JAN 11, 06 TA 16

(10)

Per your request, Neelam:

The following documents are on the enclosed CD

from: Saundra 665 6771

*260 CMS plan, LA-UR-98-3918 = on the CD
*CMS plan addendum, rev. 1, LA-UR-02-7366 = on the CD
*CMS report, LA-UR-03-7627 = on the CD (we also just sent this to NMED earlier on this year)
*CMS report NOD response, LA-UR-05-4379,& Rev 1, LA-UR-05-4381 = on the CD

>
>-----Original Message-----
>From: Dhawan, Neelam, NMENV [mailto:neelam.dhawan@state.nm.us]
>Sent: Monday, November 21, 2005 9:12 AM
>To: saundra@lanl.gov
>Cc: Young, John, NMENV
>Subject: e-copies of documents
>
>Saundra,
>
>Could you please also send me electronic copies of documents associated
>with 260 Outfall CMS. Don Hickmott should be able to give you a list
>of all documents associated with it.

>Call me if you have any questions at 428-2540.
>Thanks, Neelam
>

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Remediation Program

RRES

LA-UR-02-7366
March 2003
ER2002-0814

Addendum to the CMS Plan for PRS 16-021(c), Revision 1

Los Alamos
NATIONAL LABORATORY
Los Alamos NM 87545

Produced by the
Risk Reduction & Environmental Stewardship–Remediation Program

CONTENTS

List of Acronyms and Abbreviations

CMS	corrective measures study
CSAMT	controlled-source audio-frequency magnetotelluric
DNT	dinitrotoluene
DQO	data quality objective
ER	environmental restoration (as in ER Project)
HE	high explosives
HMX	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclooctane (cyclotetramethylenetetranitramine)
HPLC	high performance liquid chromatography
HRR	high-resolution resistivity
HSWA	Hazardous and Solid Waste Amendments
ICPES	inductively coupled plasma emission spectroscopy
ICPMS	inductively coupled plasma mass spectroscopy
IM	interim measure
LANL	Los Alamos National Laboratory
MDA	material disposal area
MNA	monitored natural attenuation
NSAMT	natural-source audio-frequency magnetotelluric
PRS	potential release site
RCRA	Resource Conservation and Recovery Act
RDX	1,3,5-trinitro-1,3,5-triazacyclohexane (cyclotrimethylenetrinitramine)
RFI	RCRA facility investigation
RRES-R	Risk Reduction & Environmental Stewardship–Remediation Program
SHB	seismic hazards borehole
TA	technical area
TNT	trinitrotoluene
XRD	X-ray diffraction
XRF	X-ray fluorescence

1.0 INTRODUCTION

This document serves as revision 1 of "Addendum to CMS Plan for Potential Release Site 16-021(c)" (LANL 1999, 64873.3). The insertion instructions and heading numbers apply to the original CMS plan (LANL 1998, 62413.3), and these insertions should replace any insertions from the original addendum. Because the new sections are insertions, acronyms and abbreviations may not be spelled out at first use; however, they are defined in the list that appears after the table of contents.

2.0 NEW OR REPLACEMENT SECTIONS

Insert this new subsection on p. 57, within section 6.1, "Objectives and Scope," just before section 6.2.

6.1.7 Groundwater Investigations (Deep Perched Zone and Regional Aquifer)

The principal goal of this investigation is to determine the extent of contamination in the deep perched zone and regional aquifer that is associated with constituent discharges from TA-16 and, potentially, other nearby sites. Subsidiary goals include (1) determining the rate at which contamination is moving downgradient toward the Pajarito well field or other potential exposure points, and (2) investigating the directions of groundwater flow and the hydrologic gradients within the regional and deep perched saturated zones at TA-16. The results of the investigation will be used to evaluate the effects of regional groundwater contamination on human health or ecological assessment endpoints. The risk assessment for the surface soils, alluvial system, and vadose zone that will be completed under the 260 CMS will be augmented with information about deep groundwaters derived from the investigation outlined in this document. These data will be used to determine the need for, and feasibility of, implementing cleanup remedies within the deep perched and regional groundwater systems contaminated with HE and other constituent discharges from TA-16.

Insert this new section on p. 58, as the final item in the numbered list within section 6.2, "Approach and Implementation."

6. Regional groundwater

   Additional deep boreholes that intersect the regional aquifer will be drilled near TA-16. While the borehole investigations are directly associated with the 260 CMS, the data from those investigations will also be relevant to investigations into other potential HE sources at TA-16 (Fish Ladder Canyon, Martin Spring Canyon, the 90s Line Pond) and at TA-9. The data from these wells will be closely integrated with data from regional wells to be drilled under the "Hydrogeologic Workplan" (LANL 1998, 59599.1). The data from all these wells will be used to

   - determine the presence or absence of contamination and the concentrations of HE and other constituents at locations near regional well R-25;
   - investigate the seasonal variations in contaminant concentrations at these locations;
   - better define the hydrologic gradients, flow directions, and hydrologic properties in both the deep perched and regional saturated zones near TA-16;
   - help determine if multiple plumes exist in the deep perched zone and regional aquifer;

- design a monitoring program for the deep perched zone and regional aquifer; and
- support modeling efforts designed to predict the movement of HE plume(s) at TA-16.

Hydrologic information will be obtained during drilling. Water-level measurements, packer or slug tests, and other hydrologic parameter analyses from the saturated zones will be completed. Core/cuttings will be used to determine lithologies. Where feasible, downhole geophysics will be carried out in each borehole.

Multiple port or single completion wells that comply with the HSWA module of LANL's Hazardous Waste Facility Permit will be installed within these boreholes. Following well development, water from each screened interval will be sampled and submitted for HE, metals, and anion analyses. These analyses will be performed on a quarterly basis until the CMS/CMI for PRS 16-021(c) has been completed. The wells will be instrumented with pressure transducers. Seasonal water-level data will be used to investigate any connectivity among portions of the deep perched and regional saturated zones.

7. Deep perched groundwater studies (FY 03 and FY 04)

   HE contamination is present in the perched zone at R-25. No intermediate-to-deep perched zones, however, were found in the two deep wells drilled to the northeast and southeast of R-25 (CdV-R-15-3 and CdV-R-37-2, respectively), calling into question the extent of the perched zone and associated contamination (Kopp et al. 2002, 73179.9; Hickmott et al. 2002, 73707). During FY 03 and 04, three new intermediate-depth boreholes (700 to 1000 ft deep) will be drilled in an attempt to intersect the deep perched zone seen in regional well R-25. Selection of the well sites will be based on the presence of geophysical anomalies that indicate high conductivity zones. The data from these wells will be used to address the same six issues that were addressed by the deep boreholes, as well as to (1) better constrain the downgradient extent and horizontal continuity of the perched zone, (2) assess the possibility that natural attenuation may be occurring (e.g., by base hydrolysis) in the plume(s), (3) evaluate the utility of geophysical measurements for identifying zones of saturation, (4) assess connectivity with the alluvial system in Cañon de Valle, and (5) determine travel times in the perched zone.

Insert the following sections on p. 81, just before section 6.4, "Data Collection Procedures."

6.3.6 Groundwater Investigations (Deep Perched Zone and Regional Aquifer)

6.3.6.1 Overview

Background and Conceptual Model

HE was detected in regional well R-25 during FY 99 and continues to be detected in ongoing quarterly sampling. R-25 is located approximately 1700 ft east of the 260 outfall [PRS 16-021(c)] (Figure 6.3-8). A major perched saturated zone was present between 747 ft and 1132 ft (Figure 6.3-9), and the regional aquifer extended from 1286 ft to the total depth of the borehole at 1942 ft. Between these two saturated zones is a zone made up of alternating saturated zones and dry rock. The nature and degree of connectivity between these two major zones is unknown. Both major saturated zones appear to contain HE constituents, including RDX, TNT, HMX, and amino-DNTs. RDX is the most abundant constituent; RDX concentrations range from not-detected to above 75 µg/L (Figure 6.3-9). The two highest HE concentrations came from the middle of the perched zone and near the top of the regional aquifer, although it is difficult to determine if any leakage has occurred from the upper zone to the lower zone. Following well completion and several rounds of quarterly sampling, it is still unclear if the contamination at the top of the regional aquifer was introduced during drilling. However, quarterly sampling does show that HE concentrations in the regional aquifer have decreased, supporting the idea that HE in the regional aquifer may have been introduced.

As noted in section 2 of this plan, HE contamination of shallow alluvial groundwater in Cañon de Valle and in the TA-16 springs is ubiquitous. RDX and other HE constituents are present in these media at levels greater than those observed in R-25. HE constituents at low levels (< 10 µg/L RDX) have also been observed in springs at TA-9, at TA-18, and in surface and alluvial waters within Pajarito Canyon. It is assumed that liquid discharges at the TA-16 surface constitute the primary historic source of the HE observed at R-25.

Through RFIs, multiple sources of HE contamination have been identified in soils at several technical areas in the western portion of the Laboratory. According to these studies, the largest HE contaminant source term in soils appears to be the 260 outfall (see section 2 of this CMS plan). Other sites with significant (greater than a few hundred µg/g HE in soils) identified HE source terms include the TA-16 Burning Ground and MDA P, MDA R, the TA-11 drop tower (K-Site), the 90s Line Pond (Figure 6.3-8), and the TA-9-48 outfall at TA-9. Although these and other not-yet-identified sources may be contributing HE to deep perched and regional saturated zones, the (former) large contaminant mass at the 260 outfall and its location directly upgradient from regional well R-25 (Figure 6.3-8) suggest that it was the major source of HE in the deep perched and regional saturated zones in the TA-16 region. The majority of contamination in the outfall was removed by an IM performed during FY 00–02 (LANL 2002, 73706). Since 1999, when the initial version of this addendum was issued, no additional sources of HE have been identified through field investigations.

The horizontal hydrologic gradient and flow directions in the regional aquifer are generally eastward from the mountain front of the Jemez Mountains, west of TA-16 (Purtymun 1995, 45344.1) (Figure 6.3-10). The gradient and flow directions in the TA-16 deep perched saturated zone are poorly defined. This zone was found in seismic hazards borehole 3 (SHB-3). Water-level data from this borehole, coupled with that from R-25, suggest that the gradient in the deep perched zone is also from west to east, perhaps with northerly and/or southerly components. Water-level data collected during the drilling of R-25 also suggest a vertical component to hydrologic gradients in the TA-16 area. Downward head gradients appear to exist in both major saturated zones (Stone et al. 1999, 64010.1; Broxton et al. 2002, 72640.1).

The principal recharge zone for the regional aquifer at TA-16 is hypothesized to lie to the west of TA-16, perhaps in association with the Pajarito Fault zone. Multiple recharge sources for the shallow perched zones at TA-16 have been postulated in section 5 of the second 260 outfall RFI report (LANL 1998, 59891.3). These sources included the Cañon de Valle alluvial system and other surface saturated zones (the 90s Line Pond, the steam plant drainage), diffuse surface recharge, recharge from TA-16 outfalls, and fracture-zone recharge. Inasmuch as the shallow saturated zones affect the deep perched zone and the regional aquifer, the deep perched zone and regional aquifer must also have multiple recharge zones. The ultimate surface discharge from the regional aquifer is into the White Rock Canyon springs and the Rio Grande.

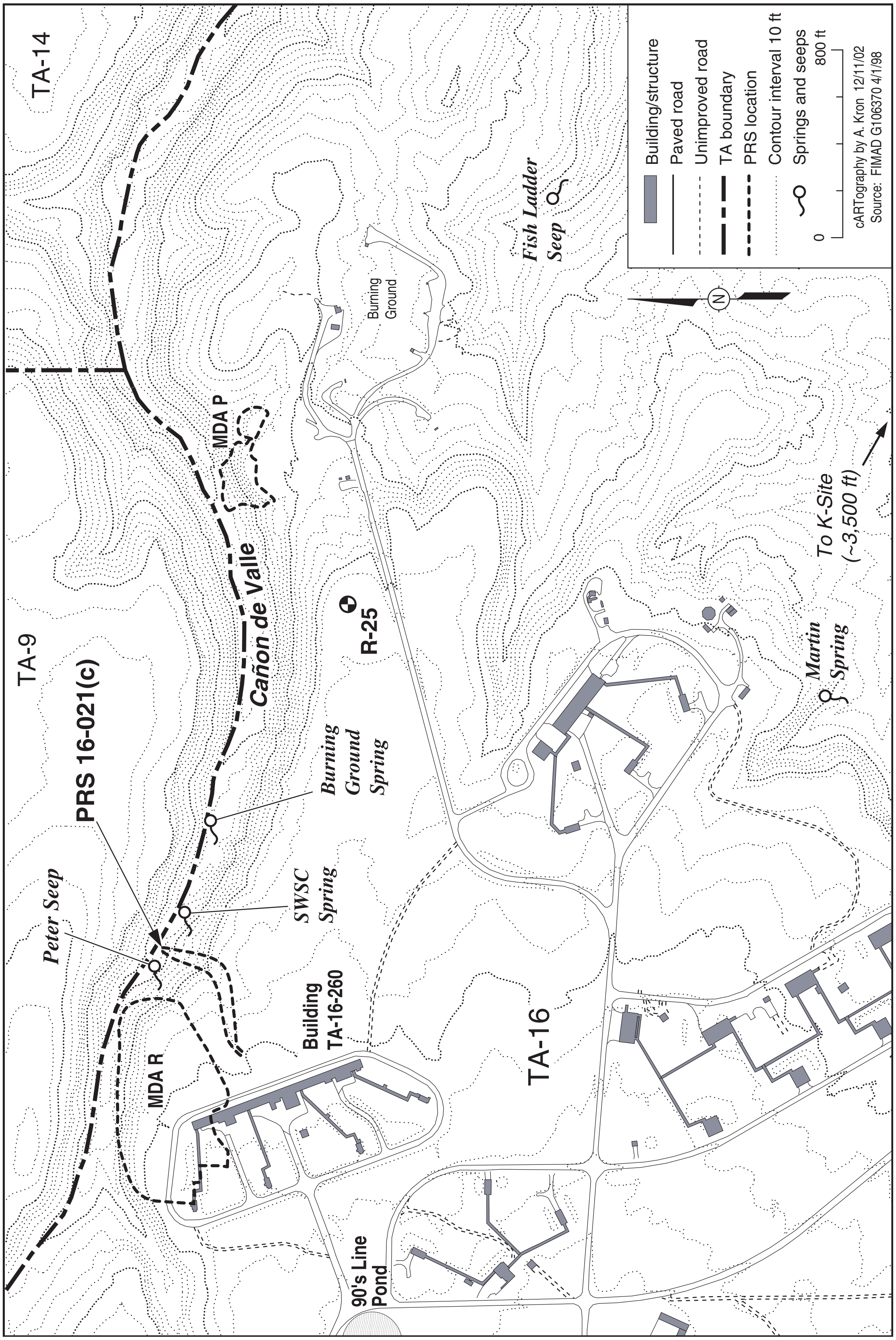

Figure 6.3-8. Location of PRS 16-021(c) and associated physical features

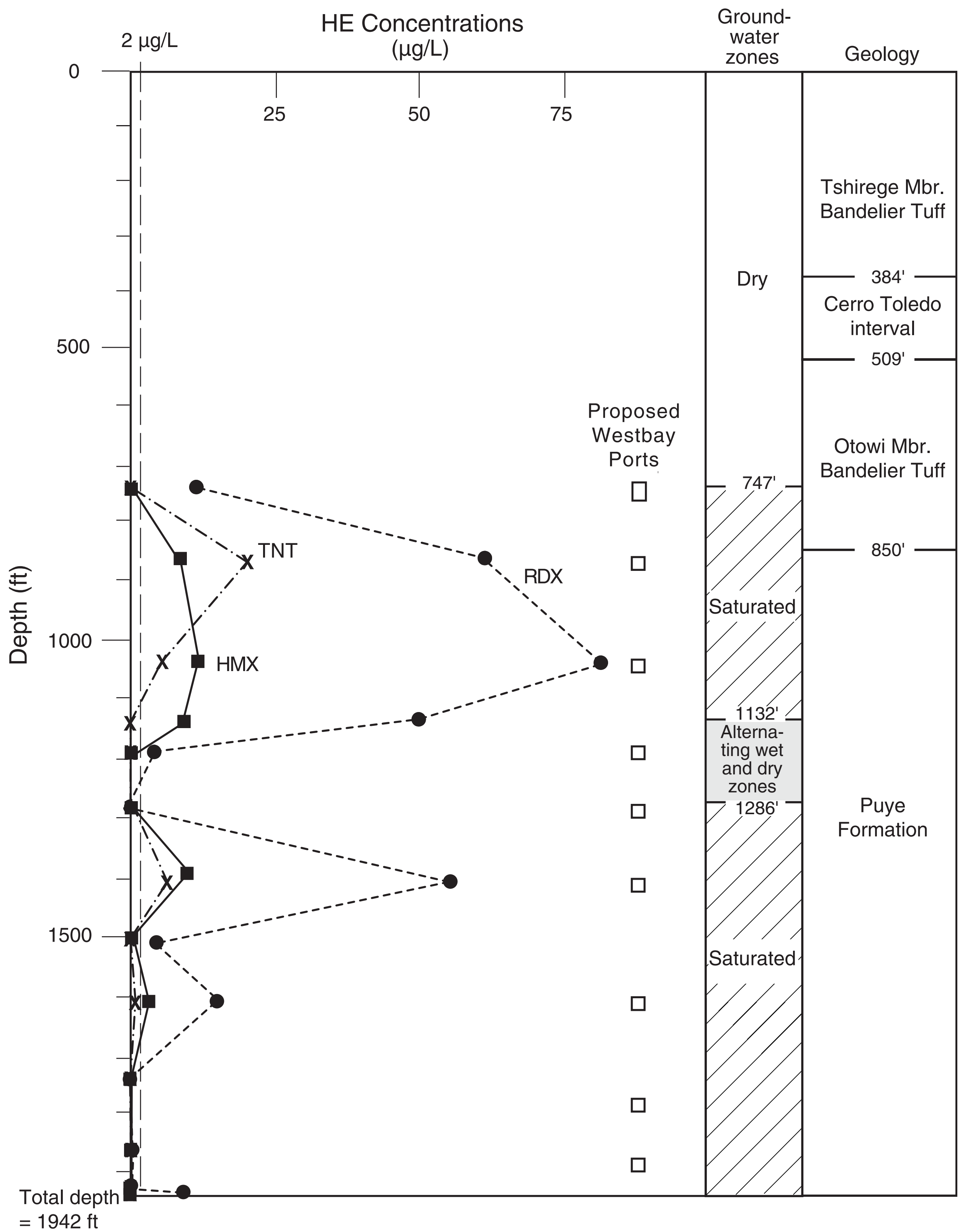

Figure 6.3-9. Distribution of HE compounds detected in deep groundwater at TA-16, borehole R-25

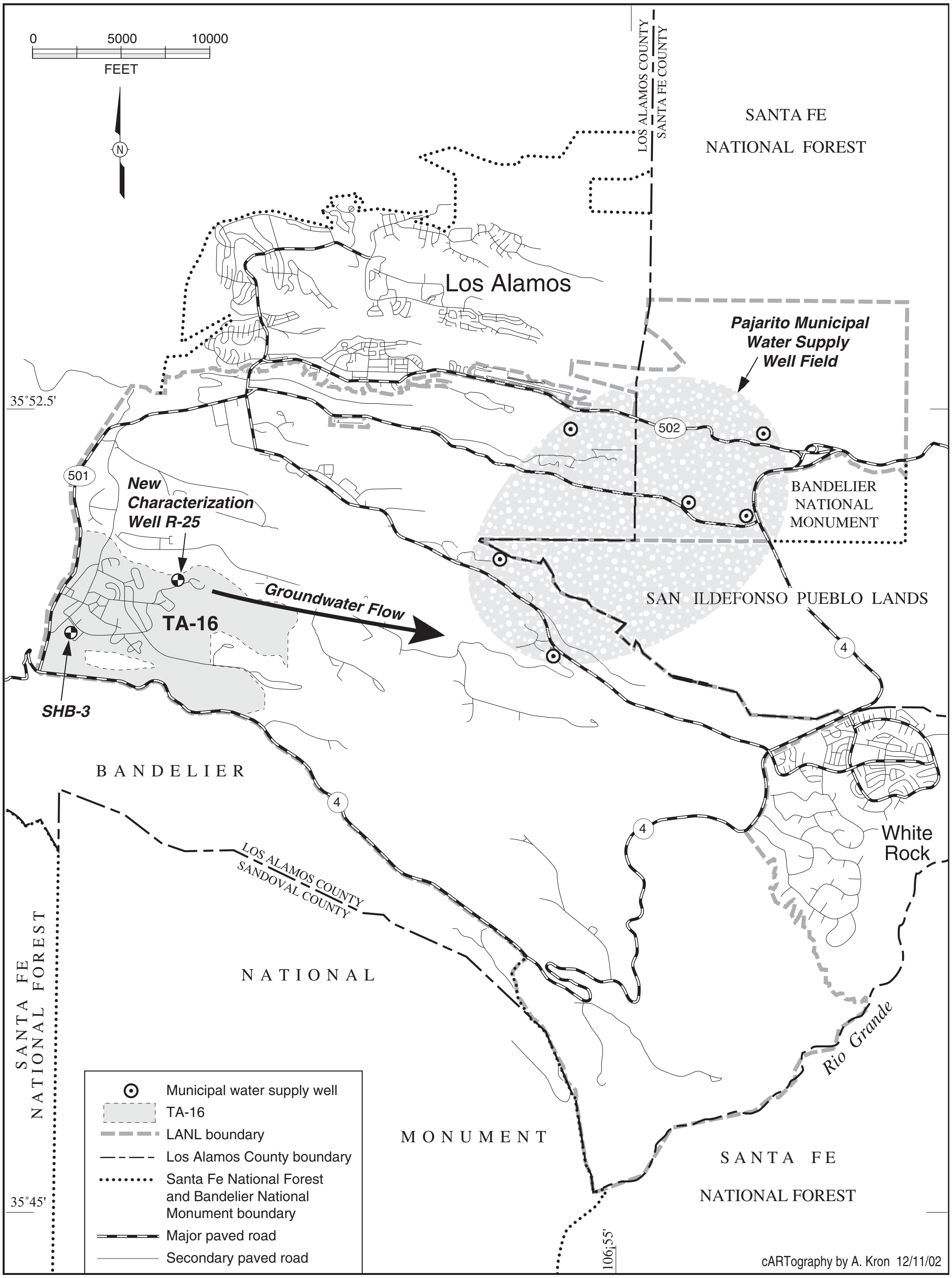

Figure 6.3-10. Location of Pajarito municipal water supply well field relative to TA-16

FY 03 Refinements to the Conceptual Model

In FY 01, an electromagnetic flyover survey (Fugro) was performed over the Laboratory. This flyover data suggest a more conductive (presumably wetter, perhaps saturated) zone in the western half of TA-16, ending in a steeply dipping zone in the vicinity of R-25 (Figure 6.3-11 and Figure 6.3-12). In these figures, warmer colors such as red indicate more highly conductive regions, suggesting higher moisture content. Wells CdV-R-37-2 and CdV-R-15-3 are located in the less conductive zone further to the east (Figure 6.3-11 and Figure 6.3-12). Note that these wells did not intercept a long-lived perched zone; perched water was seen during drilling, but not subsequent to well installation (Hickmott et al. 2002, 73707; Kopp et al. 2002, 73179.9). A controlled-source audio-frequency magneto-telluric (CSAMT) survey was performed by Zonge Engineering during FY 02. Although the data are still undergoing preliminary analysis, they suggest the presence of discrete heterogeneous sub-vertical conductive layers (presumably wetter, perhaps saturated). Preliminary analysis of the CSAMT data has found the continuous horizontal structures at intermediate depths typical of the perched zone at R-25 to be rare. The perched zone at R-25 has been tentatively linked to a geophysical anomaly in the CSAMT data.

The Fugro data suggest an eastern boundary (or steeply dipping zone) to the perched zone identified at R-25, which is consistent with the lack of a long-lived perched zone at CdV-R-37-2 and CdV-R-15-3. These observations indicate that the conceptual model needs to be refined. The model should include the fact that the perched zone (and any associated contamination) is probably of more limited extent than originally believed and that, where present, may be patchy in nature. The Zonge data support the conceptual model hypothesis that fast vertical pathways may be responsible for recharge to perched zones (where present) and to the regional aquifer, and that subsurface saturated ribbons may be an important hydrologic feature. The lack of contamination in the regional aquifer at wells CdV-R-37-2 and CdV-R-15-3 (Hickmott et al. 2002, 73707; Kopp et al. 2002, 73179.9) also places bounds on the extent of contamination within the framework of the conceptual model.

Problems

The detection of HE in the deep perched and regional saturated zones at TA-16 raises questions concerning potential impacts on receptors. For the purposes of this document, these two major saturated zones will be referred to as separate zones; however, it is not known if they are distinct zones or if both represent parts of the regional aquifer. To assess the risk posed by the site, it will be necessary to determine if there is a realistic exposure pathway—at concentrations above a threshold level of concern (or damage to a natural resource)—from the HE found in the deep groundwater underlying TA-16.

The primary initiative is to define the *boundaries* of any existing plumes rather than, for example, the maximum concentration within a plume (i.e., to determine the highest level of contamination at the present time). There is a key issue with respect to human health risk, and that is whether HE constituents are likely to affect the drinking water wells in the Pajarito well field that lies 7–8 km to the east of R-25 (Figure 6.3-10).

Four classes of data needs are identified. Each type of data bears on problems related to contaminant distribution, fate, and transport. Ultimately, the objective of collecting these data is to accurately predict contaminant concentrations in the deep perched and regional groundwater zones with a high degree of confidence. Such information about contaminant concentrations is needed to determine what type of remedy, if any, will be required for the deep perched and regional saturated zones.

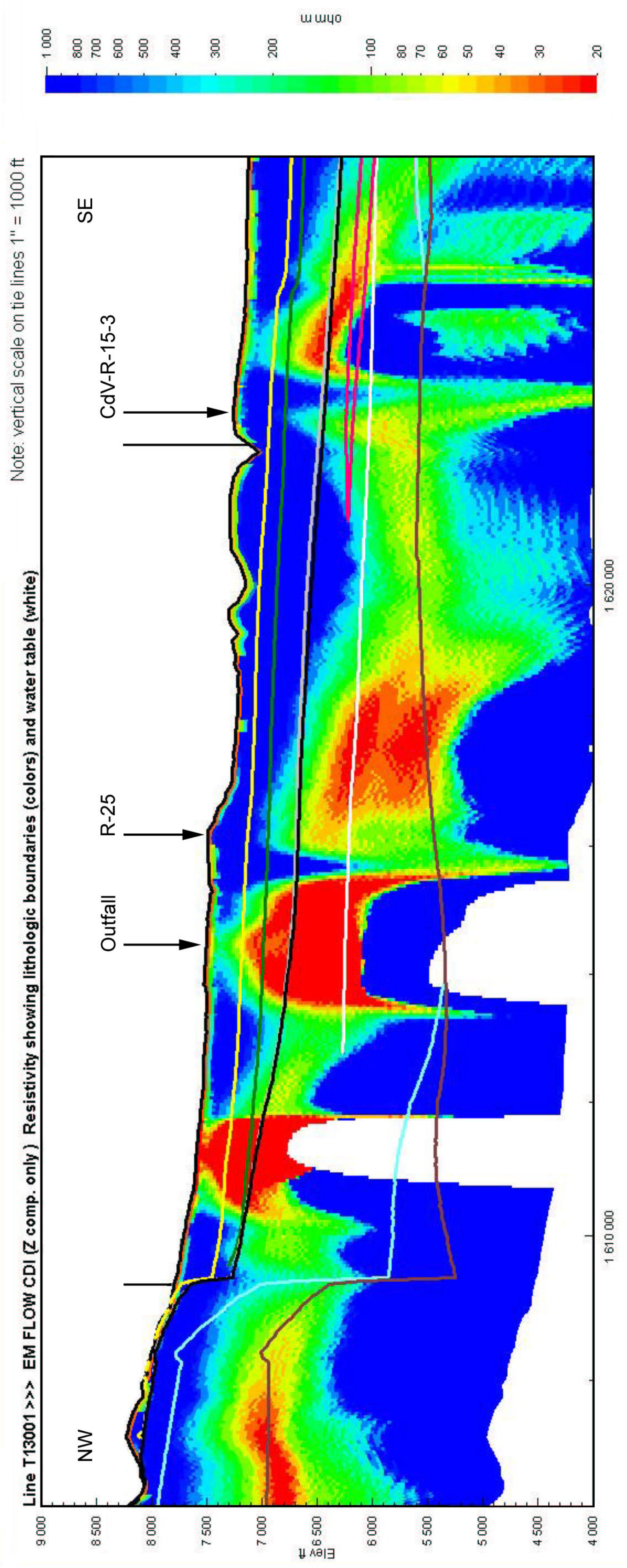

Figure 6.3-11. Northern Fugro line, showing extrapolations from the 260 outfall, R-25, and CdV-R-15-3 to the line

Note: The vertical lines without arrowheads indicate TA-16 boundaries.

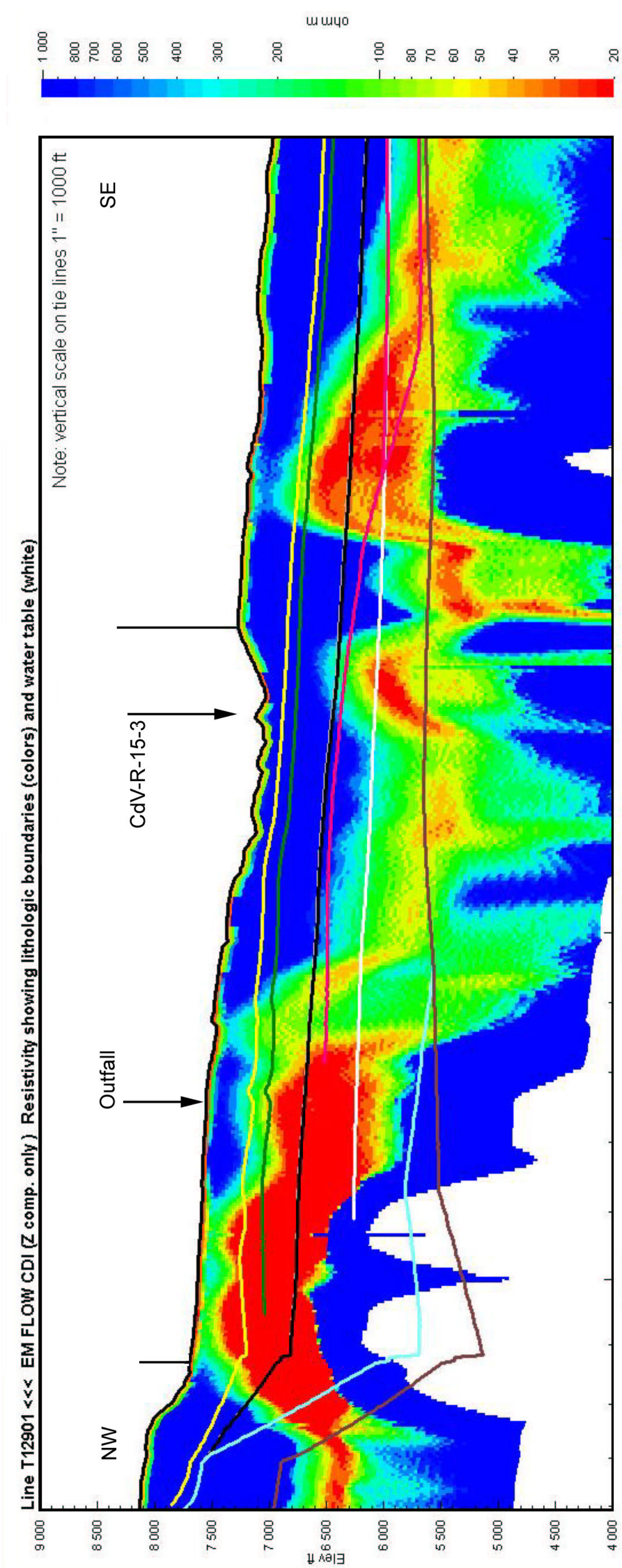

Figure 6.3-12. Southern Fugro line, showing extrapolations from the 260 outfall and CdV-R-37-2 to the line
Note: The vertical lines without arrowheads indicate TA-16 boundaries.

The four classes of data needs are described below (some of the data needs are related to deep wells only; others are relevant to deep and intermediate-depth wells):

1. The concentrations of HE and other anthropogenic constituents need to be determined, at additional locations in the western portion of the Laboratory. The spatial boundaries of—and contaminant distributions within—the HE plume need to be defined for both major saturated zones. Based on the range of flow velocities calculated for the regional aquifer, the putative HE plume could extend as far as 7–8 km to the east of R-25. However, drilling at CdV-R-15-3 and CdV-R-37-2 indicated that the extent of contamination is much smaller than these distances (Hickmott et al. 2002, 73707; Kopp et al. 2002, 73179.9).

   The constituent concentration data from additional deep and intermediate wells are needed to define a monitoring baseline, to define trends in contaminant concentration both laterally and with depth, and to examine other aspects of the temporal and spatial variability of the contaminants in the deep perched and regional saturated zones. All these data will be used as model input and model validation.

   The concentration data will help determine (1) if contaminant concentrations decrease with distance from TA-16, or if there is evidence for a high "pulse" of HE contamination associated with historic HE discharges; (2) if HE-degradation byproducts are present in the deep perched and regional aquifers, and whether information about this can be used to investigate natural attenuation as a corrective action remedy; (3) to what degree the deep perched zone retards or enhances the flow of contaminants to the regional aquifer (applicable for deep wells); (4) how water chemistry provides insight into the geochemical processes occurring in the deep perched and regional aquifers; (5) any required refinements to the conceptual model; and (6) how the mesa-top HE sources and the Cañon de Valle and other alluvial systems may recharge the deeper saturated zones.

2. The hydrologic gradients (both vertical and lateral) need to be determined, for both the regional and the deep perched saturated zones. Such data help define directions of groundwater flow and help optimize placement of monitoring and characterization wells. The data also provide key information for groundwater modeling.

   The gradient data will be used to (1) determine if contaminants enter the system at the top of the deep perched zone and if they are then transported by saturated flow to the bottom of the zone and laterally downgradient; (2) help identify fast pathways within the saturated zones; and (3) determine whether the significant downward vertical gradients identified in R-25 continue to the east or are restricted to the west of the Laboratory near the Pajarito fault zone and the Jemez Mountains front.

3. The horizontal extent and the geometry of the deep perched zone need to be determined. The deep perched zone was present in SHB-3 (1–2 km southwest of R-25) but was not found in the deep test wells that were drilled at TA-49 (4–6 km southeast of R-25) in the late 1950s and early 1960s or in well CdV-R-15-3 or well CdV-R-37-2 (Kopp et al. 2002, 73179.9; Hickmott et al. 2002, 73707).

   Information about the extent and geometry of saturated zones will be used to determine (1) the eastward extent of the deep perched zone, and (2) whether the deep perched zone is a continuous unit that extends for several km from the mountain front eastward or a "tongue" projecting eastward across TA-16. Tongue geometry implies the existence of regions within the deep perched zone with northward and southward hydrologic gradients.

   The extent of the deep perched zone has not been constrained during FY 03. No perched zone was found in CMS well CdV-R-15-3 or well CdV-R-37-2. Geophysical data (Fugro and CSAMT) suggest that the deep perched zone has an eastern boundary and that it may be patchy and discontinuous in nature, being present as subsurface saturated ribbons or plugs. Intermediate-depth boreholes will help to further constrain the geometry of the deep perched zone.

4. Hydrologic parameters within the vadose zone and the deep perched and regional saturated zones need to be defined to support groundwater modeling. These efforts may provide a better understanding of contaminant transport in the deep perched and regional saturated zones. Such information needs to be gathered from additional points within potential contaminant flow paths downgradient from TA-16.

   Hydrologic parameter data will be used to determine (1) the degree of heterogeneity across hydrologic properties of the Bandelier Tuff and Puye Formation in the western portions of the Laboratory, (2) if lateral variations in lithology are consistent with the current 3-D hydrogeologic model of the Laboratory` and (3) how that model can be refined.

6.3.6.2 Investigation Design

Data from deep wells within, and downgradient from, TA-16 will be used to address questions concerning HE sources, contaminant extent, transport and recharge pathways, contaminant concentration dynamics, and hydrologic gradients. The data will also support efforts to model the deep perched and regional saturated zones. The data will be derived from the regional wells outlined in the "Hydrogeologic Workplan" (LANL 1998, 59599.1) as well as the additional 260 CMS wells described below. Ultimately, the data will support risk assessments that include the deep perched saturated zone and regional aquifers as pathways.

The "Hydrogeologic Workplan" includes plans to drill a series of regional aquifer wells known as *R* wells. Four of these locations are approximately downgradient from TA-16: (1) regional well R-27, planned for Water Canyon near TA-49, approximately 3–4 km southeast of R-25; (2) regional well R-19 (completed), located on a mesa top south of Threemile Canyon, approximately 4–5 km east of R-25; (3) regional well R-18, planned for a location on the rim of Pajarito Canyon, approximately 1–2 km northeast of R-25; and (4) regional well R-30, planned for a location at TA-49, approximately 4–5 km southeast of TA-16 (Figure 6.3-13).

Two regional wells, R-24 and R-26, are also planned for locations west of TA-16. These represent upgradient wells for the purposes of the TA-16 investigations (Figure 6.3-13). All these regional wells will be characterized hydrogeologically. The water and cuttings samples taken from them will be analyzed for a comprehensive suite of constituents, including HE, metals, water quality parameters, and radionuclides. Current planning specifications for these work plan wells can be found in Table 6.3-6. Note that Laboratory-wide background values for groundwater are currently being developed by RRES-R (formerly the ER Project). Both the Laboratory-wide values and the data from the upgradient wells at TA-16 will be used to evaluate, in both the regional and 260 CMS wells, which anthropogenic constituents have been released to groundwater.

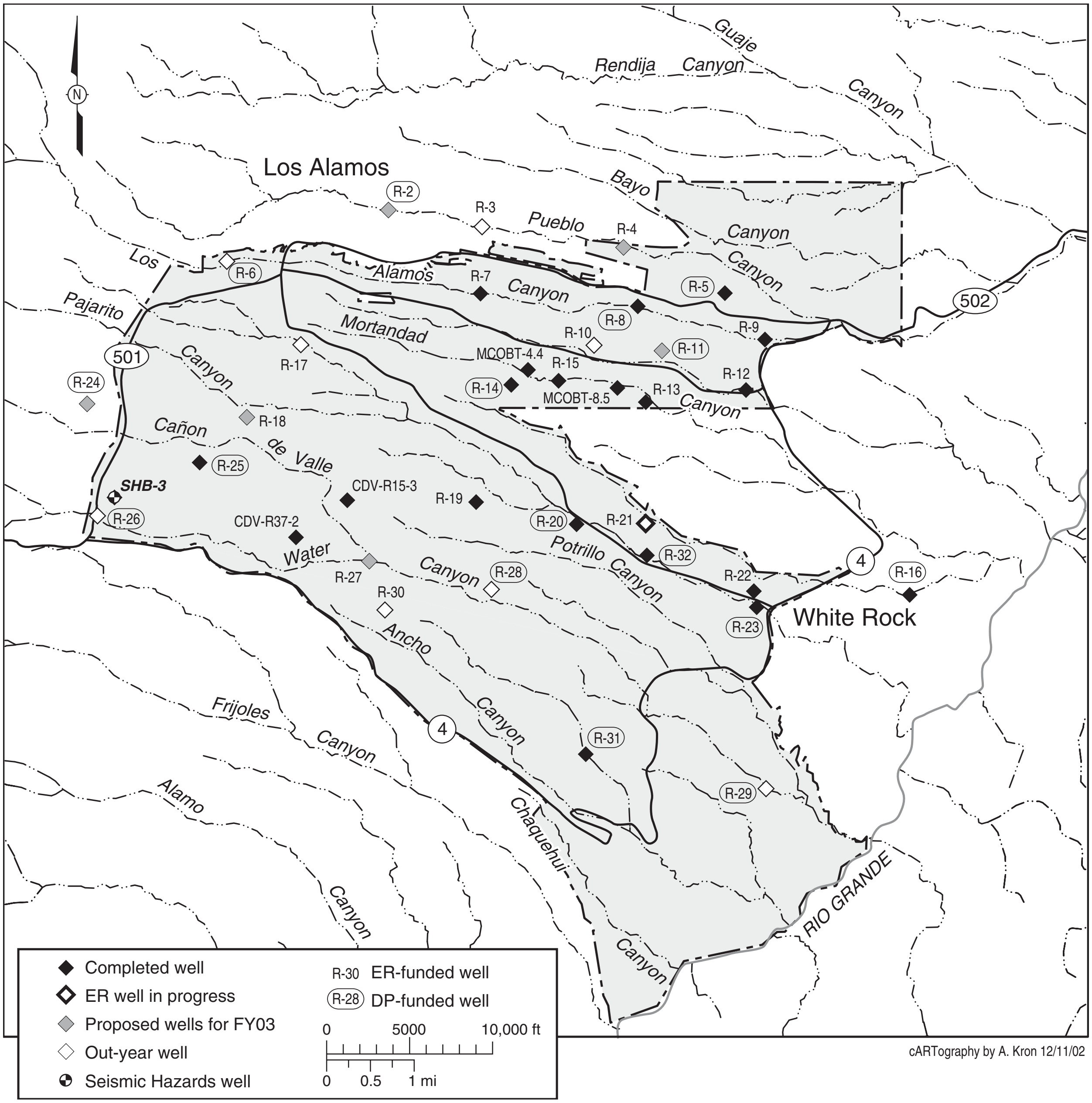

Figure 6.3-13. Proposed wells in the vicinity of TA-16 (*Note:* Locations are approximate and will be finalized following consultations with NMED.)

Table 6.3-6
Planning Specifications for Groundwater Protection Plan Wells That Are Relevant to TA-16 Investigations

Regional Well Designation	Location	Estimated or Actual Depth (ft)	Well Completion Type	Current Estimated Start Date for Drilling
R-27	Water Canyon near TA-49	1840	Multiple	Undetermined
R-19	TA-36	1902.5	Multiple	FY 00—complete
R-18	Rim of Pajarito Canyon	1945	Multiple	FY 03
R-30	TA-49	1580	Single	FY 05
R-24	Mesa north of Cañon de Valle or Water Canyon (on upthrown side of Pajarito Fault)	1476	Multiple	Undetermined
R-26	On downthrown side of Pajarito Fault, across from R-24	1280	Single	FY 03

Note: Specifications are based on the "Hydrogeologic Workplan" (LANL 1998, 59599.1).

The 260 CMS wells, which are described later, will be used to augment the regional wells proposed under the "Hydrogeologic Workplan." The 260 CMS deep drilling program addresses the problem of contamination in the deep perched zone and regional aquifer. To focus on this problem most effectively, this document minimizes, for the time being, consideration of the near-surface source term. This exclusion pertains to not only historic and ongoing surface releases but any contamination currently in the vadose zone; however, data from both the work plan wells and the 260 CMS wells will provide crucial information about recharge sources and transport pathways within the near surface. Although the assessment of sources (especially in the vadose zone) is ultimately crucial to resolving the global problem associated with TA-16 HE discharges, it is not the primary goal of the investigations outlined in this document. The near-surface source term and the vadose zone in the vicinity of Building 260 are currently being addressed by the ongoing CMS process for PRS 16-021(c). Other sources will be investigated by the ongoing RFIs at TA-16 and other TAs in the western half of the Laboratory.

A minimum of two 260 CMS deep wells to the regional aquifer were proposed in the CMS plan addendum of 1999. Two wells were completed in FY 01 and FY 02. One (well CdV-R-15-3) is located to the east of Building 260 and R-25, at TA-15 (Kopp et al. 2002, 73179.9). The other well (well CdV-R-37-2) is located to the southeast of Building 260 and R-25, at TA-37 (Hickmott et al. 2002, 73707) (Figure 6.3-13).

The sites of the initial two wells were chosen by considering the information that could be gathered from the boreholes and the data gaps that could be filled to address the TA-16 groundwater investigation. The data gaps included (1) the nature, extent, and dynamics of HE contamination in the deep perched zone and regional aquifer; (2) the hydrologic gradients in the TA-16 area; (3) the extent and geometry of the deep perched zone; and (4) the hydrologic properties of subsurface geologic units in the deep perched zone and regional aquifer. Equally important siting criteria included the ability of the wells to complement the work plan wells and the following logistical questions:

- Is the location accessible to a large drill rig?
- Does the location fall within the blast radius of an active firing site?
- Does the location lie within the nesting area of a threatened and endangered species?

FY 03 Update to Planned CMS Wells

A minimum of three new intermediate-depth boreholes are proposed. Three locations have been identified that take into account recent controlled-source audio-frequency magnetotelluric (CSAMT) and natural-source audio-frequency magnetotelluric (NSAMT) results. These locations were based on the information that could be gathered from the boreholes and the data gaps that could be filled to address the TA-16 groundwater investigation. The following issues were considered:

1. The extent of HE contamination in the perched zone has not been constrained. Moreover, no perched zone was found in the two deep CMS wells, calling into question the extent of the perched zone and associated contamination. The three proposed intermediate-depth boreholes will be sited to better constrain the downgradient extent of the perched zone and to test for the presence of HE contamination in the perched zone (if present).

2. While defining the extent of the HE plume in the perched zone and in the regional zone, it will be determined if natural attenuation is occurring (e.g., by base hydrolysis) in the plume(s). If HE is detected in new downgradient wells, concentrations will be compared to those found upgradient at R-25, and the presence and concentrations of HE breakdown products will be assessed. These comparisons will be made cautiously in the case of screen 3 from R-25, as data from this screen are subject to problems associated with the screen’s construction. The data, along with continued monitoring, will help determine if monitored natural attenuation is a viable option for the deep groundwater at the site. Trends of stable or decreasing HE concentration within the plume, and decreasing concentration over time at any given monitoring location, would support this remediation alternative. The data would also be important for evaluating engineered alternatives for the perched zone and regional aquifer, if active treatment technologies are required.

3. The hydrology of the perched zone needs to be better defined. The static water level in the three proposed boreholes will provide information about potentiometric surfaces when compared with R-25. Modeling the hydrology will be key to addressing this need.

4. The use of surface geophysics for identifying the presence of deep groundwater will be assessed. Geophysical results from an electromagnetic overflight (Fugro) and CSAMT and NSAMT data from Zonge Engineering will be compared to the conceptual model. The results will also be compared to ground-truth data (presence or absence of saturation) from R-25, CdV-R-37-2, CdV-R-15-3, and other boreholes within and surrounding the site. Geophysical anomalies will be compared to surface expressions of water (springs, seeps, canyon surface flows) and to structural anomalies and stratigraphy/degree of welding in Bandelier Tuff to determine the controls on conductivity.

5. If a borehole is placed in Cañon de Valle, the alluvial system would be assessed. High-resolution resistivity (HRR) data from HydroGeophysics, for example, suggest the existence of a losing reach (where water is lost from the surface to subsurface) in Cañon de Valle, west of MDA P, that may be a source of recharge to the perched or regional aquifer. Contaminant levels in the alluvial system and any recharge pathways to deep groundwater would also be assessed. Core would be taken from this well, and anion profiles would be determined. Moisture content measurements from this core would also allow for calibration of HRR and Zonge data. In any such hole, downhole geophysics would be particularly valuable for assessing recharge pathways to deeper groundwater and further constraining the conceptual model.

6. The three proposed intermediate-depth wells will be used to further constrain travel times in the perched zone and regional aquifer using anthropogenic constituents such as HE and tritium.

The three proposed locations are described below and shown in Figure 6.3-14.

1. Cañon de Valle, west of MDA P—This well would be located in the resistivity anomaly (area of low resistivity) noted by HydroGeophysics in the HRR survey (see Appendix H) and in a high-conductivity anomaly in the CSAMT and NSAMT data. This anomaly suggests water is being lost from the canyon alluvial system to the vadose zone and possibly to deeper groundwater.

2. TA-16 mesa top, east of R-25—The Fugro electromagnetic data suggest that the border of the conductive zone is close to the eastern edge of the TA-16 mesa top (Figure 6.3-14). Drilling toward the edge of the mesa would provide a high probability of hitting perched water at a > 700-ft depth, toward the edge of the perched zone (assuming it is continuous downgradient from R-25). Because this location is not in a high-conductivity anomaly in the CSAMT data, it is possible that perched water is not present or is present at significantly greater depth than in R-25.

3. Southeast of R-25, within the more highly conductive zone identified in the Fugro flyover data—This well could be located near P-Site.

Logistical considerations (e.g., moving a large rig into Cañon de Valle) could limit site selection. Sites are located along the geophysical survey lines where the presence of intermediate-depth water is hypothesized based on the CSAMT and NSAMT results.

Data from these intermediate-depth wells will help us to

1. assess the risk to water quality at the Pajarito well field and therefore determine if active treatment of deep groundwater is called for, or if a monitored natural attenuation (MNA) approach will suffice; and

2. decide if more intermediate-depth or deep wells are required (based on the extent of the perched zone and the presence or absence of contamination in the perched zone and/or regional aquifer).

Table 6.3-7 outlines the rationale for drilling the two completed deep wells at their particular locations as well as the rationale for the three new intermediate well locations.

The first well drilled was CdV-R-15-3, the TA-15 well; the second well drilled was CdV-R-37-2, the TA-37 well. Drilling of the first intermediate-depth well will be started during FY 03 (pending availability of funding). The other two wells will be initiated as soon as funding allows, probably during FY 04.

Based on the considerations shown in Table 6.3-7, the first intermediate-depth well to be drilled will be the one in Cañon de Valle. The results from each well will be discussed with NMED personnel in order to reassess the 260 CMS deep groundwater characterization and the ongoing well-installation project. At that time, locations of upcoming wells will be reviewed.

Table 6.3-7
Assessment of Candidates for Well Sites

Location/ Well ID	Pros	Cons
TA-15/ CdV-R-15-3	• Provides insight into TA-18 HE observations • Downgradient from 260, generally upgradient from supply wells • Downgradient from water-losing section of Cañon de Valle • Lies on east-west transect that includes 260, R-25, R-19, and PM-2/PM-4 • Provides insight into geologic “basement structure”	• In concert with R-25 and SHB-3, not optimal for defining principal deep perched zone gradient
TA-37/ CdV-R-37-2	• Easy access • Area not already covered by planned *R* wells • Helps define hydrologic gradient and the plumes’ southern boundaries • Provides evaluation of additional sources for contaminants observed in Martin Spring and the Martin hydrohole (2665) • Lies on transect between 260 and R-27 • Provides information about conditions near southern Laboratory boundary	• May not be directly downgradient from 260 in regional aquifer
TA-16/ CdV-16-1(I) (Cañon de Valle)	• Downgradient from 260 and cross-gradient from R-25 • In water-losing section of Cañon de Valle • Could help define the extent of perched zone and associated plumes • Should help evaluate other sources (Burning Ground, MDA P, Cañon de Valle alluvial waters)	• Access for a drill rig may be difficult in Cañon de Valle
TA-16/ CdV-16-2(I) (east of R-25)	• Downgradient from 260 and R-25 • Could help define the extent of perched zone and associated plumes	• Too close to R-25? • Could miss perched zone
TA-16/ CdV-16-3(I) (near P-Site)	• To the southeast of 260, which would help determine southern extent of the deep perched water zone and its hydrologic gradient • Could help define the extent of perched zone and associated plumes	• Could miss perched zone

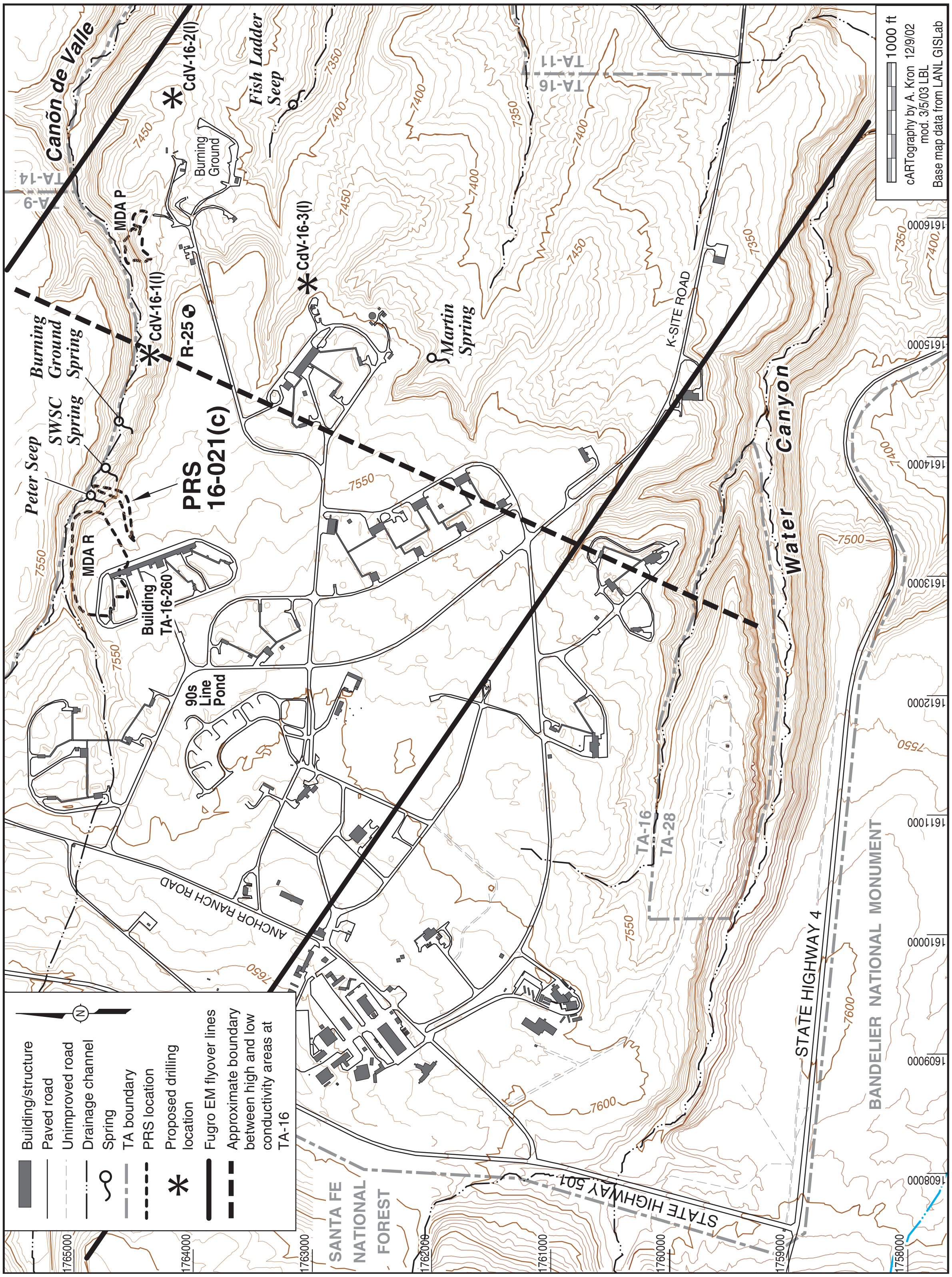

Figure 6.3-14. Proposed drilling locations, showing relation to Fugro lines (heavy solid lines) and approximate boundary between conductive regions to the west and less conductive regions to the east (heavy dashed line) (*Note:* The approximate boundary between conductive regions is drawn as a straight line, but it likely exhibits much greater complexity; the only control points for the boundary position are at the intersections with the Fugro lines. Deep perched water was encountered at R-25, so locally the boundary must extend further east than shown.)

If the data from the deep 260 CMS wells, the intermediate-depth wells, and the “Hydrogeologic Workplan” wells listed above suggest that the HE plumes within the deep perched zone and regional aquifer are not bounded, additional regional or intermediate 260 CMS wells may be drilled. This strategy will be applied, whether the HE in perched and regional groundwater is derived solely from 260 or from multiple sources. The locations of any additional wells will be developed in consultation with NMED personnel as well as members of the public and other stakeholders. Ongoing groundwater modeling efforts will also be used to optimize well location selection.

6.3.6.3 Sampling Activities

The data quality objectives (DQOs) for data collection at these 260 CMS wells are similar, although reduced in scope, to those outlined in the “Hydrogeologic Workplan” (LANL 1998, 59599.1). If relevant changes to the DQOs in the work plan are agreed upon with NMED, similar changes will be implemented for these wells. The data needs are ranked as follows, in descending order of priority:

1. contaminant profiles (for HE, metals, and anions) and water levels;
2. general lithology [from a hydrogeologic perspective, the zone that would be most beneficial to understand would be the layers between the two major saturated zones (deep wells only)]; and
3. various hydrogeologic parameters (e.g., saturated zone thicknesses, saturation levels, head gradients, permeability, and porosity).

One reason for the hydrogeologic parameters receiving the lowest priority is that relevant information from other adjacent wells is available. Another reason is that the primary use for these parameters is as input to models. Due to the heterogeneities of hydrogeologic parameters within lithologies on the Pajarito Plateau, modelers will have to compensate for poorly constrained data through the use of sensitivity analyses.

Borehole Advancement and Well Installation Specifications

The 260 CMS deep wells will be drilled and completed similarly to Type 2 wells, using the terminology of the “Hydrogeologic Workplan” (LANL 1998, 59599.1). The following description of the proposed wells was taken from the work plan, section 4.1.1.2, and modified.

Each of the two wells will be a multiple-completion regional aquifer well. The boreholes for these wells will be drilled to an estimated depth of 1800 ft or at least 200 ft into the regional aquifer. A principal control on the depth of drilling will be whether the HE plume has been bounded in the vertical direction, based on screening results. The number and length of screened intervals will be finalized in the field, in consultation with NMED personnel and based on site-specific findings. Screened zones will be installed in both the deep perched zone (if found) and regional aquifer. The selection of screen size and the selection of filter pack materials will be made following particle-size analysis of geologic cuttings in the zone to be screened.

Applicable borehole advancement/deep well installation specifications are as follows:

- A carbon steel surface casing, approximately 16 in. in diameter, will be set from the land surface to a depth of approximately 10 ft. At locations where alluvium is present, the surface casing will extend approximately 10 ft into the underlying competent layer and will be grouted in place.

- During borehole advancement, the drilling method will employ an outer temporary casing that is advanced to the total depth of the borehole. This is done to maintain borehole integrity, help the circulation of drilling fluids, and minimize migration of fluids between the deep perched zone and the regional aquifer.
- The well will be constructed of mild carbon steel casing, 5.56-in. in outer diameter, from land surface to the top of the stainless-steel screen. To minimize the potential for corrosion, a transitional coupling will be installed between the two casing types. An annulus ≥ 2 in. will be provided. Approximately 10 ft of blank casing, with an end cap, will be set at the base of the screen. Centralizers will be used at intervals of approximately 100 ft.
- All backfill materials (grout, bentonite, sand) will be tremied/pressure-grouted in place.
- A lockable steel protective cover will be cemented, in place, over the well casing and extending at least 2 ft below ground surface.
- The top of the well will be finished with a concrete pad that measures 4 ft × 4 ft × 4 in. or more.

Figure 6.3-15 shows a general prototype of Type 2 wells. Figure 6.3-16 depicts the multiple-completion configuration.

The new intermediate-depth wells will have a single completion (Fig. 6.3-17) and will be drilled to a depth of approximately 800–1000 ft, or into the top of the deep perched zone, where present. Depth DQOs include drilling through the perched zone until no contamination is found, based on HE screening results, or until dry rock is encountered between the perched zone and the regional aquifer.

Module VIII Requirements

LANL plans to meet the requirements of Module VIII of the Laboratory's Hazardous Waste Facility Permit for these wells/boreholes and, ultimately, to use them for long-term monitoring. Thus, they will fulfill all HSWA module special permit conditions concerning the construction of monitoring wells. The following permit language from the "Hydrogeologic Workplan" is relevant to the typical construction of the wells proposed in this document:

> The monitoring wells installed under this and following sections of this permit shall be constructed using flush-joint, internal upset, threaded (or an equivalent method of joining without rivets, screws and glues) casing manufactured from inert materials. The boreholes for casings and screens shall be a minimum of six (6) inches greater in diameter than the well casing or screen outer diameter. Filter pack and screen slot openings shall be sized based on formation grain size and characteristics. Well screen lengths shall be no more than ten (10) feet in length. The filter pack shall extend no more than two (2) feet above the top of the screen and shall not cross any clay layers which may act as aquitards. If a bentonite seal is used, the bentonite shall be allowed to hydrate a minimum of twelve (12) hours before emplacement of grout. Grout shall be emplaced using a tremie pipe to ensure a consistent seal at depths greater than 5 feet, and grout shall be allowed to set a minimum of twelve hours before initiating development.

> Development procedures shall include purging of the well until contaminants introduced during drilling can be assured of being removed. Development shall also include surging with a surge plug, and either bailing or pumping until the nephelometric turbidity units (N.T.U.) can be consistently measured at five (5) or less, if possible. Well head construction shall include a well pad keyed into the well annulus and a system to secure the well from traffic and unauthorized access. Within thirty (30) days of construction and development of the last well required under this section, the Permittee shall submit to the Administrative Authority a report and map including:
>
> 1. Survey of location of each well;
> 2. Surveyed ground level, top of casing and top of well pad referenced to known elevation datum (NGVD, 1929);
> 3. Static water level, referenced to mean sea level;
> 4. Well construction data (including a diagram for each well, detailing total depth, screen placement, gravel pack, annular seal, borehole and casing size [all measured to within 0.1 foot], and well log data; and
> 5. Well development data.
>
> Any saturated condition encountered will require grouting in a surface casing to prevent any downward migration of surface contamination along the wellbore. Any boring drilled into the main aquifer that encounters perched water shall set conductor pipe to the top of the main aquifer and hydraulically isolate the main aquifer from the deep perched zone. The annular space must be sealed with a bentonite grout or equivalent to prevent shrinkage cracking. (section 4.1.2)

Renewal of Module VIII of the Laboratory's Hazardous Waste Facility Permit is currently being addressed with the NMED. The specifications for the 260 CMS wells as outlined in this document will be modified to reflect any changes in the new Module VIII of the Laboratory's Hazardous Waste Facility Permit that are applicable to regional or monitoring wells.

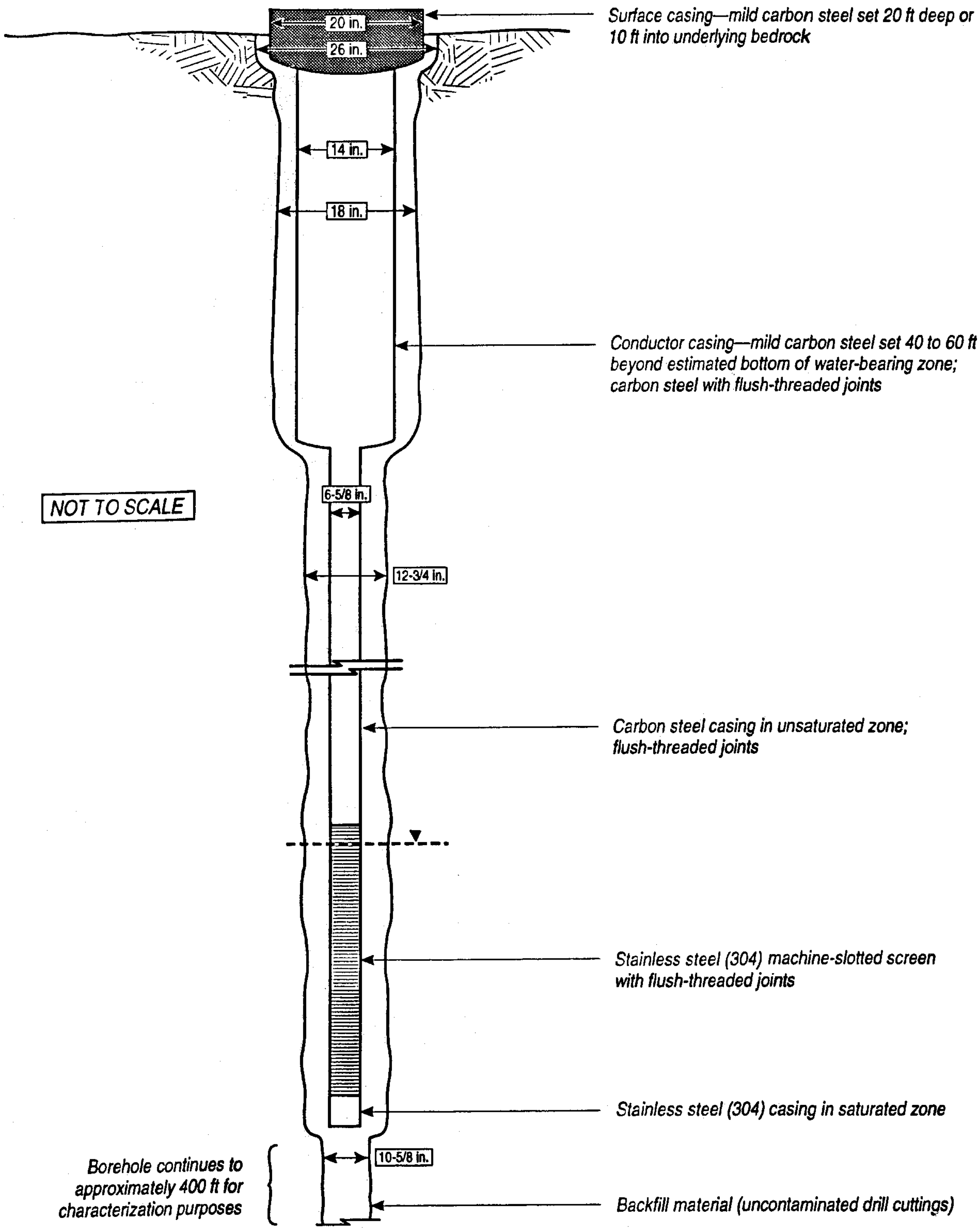

Figure 6.3-15. Schematic of Type 2 and Type 3 (regional) well design; all dimensions are approximate

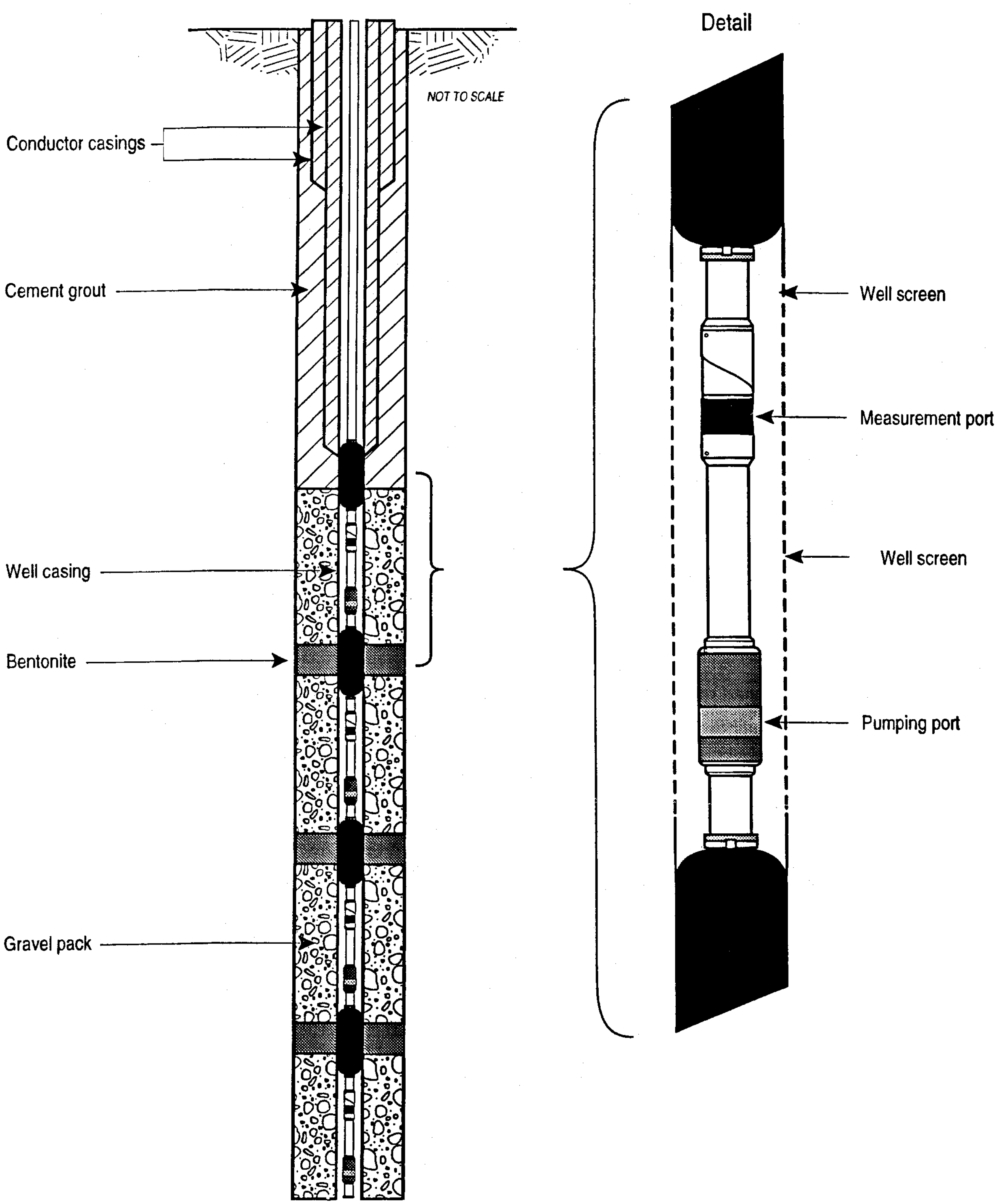

Figure 6.3-16. Westbay-type design for multi-level monitoring

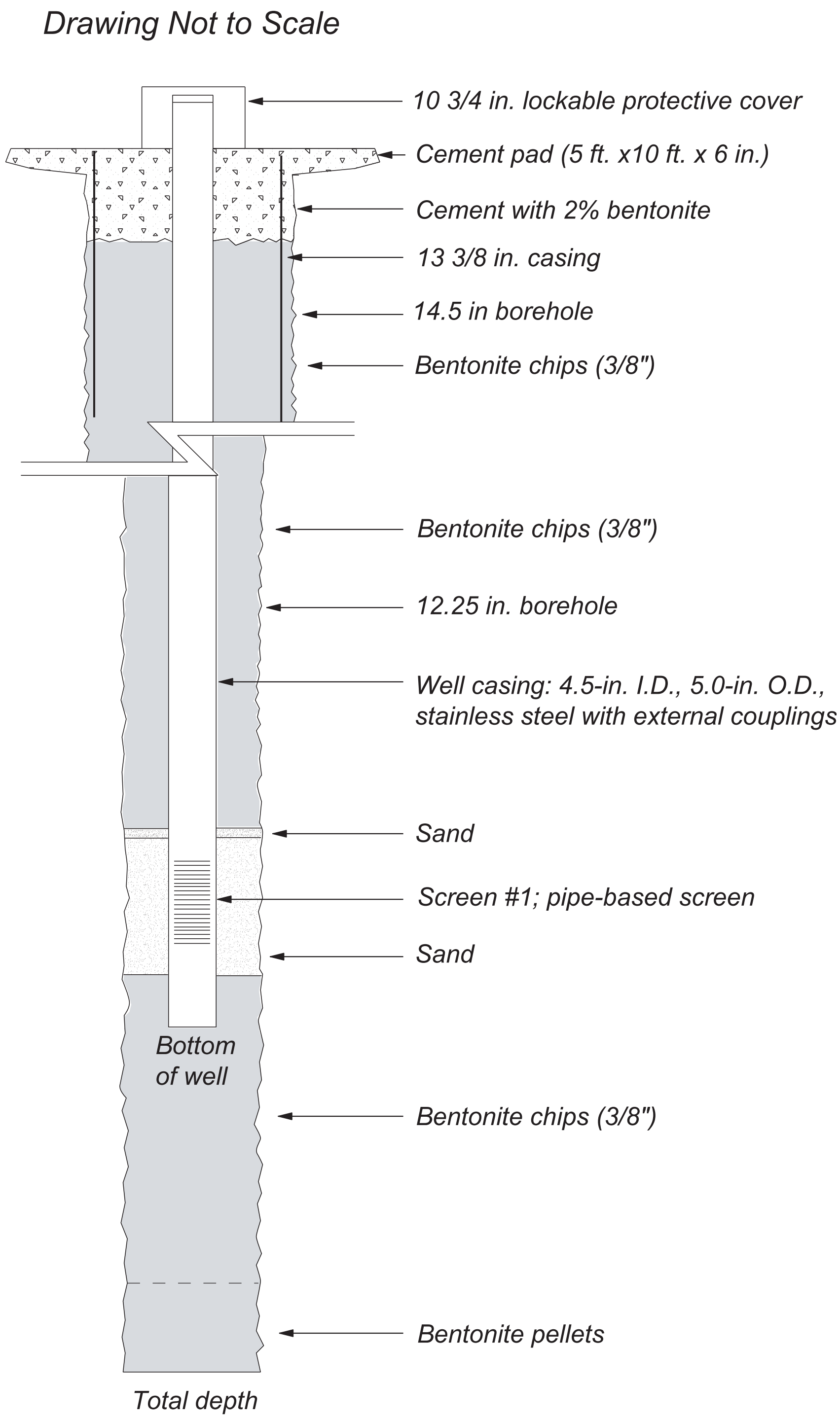

Figure 6.3-17. Schematic single completion well diagram

Borehole and Groundwater Sampling

The well sampling specified for these wells is a subset of what was proposed for the regional wells in the "Hydrogeologic Workplan" (LANL 1998, 59599.1). The key data needs are characterization of contaminant profiles, lithology, and hydrogeologic parameters. These needs will be met through sampling core and/or cuttings as well as groundwater, and through geophysical logging methods.

The following guidelines for sampling, extracted from the "Hydrogeologic Workplan," apply to these 260 CMS wells:

- A comprehensive cased-hole geophysical logging suite will be run through the drill string, immediately prior to the completion of each well.
- Core and cutting samples will be field-screened for HE using the spot test and D TECH immunoassay methods as necessary.
- Packer and slug tests will be completed at key geologic intervals as defined by the technical team hydrologist. These tests may be performed following well completion.
- At least five samples of cuttings or core will be collected from saturated zones for petrographic, X-ray fluorescence (XRF), and X-ray diffraction (XRD) analyses.
- Core sampling for vadose zone anions and stable isotopes ($\delta^{18}O$, δD, and possibly $\delta^{15}N$) will be done. Sampling will be done on a regular interval of 10 or 20 ft for intermediate-depth boreholes.
- Following completion and development of the wells, groundwater samples will be collected on a quarterly basis from each screened interval or Westbay-type port. These samples will be analyzed for the presence of HE, metals, and anions. One quarterly round of samples per year will be analyzed for volatile organic compounds, gross alpha and beta, and a full suite of geochemical parameters as required for geochemical modeling.

Geophysical logging will be conducted on each of the wells. The geophysical logs that will be completed will depend on borehole stability. If open-hole conditions can be maintained, a comprehensive suite of tools will be used. If casing is required, a more limited suite will be deployed.

The geophysical logs may include, but are not limited to, the items on the following list:

- Compensated thermal and epithermal neutron
- Electromagnetic induction
- Array induction
- Elemental capture sonde
- Natural gamma
- Spectral gamma
- Combined magnetic resonance
- Formation microimager
- Triple detector litho-density

- Hostile environment gamma-ray sonde
- Borehole color video (axial and sidescan)
- Accelerator porosity sonde
- General purpose inclinometer
- Pressure temperature sonde
- Full bore spinner

Insert this revised table on p. 84, in section 6.4.4, "Laboratory Analytical Procedures."

Table 6.4-3
Analyte Suites, Methods, and Protocols for Analysis of Soil and Water Samples

Analyte Suite	Analytical Method	Analytical Protocol*
HE	High performance liquid chromatography (HPLC)	SW-846, Method 8330
Metals	Inductively coupled plasma emission spectroscopy (ICPES) or inductively coupled plasma mass spectroscopy (ICPMS)	SW-846, Methods 6010 and 6020
Anions (nitrate, sulfate, perchlorate)	Ion chromatography	EPA Method 300, 310
Fluoride	Ion chromatography	EPA WW 340 series
Chloride	Ion chromatography	EPA WW 325 series
Bromide	Ion chromatography	EPA Method 300, EPA Method 320.1
HCO_3 (bicarbonate)	Titration	SW-846, Method 4500–CO_2
Volatile organic compounds	Gas chromatography mass spectrometry	SW-846, Method 8240
Gross alpha/beta	Gas proportional or liquid scintillation counting	Not available

* Or latest equivalent EPA method.

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Appendix H

Geophysics Report

LA-UR-03-7627
ER2003-0709

Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99

November 2003

Responsible project leader:

Printed Name	Signature	Title	Organization	Date
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Responsible UC representative:

Printed Name	Signature	Title	Organization	Date
David McInroy		Deputy Project Director	RRES-RS	

Responsible DOE representative:

Printed Name	Signature	Title	Organization	Date
David Gregory		Project Manager	DOE-LASO	

LA-UR-03-7627
November 2003
ER2003-0709

Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99

Los Alamos
NATIONAL LABORATORY

Los Alamos NM 87545

Disclaimer

This document contains data regarding radioactive wastes, the management of which is regulated under the Atomic Energy Act and specifically excluded from regulation under the Resource Conservation and Recovery Act and the New Mexico Hazardous Waste Act. These data are provided to the New Mexico Environment Department for information purposes only.

Produced by
Risk Reduction and Environmental Stewardship Division–Remediation Services

EXECUTIVE SUMMARY

This report describes the results of the Resource Conservation and Recovery Act (RCRA) corrective measures study (CMS) conducted at consolidated Solid Waste Management Unit (SWMU) 16-021(c)-99, located within Technical Area 16 (TA-16) at the Los Alamos National Laboratory (the Laboratory or LANL). This SWMU is associated with a former outfall located adjacent to Building 260, a building formerly used to process high explosives (HE). The former outfall and immediate area are also known as the TA-16-260 outfall, or the outfall source area (see Figure 1.2-1). The CMS was conducted according to the CMS plan for SWMU 16-021(c)-99, which was approved by the New Mexico Environment Department (NMED) in September 1999. The regulatory status of SWMU 16-021(c)-99 is shown in Table ES-1.

This CMS report proposes media cleanup standards (MCSs), evaluates remediation technologies, proposes corrective measure alternatives, and proposes a monitoring program to measure remedial progress for SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon. The CMS addresses surface and subsurface soils within the outfall source area and an underlying surge bed, as well as alluvial sediment, springs, surface water, and groundwater located within Cañon de Valle and Martin Spring Canyon. The identification and evaluation of alternatives for the site's deep vadose zone components (e.g., regional groundwater) was not conducted. A second CMS that will focus on regional groundwater will address these areas.

The CMS used the following process to develop MCSs: review of the Phase III RCRA Facility Investigation (RFI) (LANL 2003, 77965) list of chemicals of potential concern (COPCs) to identify CMS COPCs; review of the Phase III RFI risk assessment results; identification of applicable or relevant and appropriate requirements (ARARs); and identification or calculation of MCSs for each COPC.

The CMS COPCs identified include barium; manganese; hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX); hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine (DNX); hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine (MNX); and trinitrotoluene[2,4,6-] (TNT). CMS COPCs were identified for each area of the site.

The proposed ARARs for groundwater, surface water, and springs are the currently enforceable New Mexico Water Quality Control Commission (NMWQCC) human health standards for groundwater, 20 New Mexico Administrative Code (NMAC) 6.2.3103, Parts A and B. In applying these ARARs, this CMS treats all site waters as groundwater because of their interchangeability in the site hydrology. For alluvial sediment, the ARARs consist of NMAC 6.2.4103, Parts A and B. These ARARs contain both risk-based and standards-based (numerical standards) provisions from which the MCSs were derived. For the outfall source area, MCSs were derived from the Phase III RFI risk assessment results.

The risk-based provisions in the ARARs are dependent on the point of withdrawal of site waters and the human exposure scenario. Because of the future industrial use of the site and the presence of regional groundwater, this CMS identified two potential points of withdrawal for site waters: incidental water ingestion associated with industrial use and drinking water ingestion associated with residential use of the nearest municipal well. The latter point of withdrawal is applicable to shallow site groundwater because of the potential for shallow site groundwater to infiltrate to regional groundwater.

Risks associated with the industrial exposure scenario to shallow site water were calculated during the Phase III RFI and the results showed acceptable risk; according to the risk-based provisions of the ARARs, these results imply that remediation of site waters is not required. A risk assessment for residential use of the municipal well is planned for the regional groundwater CMS and will result in the development of risk-based MCSs for the CMS COPCs, including RDX and TNT, that existing numerical standards of the ARARs do not cover.

Proposed points of compliance (POCs) for the MCSs consist of five existing alluvial wells in Cañon de Valle, three existing alluvial wells in Martin Spring Canyon, two surface water sampling points along the perennial surface water reach of Cañon de Valle, one surface water sampling point in Martin Spring Canyon, and waters emanating from flowing springs. For alluvial sediment, the POCs are a set of statistically representative sediment sampling points at which leaching tests would be conducted. For the purposes of this CMS, compliance is defined as the attainment of the MCS for eight consecutive quarters of sampling results at a POC.

Several of the standard and innovative remediation technologies screened and identified as capable of attaining the MCSs were tested at the site. Technologies that rated favorably as a result of testing were assembled into corrective measures alternatives. These alternatives were evaluated using criteria consistent with the CMS Plan and RCRA.

For the outfall source area residual soils, the proposed alternative is soil removal and off-site disposal. For the outfall source area settling pond and surge bed, the proposed alternative is grouting of the surge bed to isolate residual HE and barium and maintenance of the cap that was installed in the settling pond area as part of the outfall source area interim measure.

For the Cañon de Valle and Martin Spring Canyon alluvial systems, the alternative is natural flushing of alluvial sediments and permeable reactive barrier (PRB) treatment of groundwater and surface water. The PRB is proposed to be composed of either zero valent iron or granulated activated carbon for HE treatment and calcium sulfate for the immobilization of barium. Final design of the PRB will be completed as part of the corrective measure implementation phase. Three PRBs for Cañon de Valle and one PRB for Martin Spring Canyon are proposed. The proposed alternative for springs is the installation of stormwater filters for the treatment of HE.

The proposed alternatives discussed above collectively constitute the proposed final remedy for 16-021(c)-99, with the exception of regional groundwater, which is deferred to the regional groundwater CMS.

Table ES-1
Summary of Proposed Action

SWMU Number	SWMU Description	HSWA	Radionuclide Component	Proposed Action	Rationale for Recommendation
16-021(c)-99	Outfall and drainage channel	Yes	No	Remediation	Contamination exceeds MCSs and poses the potential to adversely affect regional groundwater.

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1.0 INTRODUCTION

The purpose of this corrective measures study (CMS) report is to summarize all CMS activities and results to date; evaluate alternatives for remediation; and propose corrective measures, media cleanup standards (MCSs), and an associated monitoring program for Los Alamos National Laboratory (the Laboratory, or LANL) solid waste management unit (SWMU) 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon.

The Laboratory is a multidisciplinary research facility owned by the US Department of Energy (DOE) and managed by the University of California. The Laboratory is located in north-central New Mexico, approximately 60 mi northeast of Albuquerque and 20 mi northwest of Santa Fe. The Laboratory site covers 43 mi^2 of the Pajarito Plateau, which consists of a series of fingerlike mesas separated by deep canyons that contain perennial, ephemeral, and intermittent streams that run from west to east. Mesa tops range in elevation from approximately 6200 to 7800 ft. The eastern portion of the plateau stands 300 to 900 ft above the Rio Grande.

The Laboratory's Risk Reduction and Environmental Stewardship–Remediation Services (RRES-RS) project is involved in a national effort by the DOE to clean up facilities that were formerly involved in weapons production. The goal of the RRES-RS project is to ensure that the DOE's past operations do not threaten human or environmental health and safety in and around Los Alamos County, New Mexico.

RRES-RS, in coordination with the New Mexico Environment Department (NMED), has been actively investigating and assessing the contamination present in SWMU 16-021(c)-99 and adjacent Cañon de Valle and Martin Spring Canyon since 1990. Thus, the corrective measures and MCSs proposed in this CMS are the results of a series of extensive site-characterization and investigation efforts conducted by RRES-RS under the ongoing facility-wide investigation and the Resource Conservation and Recovery Act (RCRA) corrective action (CA) process.

1.1 Purpose and Regulatory Context

Under the RCRA CA Program (55 FR 30798; 61 FR 19432), the two main objectives of corrective action at a hazardous waste management facility are (1) to evaluate facility characteristics in relation to the nature and extent of the contaminant releases; and (2) to identify, develop, and implement appropriate corrective measure(s) to protect human health and/or the environment. At the Laboratory, the University of California and the DOE have instituted a CA program to protect human health and the environment from any potential releases of Laboratory-related hazardous waste or hazardous constituents.

For SWMU 16-021(c)-99, the CA investigation is taking place in accordance with both RCRA/HSWA requirements, as specified in Module VIII of the Laboratory's Hazardous Waste Facility Permit (EPA 1990, 01585). Module VIII was issued to the Laboratory by the EPA on May 23, 1990, and modified on May 19, 1994 (EPA 1994, 44146).

For contaminants released from SWMU 16-021(c)-99 into adjacent Cañon de Valle and Martin Spring Canyon, CA is being implemented in phases. These phases—preliminary RCRA facility assessment (RFA), RCRA facility investigation (RFI), interim measures (IMs), corrective measures study (CMS), and corrective measures implementation (CMI)—are outlined in EPA RCRA CA guidance and are consistent with the EPA's traditional approach to executing RCRA CA (55 FR 30798, 61 FR 19432).

Now actively in the CMS phase of RCRA CA, SWMU 16-021(c)-99 is a high-priority site for the RRES-RS project's CA program. SWMU 16-021(c)-99's pervasive contamination and complex hydrogeology have drawn out site remediation and characterization efforts into an extensive process. Table 1.1-1 presents all scheduled, ongoing, or completed RCRA-driven corrective actions for SWMU 16-021(c)-99 to date.

1.2 Facility Location and Background

Technical Area-16 (TA-16) is located in the southwest corner of the Laboratory (Figure 1.2-1). It covers 2410 acres, or 3.8 mi^2. The land is a portion of that acquired by the Department of Army for the Manhattan Project in 1943. TA-16 is bordered by the Bandelier National Monument along State Highway 4 to the south and the Santa Fe National Forest along State Highway 501 to the west. To the north and east, it is bordered by TA-8, -9, -11, -14, -15, -37, and -49. TA-16 is fenced and posted along State Highway 4. Water Canyon, a 200-ft-deep ravine with steep walls, separates State Highway 4 from active sites at TA-16. Cañon de Valle forms the northern border of TA-16.

The administrative boundary or focus area for the CMS is shown in Figure 1.2-2. The boundary runs along State Highway 501, follows the basin drainage divide between Water Canyon and Cañon de Valle to the south, and incorporates Martin Spring Canyon, Fishladder Seep Canyon, and Cañon de Valle to the north. The administrative boundary includes all the surface and subsurface terrain within the boundary except (1) other SWMUs, and (2) Fishladder Seep and its sub-basin. These potential contaminant sources are being addressed within the scope of other RRES-RS activities.

The administrative boundary is designed to incorporate the major source of contaminants in the basin, the former TA-16-260 outfall, and associated fate and transport pathways within Cañon de Valle and Martin Spring basins. Monitoring and data analysis within the administrative boundary will support decisions for conducting remedial activities at other potential contaminant source locations as well.

1.3 CMS Report Overview

This CMS report proposes corrective measures and associated monitoring programs for remediating SWMU 16-021(c)-99 surface and shallow subsurface soils within the outfall source area, as well as alluvial sediments, surface water, alluvial groundwater, and springs located within Cañon de Valle and Martin Spring Canyon. Regional groundwater and the associated deep vadose zone are not addressed in this report, but will be addressed by a second CMS focusing on these areas. The scope of the CMS with respect to the shallow system components of the site is presented in Table 1.3-1.

The CMS uses the following process to develop MCSs: review of the Phase III RFI (LANL 2003, 77965) chemicals of potential concern (COPCs) to identify CMS COPCs, review of Phase III RFI risk assessment results, identification of applicable or relevant and appropriate requirements (ARARs), and identification or calculation of MCSs for each COPC. According to EPA guidance, use of ARARs is a CERCLA requirement that is also suited to the development of MCSs under RCRA (EPA 1998, 80120).

The proposed ARARs for groundwater, surface water and springs consist of New Mexico Water Quality Control Commission (NMWQCC) human health standards for groundwater, 20 New Mexico Administrative Code (NMAC) 6.2.3103, Parts A and B. Under this ARAR, all site waters are treated as groundwater because of their interchangeability in the site hydrology. For alluvial sediment, the ARARs consist of NMAC 6.2.4103 A and B. These ARARs contain both risk-based and standards-based

Table 1.1-1
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
1990	RCRA facility assessment (RFA) (LANL 1990, 07512)	RFA initial site assessment is completed. Prior studies are summarized, and document extensive contamination in TA-16-260 sump water.
July 1993	Phase I RFI work plan—site characterization plan (LANL 1993, 20948)	"RFI Work Plan for Operable Unit 1082" is issued. Plan addresses Phase I sampling at SWMU 16-021(c).
May 1994	First addendum to Phase I RFI work plan (LANL 1994, 52910)	"RFI Work Plan for Operable Unit 1082, Addendum 1" is issued. Plan is approved by NMED in January 1995.
April 1995–November 1995	Phase I RFI site characterization	Phase I RFI is implemented, including Phase I investigation of SWMU 16-021(c)-99.
1995–1996	Interim action (IA)—best management practices (BMPs) (LANL 1996, 53838)	Sandbag dam and diversion pipe are installed upgradient from the former high explosives (HE) pond; sandbag dam is located east of the parking lot behind TA-16-260; geotextile fabric matting is placed in former HE pond area; eight hay bale check dams are placed within the SWMU drainage between the rock dam and the 15-ft-high cliff.
September 1996	Phase I RFI report (LANL 1996, 55077)	Phase I RFI report is issued. Data show widespread HE contamination at SWMU 16-021(c)-99, extending from the 260 outfall discharge point down to the sediment and waters of Cañon de Valle. Report is approved by NMED in March 1998.
September 1996	Phase II RFI work plan (part of LANL 1996, 55077)	Phase II RFI work plan is included in Phase I RFI report. Report is approved by NMED in March 1998.
November 1, 1996–December 23, 1996; May 1997–November 9, 1997	Phase II RFI site characterization	Phase II RFI is implemented at SWMU 16-021(c)-99.
September 1998	Phase II RFI report (LANL 1998, 59891)	Phase II RFI report is issued. Data confirm widespread HE contamination extending from the 260 outfall discharge point down to the sediment and waters of Cañon de Valle and show deeper subsurface contamination. Up to 1% total HE is detected in surge bed at a depth of 17 ft. Report documents risk to human health and the environment. Report is approved by NMED in September 1999.
September 30, 1998	CMS plan (LANL 1998, 62413.3)	CMS plan is issued. Alternatives are evaluated. Report includes Phase III RFI sampling plan and describes ongoing hydrogeologic investigations for the site. Report is approved by NMED in September 1999.
October 1998–present	Phase III RFI site characterization	Continued monitoring and sampling are used to characterize the temporal and spatial variability of site contamination; components of the site hydrogeologic system are undergoing continued evaluation.
October 1998–present	CMS—ongoing evaluation of alternatives	CMS is initiated. Series of soil and water corrective measures technologies are evaluated. Investigation of components of the site hydrogeologic system continues.

Table 1.1-1 (continued)
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
September 30, 1999	Addendum to CMS plan (LANL 1999, 64873.3)	Addendum to CMS plan is issued. Addendum expands investigations to include deeper perched and regional groundwater potentially impacted by releases from SWMU 16-021(c)-99.
November 1999	Interim measure (IM) plan—abatement of potential risks at the source area (LANL 2000, 64355.4)	IM plan is issued. Plan specifies removal of the highly contaminated soil and tuff identified in the 260 outfall drainage channel. Plan is approved by NMED in April 2002.
November 12, 1999–November 18, 2000	Abatement of ongoing risks is initiated	TA-16-260 IM begins. Activities are interrupted by Cerro Grande fire. Initial stage of project is completed in November 2000.
January 7, 2000	Contained-in determination (NMED 2000, 64730)	NMED memo of contained-in determination is sent to the Laboratory (J. Brown) and DOE-ER (T. Taylor).
April 4, 2000	Designation of area of contamination (NMED 2000, 70649)	NMED designates SWMU 16-021(c)-99 an area of contamination. Purpose of designation is to allow material from entire drainage area to be excavated, processed, and segregated without invoking RCRA land disposal restrictions. Excavated material considered potentially hazardous waste is staged in covered piles within area-of-contamination boundary.
June 5, 2000	In situ blending authorization (NMED 2000, 67094)	NMED authorizes in situ blending in memo sent to the Laboratory and DOE. To ensure worker health and safety during the IM and after, settling pond soil is robotically blended in situ with clean or low HE concentration material to reduce maximum concentration of settling pond sediment to below-reactive limit.
August 4, 2001–October 13, 2001	Abatement of ongoing risks is completed	Remobilization and removal of isolated areas containing more than 100 mg/kg of RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) is completed. Waste disposal stage of project is completed.
July 2002	260 outfall IM report (LANL 2002, 73706)	IM results are presented in IM report. Report is approved by NMED in January 2003.
March 2003	Revision 1 to CMS plan addendum—evaluation of alternatives (LANL 2003, 75986.2)	Addendum to CMS plan is updated. Investigation into deeper perched and regional groundwater and deeper vadose zone potentially impacted by releases from SWMU 16-021(c)-99 is expanded further. Plan is approved by NMED in March 2003.

Table 1.1-1 (continued)
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
September 2003	Phase III RFI report (LANL 2003, 77965)	Report focuses on investigations into the surface water, alluvial groundwater, canyon sediment, and springs in Cañon de Valle and Martin Spring Canyon. Report includes analysis of data generated since Phase II RFI report (post-1998) and baseline risk assessments using a comprehensive database of both pre- and post-1998 data and emphasizes greater understanding of site hydrogeology and contaminant behavior. Report presents human health baseline risk assessments, one for source area, one for a selected reach of Cañon de Valle. In addition, a baseline ecological risk assessment is performed for that reach of Cañon de Valle.
November 2003	CMS report for alluvial system corrective measures evaluated/selected (this report)	CMS report for SWMU 16-021(c)-99 alluvial system. Report is a companion document to Phase III RFI report and relies heavily on the understanding of site hydrogeology and contaminant behavior outlined in that document. Report evaluates potential remedial technologies for each media and proposes appropriate technologies.
March 2006	CMS report issued for regional groundwater system—corrective measures evaluated/selected	CMS report for SWMU 16-021(c)-99 deep perched and regional groundwater system will be issued. Data will be used to support risk assessments that include the deep perched saturated zone and the regional aquifers as pathways.
Pending	Corrective measures implementation (CMI)	Final evaluation, selection, and design of selected treatment technology for impacted site media will be presented. CMI will include refinements to long-term monitoring program and criteria for establishing the attainment of media cleanup standards.
Pending	Long-term monitoring	Verification that remedies are/were effective.

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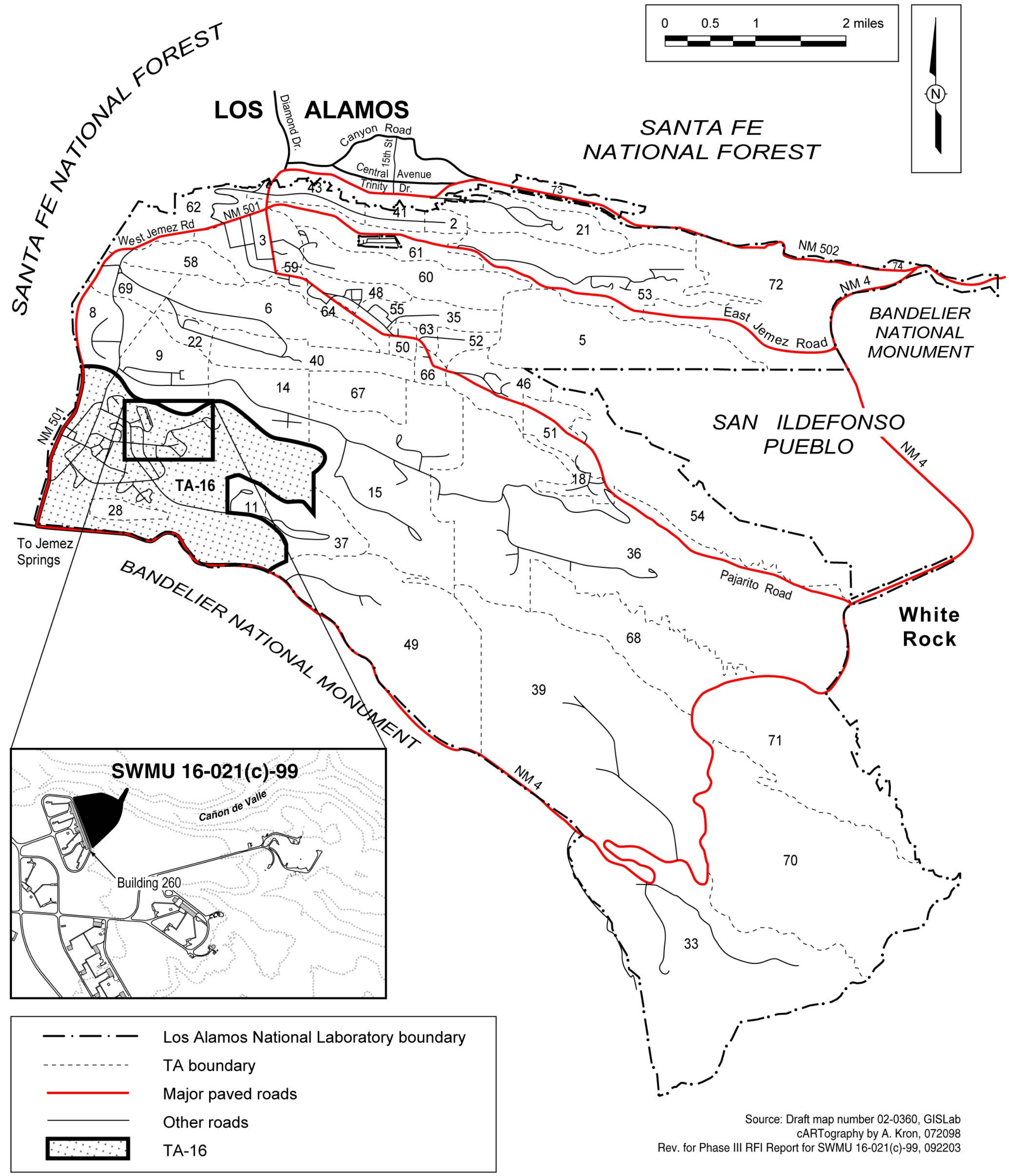

Figure 1.2-1. Location of TA-16 with respect to Laboratory technical areas and surrounding landholdings; Building 260 is also shown

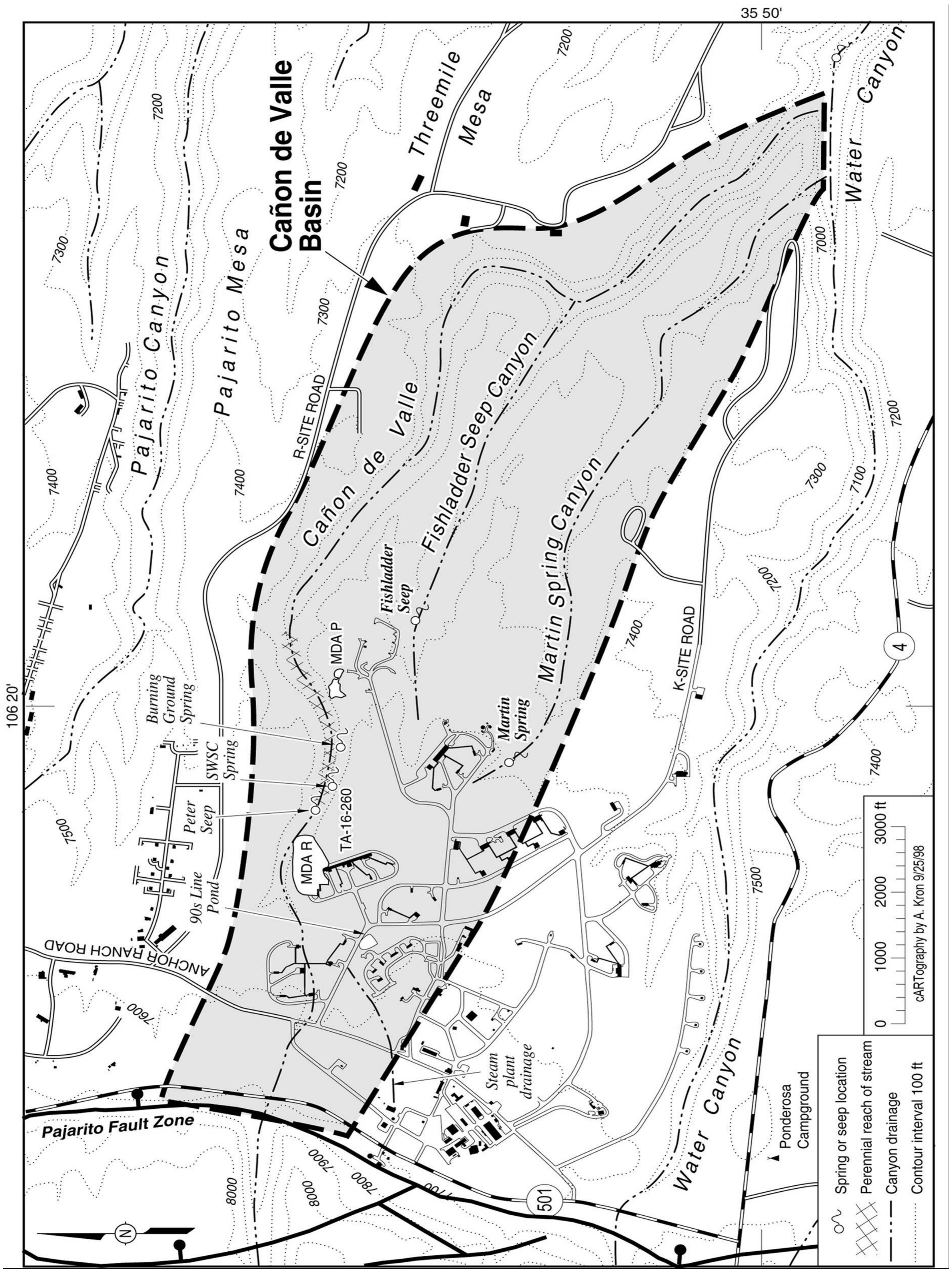

Figure 1.2-2. Administrative boundary for the SWMU 16-021(c)-99 CMS

Table 1.3-1
Scope of CMS Report and Components of SWMU 16-021(c)-99

Conceptual Model Component	CMS Scope
Outfall and pond surge beds	SWMU 16-021(c)-99 outfall area and settling pond 17-ft surge bed addressed in this report
Mesa vadose zone	Inaccessible to direct human and ecological exposure, though important in overall contaminant transport; addressed as part of springs component.
Alluvial sediments	Both Cañon de Valle and Martin Spring Canyon alluvial sediments addressed in this CMS
Springs	Springs in Cañon de Valle and Martin Spring Canyon addressed in this CMS
Surface water	Perennial surface water addressed in this CMS
Alluvial groundwater	Addressed in this CMS for Cañon de Valle (within approximately 7000 ft east of outfall) and Martin Spring Canyon
Deep vadose zone with perched groundwater table	Not addressed in this CMS; will be addressed by regional aquifer CMS
Regional aquifer	Not addressed in this CMS; will be addressed by regional aquifer CMS

(numerical standards) provisions from which the MCSs were derived. For the outfall source area, MCSs were derived from the Phase III RFI risk assessment results.

The risk-based provisions in the ARARs are dependent on the point of withdrawal of site waters and the human exposure scenario. Based on the future industrial use of the site and the presence of regional groundwater, two potential points of withdrawal for site waters were identified: incidental water ingestion associated with industrial use, and residential drinking water use at the nearest municipal well. The latter point of withdrawal is applicable to shallow site groundwater because of its potential to infiltrate to regional groundwater.

Risks associated with to shallow site water were calculated during the Phase III RFI and showed acceptable risk for a trail user; under the risk-based provisions of the ARARs, these results imply that remediation of site waters is not required. However, a risk assessment for the municipal well scenario has not been completed to date, but is planned for the regional groundwater CMS. This will result in a risk-based MCSs for those CMS COPCs not previously covered under existing numerical standards, including RDX and trinitrotoluene[2,4,6-] (TNT).

Although regional groundwater is addressed in a second CMS, the relationship between the shallow and deep systems and the contamination effects on the site's deeper systems are considered in the evaluation of alternatives for the shallow system.

The preferred alternative identified in this CMS meets the following criteria:

- be protective of human health and the environment,
- attain the MCS for each media within a compliance time frame (CTF),
- provide source control to reduce or eliminate further releases of COPCs that are potentially threatening to human health and the environment, and
- comply with the standards for management of wastes generated as part of the CMI.

This CMS is organized into 8 sections. Section 1 provides an introduction and regulatory overview. Section 2 provides a site history. Section 3 presents a summary of current site conditions and the site conceptual model (SCM). Section 4 presents the MCSs proposed for the site. Section 5 presents the preliminary screening of remedial technologies to be used at the site. Section 6 presents the assembly and evaluation of corrective measures alternatives. Section 7 provides a summary of the preferred alternatives, their associated monitoring plans, and the uncertainties in the SCM that may require further definition as part of the CMI. Section 8 provides references. Appendix A is a list of acronyms and a glossary. Appendix B provides summary tables of Phase III RFI COPCs. Appendix C provides life cycle cost estimates for the corrective measures alternatives. Appendix D presents the public involvement plan (PIP).

2.0 SITE HISTORY

2.1 History of TA-16 Operations

TA-16 was established to develop explosive formulations, to cast and machine explosive charges, and to assemble and test explosive components for the US nuclear weapons program. Present-day use of this site is essentially unchanged, although facilities have been upgraded and expanded as explosives and manufacturing technologies have advanced.

The TA-16-260 facility, which has operated since 1951, is an HE-machining building that processes large quantities of HE. Machine turnings and HE washwater are routed as waste to 13 sumps associated with the building. Historically, the sumps were routed to the TA-16-260 outfall, where, historically, discharges as high as several million gal. per year occurred (LANL 1994, 76858).

In the late 1970s, the TA-16-260 outfall was permitted to operate by the EPA as EPA Outfall No. 05A056 under the Laboratory's National Pollutant Discharge Elimination System (NPDES) permit (EPA 1994, 12454). The last NPDES permitting effort for this TA-16-260 outfall occurred in 1994. The NPDES TA-16-260 outfall was deactivated in November 1996; it was officially removed from the Laboratory's NPDES permit by the EPA in January 1998. This waste stream is currently managed by pumping the sumps and treating the water at the TA-16 HE wastewater plant, which was completed in 1997.

Both the outfall and the drainage channel below the outfall are contaminated with HE and barium. The sumps and drainlines of this facility are designated as SWMU 16-003(k), and the outfall and drainage are designated as SWMU 16-021(c) in Module VIII of the Laboratory's Hazardous Waste Facility Permit (EPA 1990, 01585). Following the Laboratory's SWMU-consolidation effort, the two SWMUs are now collectively referred to as SWMU 16-021(c)-99. Prior to the Phase I RFI and Phase II RFI at SWMU 16-003(k) and 16-021(c), known contaminants included barium, RDX; TNT; and cyclotetramethylenetetranitramine (HMX). Suspected contaminants included other HE compounds, additional inorganic chemicals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and uranium.

2.2 SWMU Description

SWMU 16-021(c)-99 is a consolidation of two SWMUs: SWMU 16-003(k) and SWMU 16-021(c).

The part of SWMU 16-021(c)-99 that is designated SWMU 16-003(k) comprises 13 sumps and approximately 1200 ft of associated drainlines or troughs that ran from the HE machining building (TA-16-260) to the outfall. HE-contaminated water flowed from the sumps into the concrete drainlines and ultimately to the TA-16-260 outfall, located approximately 200 ft east of Building 260. Building 260 is located on the north side of TA-16 (Figure 2.2-1). The structure was originally built in 1951, with minor modifications made to the structure at a later date. SWMU 16-003(k) is not addressed in this CMS. Limited characterization was conducted as part of the Phase I RFI (LANL 1996, 55077).

The part of SWMU 16-021(c)-99 that is designated SWMU 16-021(c) comprises a well-defined upper drainage channel fed directly by the TA-16-260 outfall, a settling pond, and a lower drainage channel leading to Cañon de Valle. The settling pond, excavated during the 2000 IM, is approximately 50 ft long and 20 ft wide and was located within the upper drainage channel, approximately 45 ft below the outfall.

The drainage channel runs approximately 600 ft northeast from the outfall to the bottom of Cañon de Valle. A 15-ft near-vertical cliff is located approximately 400 ft from the outfall and marks the break between the upper and lower drainage channels.

A settling pond approximately 55 ft long is also part of SWMU 16-021(c)-99. HE-contaminated water from the outfall entered the settling pond about 40 ft from the TA-16-260 outfall. The settling pond and outfall drainage channel area were the primary source for the contamination identified in downgradient components of the SWMU 16-021(c)-99 hydrogeologic system. An IM was conducted during 2000 and 2001, and more than 1300 yd^3 of contaminated soil were excavated from the settling pond and channel. Approximately 90% of the HE that existed in the SWMU 16-021(c)-99 source area was removed during the IM (LANL 2002, 73706). The residual contamination in the TA-16-260 outfall source area is addressed in this report.

2.3 Adjacent Land Use

The land adjacent to the outfall site is dedicated to continued Laboratory operations. Other SWMUs located in the vicinity of the outfall are shown on Figure 2.3-1 and described below.

- Material Disposal Area (MDA) R (SWMU 16-019)—This MDA is located northwest (upcanyon) of the TA-16-260 outfall area. MDA R was constructed in the mid-1940s and used as a burning ground and disposal area for waste explosives and possibly other debris. Potential contaminants at this MDA include HE, HE byproducts, and metals (particularly barium). Use of the site was discontinued in the early 1950s. Soil removal and site investigations were conducted at MDA R following the Cerro Grande fire (LANL 2001, 69971.2), but barium and HE residual contamination are still present.
- The Burning Ground SWMUs [16-010(b), (c), (d), (e), (f), (h)-99, 16-028(a), and 16-016(c)-99]—These SWMUs are located on a level portion of the mesa in the northeast corner of TA-16. The burning ground was constructed in 1951 for HE waste treatment and disposal. Over the years, hundreds of thousands of pounds of HE and HE-contaminated waste material have been burned at this location. The remaining noncombustible material was subsequently placed in MDA P (SWMU 16-018), north of the burning ground (through 1984), or taken to TA-54 for disposal (1984 to present). A barium nitrate pile was located at the TA-16 Burning Ground for many years. Site investigations have been conducted at several of these SWMUs (LANL 2003, 76876). Information was also obtained from investigations conducted between 1997 and 2002 at Flash Pad 387 and the consolidated SWMU 16-016(c)-99. Flash Pad 387 underwent clean closure and the sites representing consolidated SWMU 16-016(c)-99 underwent voluntary corrective action (VCA) concurrently with the MDA P clean closure.

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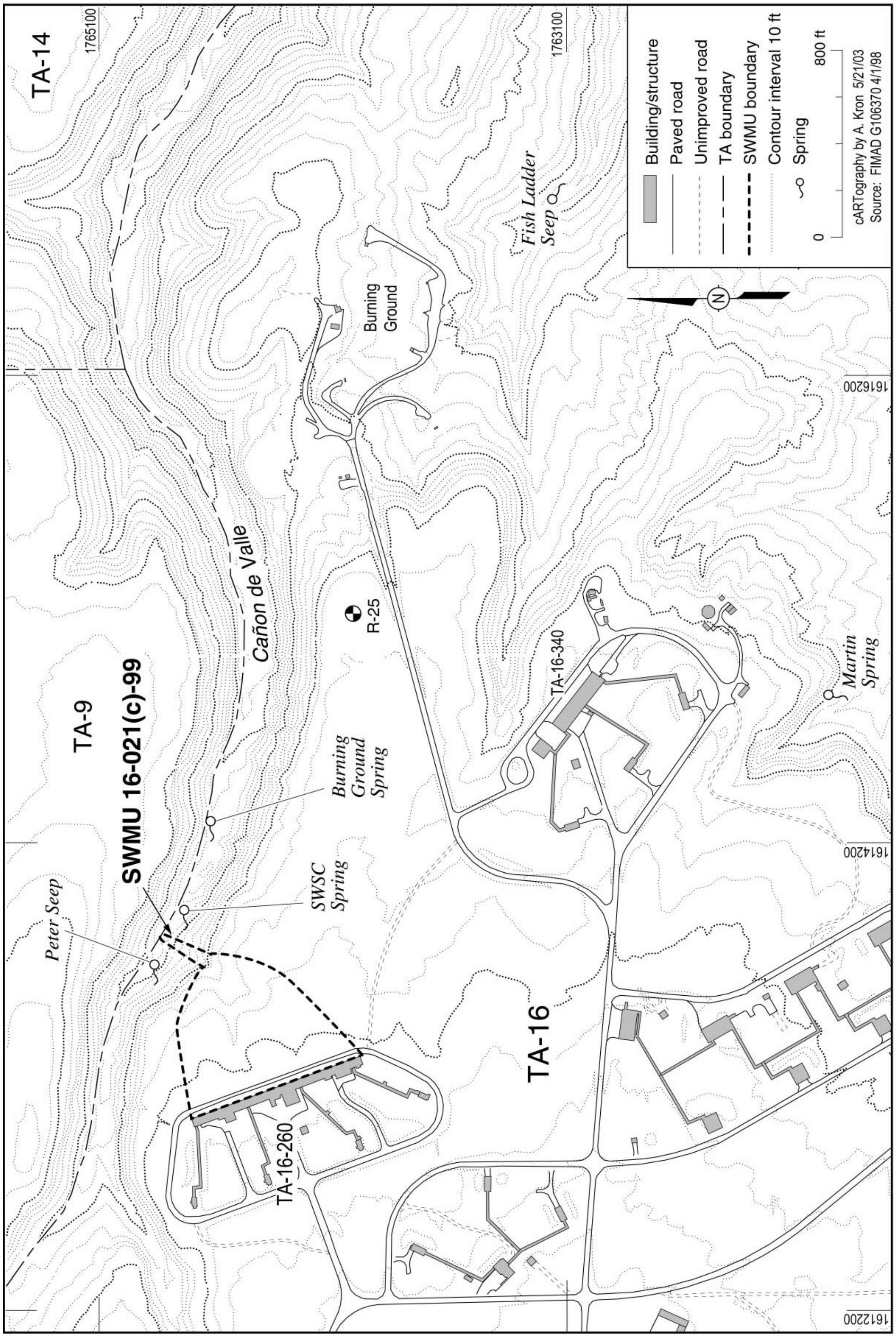

Figure 2.2-1. Location of SWMU 16-021(c)-99 and associated physical features

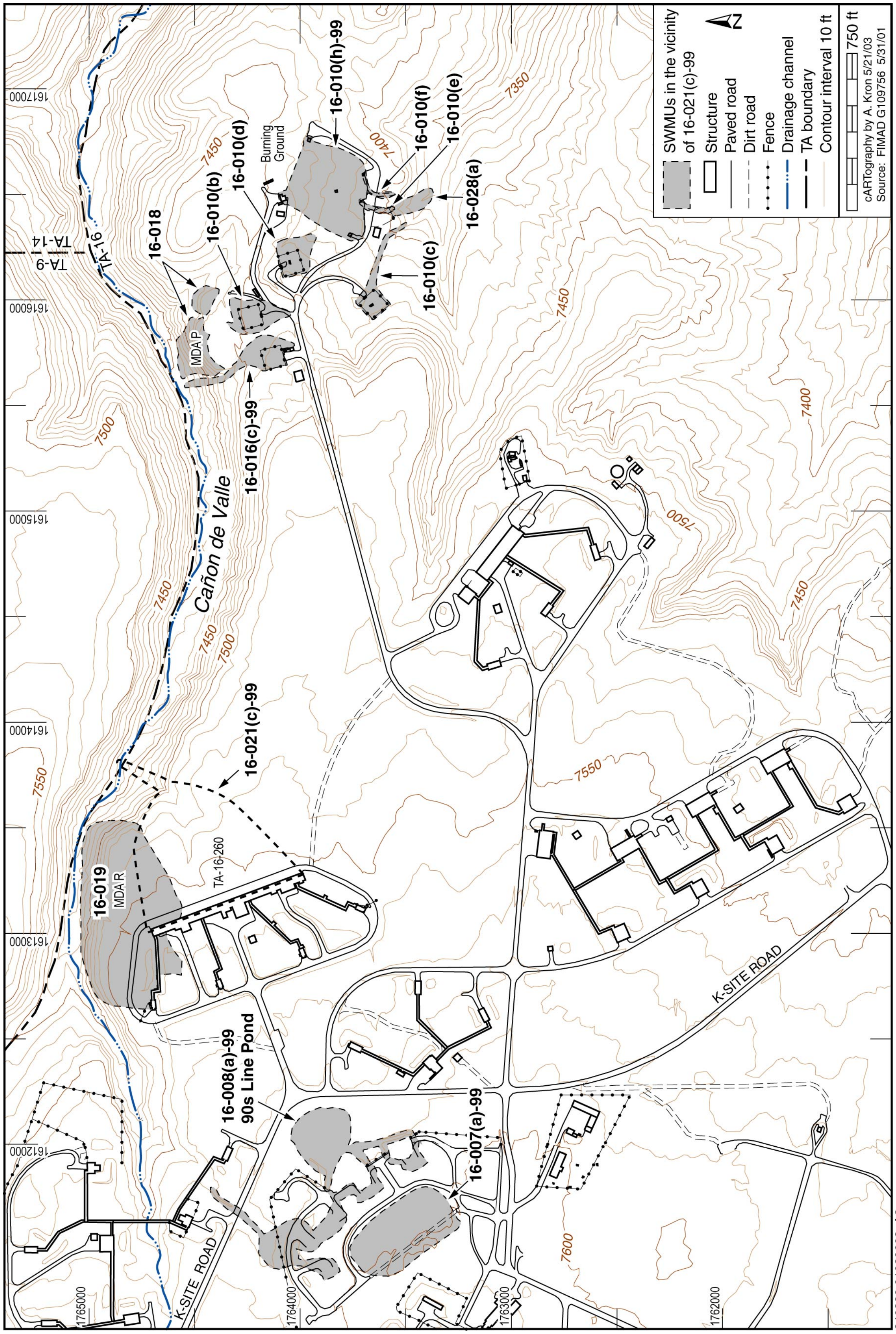

Figure 2.3-1. SWMUs in the vicinity of SWMU 16-021(c)-99

MDA P (SWMU 16-018)—This MDA contained wastes from the synthesis, processing, and testing of HE; residues from the burning of HE-contaminated equipment; and construction debris. HE waste-disposal activities at this site started in the early 1950s and ceased in 1984. The site is located on the south slope of Cañon de Valle. Removal of hazardous waste and hazardous waste residues was recently completed at MDA P to support closure and entailed the removal of approximately 55,000 yd^3 of soil and debris (LANL 2003, 76876).

The 90s Line Pond portion of consolidated SWMU 16-008(a)-99. The 90s Line Pond is an inactive unlined settling pond located a few hundred ft southwest of Building 260. The pond received HE, barium, and organic chemicals from machining operations discharge from TA-16-89, -90, -91, -92, and -93. Visible HE has been removed from a site east of the pond.

Historically, these SWMUs contained contaminants similar to those found in SWMU 16-021(c)-99. Moreover, these SWMUs are located within the Cañon de Valle drainage.

2.4 Previous Environmental Investigations

Sampling and analysis data have been collected for the outfall [SWMU 16-021(c)-99] since the early 1970s and have indicated substantially elevated HE contamination in the sediment, the outfall, the outfall settling pond and drainage channel water. Concentrations of up to 27 wt% of HMX and RDX have been documented in the area of the settling pond. The data showed HE contamination extending from the discharge point to Cañon de Valle (Baytos 1971, 05913; Baytos 1976, 05920). These historical data have been summarized in the Phase I and II RFI reports for SWMUs 16-003(k) and 16-021(c) (LANL 1996, 55077; LANL 1998, 59891).

This section summarizes the data from the Phase I and II RFIs and the IM. The Phase III RFI data are summarized in section 3, "Current Site Conditions." All available data for the site were used to build an SCM to support CMS activities.

2.4.1 Source Area Investigation and IM

The Phase I RFI primarily consisted of surface sampling and sample analysis within the drainage area. The Phase II RFI (LANL 1998, 59891) included surface sampling and analysis of surface and near-surface material within the drainage and sampling 13 boreholes (BHs) drilled to depths between 17 and 115 ft in and near the drainage. The Phase II RFI also included extensive field-screening for RDX and TNT using immunoassay methods, and sampling and analysis for HE and other chemicals.

Elevated concentrations of HE and barium were reported within drainage channel soils from the surface to the soil/tuff interface. Soil thicknesses were approximately 5.5 ft in the settling pond area and drainage at a distance of about 40 to 95 ft downstream from the outfall, and they were approximately 1 ft at a distance of 300 to 400 ft downstream from the outfall. Phase I and Phase II surface sampling and analyses showed that surface contamination did not extend laterally beyond the reasonably well-defined drainage.

Subsurface sampling and analyses indicated HE concentrations decreased rapidly below the soil/tuff interface. However, up to 1000 mg/kg of HE were detected in tuff within the uppermost tuff unit (Unit 4 of the Tshirege Member of the Bandelier Tuff, Qbt4) beneath the settling pond area. Approximately 1% HE was reported under the settling pond at a depth of 17 ft within a surge bed of Unit 4 of the Tshirege Member of the Bandelier Tuff (LANL 1998, 59891). Below this surge bed, HE was detected sporadically and at much lower concentrations (less than 5 mg/kg). However, thin surge bed deposits were reported in a borehole drilled into the center of the settling pond during the IM, at depths of 40 ft and 46 ft below ground surface (bgs), indicating multiple potential transmissive zones at depth (LANL 2002, 73706).

HE and barium are the principal contaminants found at the outfall, although several other metals, including cadmium, chromium, copper, lead, nickel, vanadium, and zinc, are consistently detected above background in the drainage. Other organic compounds (SVOCs, VOCs, and polychlorinated biphenyls) were also detected in one to four samples each. Details and results from the Phase I and Phase II RFIs are presented in two RFI reports (LANL 1996, 55077; LANL 1998, 59891). Phase III RFI (LANL 2003, 77965) results for the source area, including post-IM sampling results, are summarized in section 3.

From the winter of 2000 through the summer of 2001, an IM was conducted to remove contaminated material from the TA-16-260 outfall drainage area. The IM successfully removed the bulk of contamination from the outfall drainage channel. More than 1300 yd^3 of contaminated soil were excavated and disposed of at off-site facilities. Of this amount, more than 200 yd^3 of characteristic hazardous waste for reactivity (D003), which contained HE in concentrations of approximately 2 wt%, were treated by the selected disposal facility prior to disposition. An IM report for SWMU 16-021(c)-99 details the IM activities and results (LANL 2002, 73706).

2.4.2 Alluvial System Investigations

The Phase II RFI sampling in the Cañon de Valle alluvial system included the collection of surface and subsurface sediment, three pairs of overbank sediment samples, filtered and unfiltered surface water, and one quarterly round of filtered and unfiltered alluvial groundwater from five alluvial groundwater wells. These samples were collected during three different investigations in 1994, 1996, and 1997/1998.

Barium was the most abundant inorganic contaminant in sediment. For the surface samples, barium ranged from 6.3 mg/kg to 40,300 mg/kg. Other inorganic chemicals that were consistently measured above background include cadmium, chromium, copper, lead, nickel, vanadium, and zinc. Several HE were detected: the amino-dinitrotoluenes (A-DNTs), HMX, nitrobenzene, 3-nitrotoluene, RDX, 1,3,5-trinitrobenzene (TNB), and TNT. The two HE compounds highest in abundance and concentration were HMX and RDX. Their maxima were 170 mg/kg and 42 mg/kg, respectively.

Surface water samples and alluvial groundwater samples from five alluvial wells and Peter Seep were collected in Cañon de Valle. Filtered/unfiltered sample pairs were collected in 1994 and 1997/98; primarily unfiltered samples were collected in 1996. The concentration differences between the filtered and unfiltered samples are small. The inorganic chemicals identified as COPCs in all water were antimony, barium, chromium, lead, manganese, mercury, nickel, vanadium, and zinc. Barium is the most abundant, with concentrations ranging from 99 to 16,000 µg/L. As in the sediment, HE appears to be the other major COPC in Cañon de Valle surface water and alluvial groundwater. The HE COPCs identified were A-DNTs, HMX, nitrobenzene, 2-nitrotoluene, RDX, TNB, and TNT. RDX has the highest concentration, with a maximum concentration of 818 µg/L in surface water. Contaminant concentrations in surface water and groundwater generally decrease downgradient from Peter Seep to the confluence of Cañon de Valle with Water Canyon (LANL 1998, 59891).

Phase III RFI alluvial system investigation results are discussed in section 3, "Current Site Conditions."

2.4.3 Subsurface System Investigation

The intermediate-depth borehole investigation included drilling five BHs (126 to 207 ft) at locations on the mesa top that were likely to intersect the perched water-bearing zones. The local trend of subunit-subunit contacts is to the north and east. Two of these BHs intersected ephemeral perched water. In each case, the water dissipated in less than 1 month. Analysis of this perched water indicated low concentrations (generally ppb) of HE.

The springs investigation included quarterly sampling of SWSC, Burning Ground, and Martin Springs. Results indicate that all three springs are contaminated with RDX and other HE. Several major cations and anions, including calcium, magnesium, sodium, and boron, were detected. Boron is particularly elevated (1800 μg/L) in Martin Spring. Aluminum, iron, barium, phosphate, and nitrate were also elevated. Although low levels (ppb) of VOCs have been detected in all three springs, detections were sporadic and occurred primarily during the quarterly sampling round of June 1997.

A time-series analysis of the springs data indicates extreme variability in the concentration of constituents (up to a factor of 20 in RDX concentration at Martin Spring). Similarities in element variability and flow-rate changes over time indicate that SWSC Spring and Burning Ground Spring are hydrogeologically related, but that Martin Spring probably represents a different hydrogeological system.

A potassium bromide tracer was deployed at SWMU 16-021(c)-99 during April 1997. A breakthrough of bromide ions was observed in SWSC Spring during August 1997. Bromide breakthrough may also have occurred at Burning Ground Spring during August 1997, but the effects were more subtle, due to partial masking by variability in all the anions (LANL 1998, 59891). These bromide results indicate that the springs are hydrologically connected to the SWMU 16-021(c)-99 source area.

3.0 CURRENT SITE CONDITIONS

This section describes current site conditions with respect to current and future site usage and the current concentration and distribution of COPCs. The latter discussion uses the SCM as a framework. The COPCs identified during the Phase III RFI (LANL 2003, 77965) reflect Phase III RFI organic and inorganic data, and Phase II RFI (LANL 1998, 59891) radionuclide data. Consequently, these COPCs are termed RFI COPCs. Given the results of the Phase III RFI risk assessment, for the CMS, a more restrictive set of CMS COPCs screening rules are applied, including ubiquity of detection, association with known sources as opposed to naturally occurring, and potential adverse effects on regional groundwater. These new screening criteria are described in section 3.2

3.1 Current and Reasonably Foreseeable Future Land Use

According to the Laboratory's comprehensive site plan of 2000 and its 2001 update (LANL 2000, 76100; LANL 2001, 70210.1), future land use at TA-16 is designated as HE research and development and HE testing. Most areas within TA-16 are active sites for the Engineering Science and Application Division of the Laboratory, and construction of new buildings and other facilities in the area is possible.

Accordingly, the Phase III RFI risk assessment assumed an industrial scenario for the outfall source area that incorporated potential exposures for an on-site environmental worker, a trail user, and a construction worker (LANL 1998, 59173). For Cañon de Valle and Martin Spring Canyon, the baseline risk assessment was limited to potential exposures associated with a trail user. Potential exposures and risks associated with extracted regional groundwater will be evaluated and quantified in the groundwater CMS.

3.2 Development of CMS COPCs

For the development of RFI COPCs, the Phase III RFI (LANL 2003, 77965) used a screening process that included state and federal standards and guidelines for water and screening action levels (SALs) for soil, sediment, and tuff. This process yielded a representative list of COPCs that were used for the Phase III RFI risk assessments for alluvial groundwater, surface water, springs, alluvial sediment, and water. For site water, the screening standards and guidelines are presented in Table 3.2-1.

Table 3.2-1
Phase III RFI Screening Standards and Guidelines for Canyon Waters

US EPA MCLs
EPA Region 6 Tap Water Screening Levels
NMWQCC Groundwater Standards for Irrigation Use (20 NMAC 6.2.3103)
NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900)
NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103)
NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103)
NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900)
2003 California DHS Action Level

Sources: 20 NMAC 6.2.3103, “Standards for groundwater of 10,000 mg/l TDS concentration or less,” Parts A, B, and C; 20 NMAC 6.4.900, “Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC,” Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

The Phase III RFI risk assessment showed acceptable risk outside of outfall source area soils. The regional groundwater that lies more than 1000 ft beneath the site, however, is a component of the regional drinking water aquifer. Potential risks to regional groundwater were not assessed in the Phase III RFI, but will be assessed during the regional groundwater CMS, which is to be completed at a later date. Although certain RFI COPCs showed acceptable risks during the Phase III RFI risk assessment, they cannot be eliminated as CMS COPCs because the regional groundwater risk assessment has not yet been completed. These CMS COPCs include RDX, which has been detected in regional groundwater in monitoring well R-25 (LANL 2003, 75986.2) (Figure 3.2-1).

When developing the CMS COPCs, therefore, a measure of judgment must be used to eliminate those RFI COPCs that do not pose an unacceptable risk in the industrial scenario and do not pose a potential risk to regional groundwater. In recognition of these conditions, CMS screening criteria are used that are a subset of the Phase III RFI screening criteria. This subset recognizes both the current and future industrial use of the site as well as the presence of regional groundwater more than 1000 ft below the site.

The CMS COPC screening criteria for site waters are listed in Table 3.2-2. Both EPA maximum contaminant levels (MCLs) and NMWQCC standards are used, specifically NMWQCC, Subpart IV, 4103 A and B, for toxic pollutants at a threshold cancer risk of 10^{-5} and groundwater standards listed in NMWQCC, Subpart III, 3103 A and B. For compounds such as RDX which are not included in NMWQCC standards, and are not toxic pollutants subject to a 10^{-5} cancer risk threshold, EPA screening levels for tap water at a 10^{-6} cancer risk (EPA 2003, 76867) are used. For perchlorate, the California Department of Health Services (DHS) action level of 4 µg/L is used. Note that these CMS screening standards are different from the ARARs proposed in section 4 for regional groundwater, from which MCSs are, in part, derived.

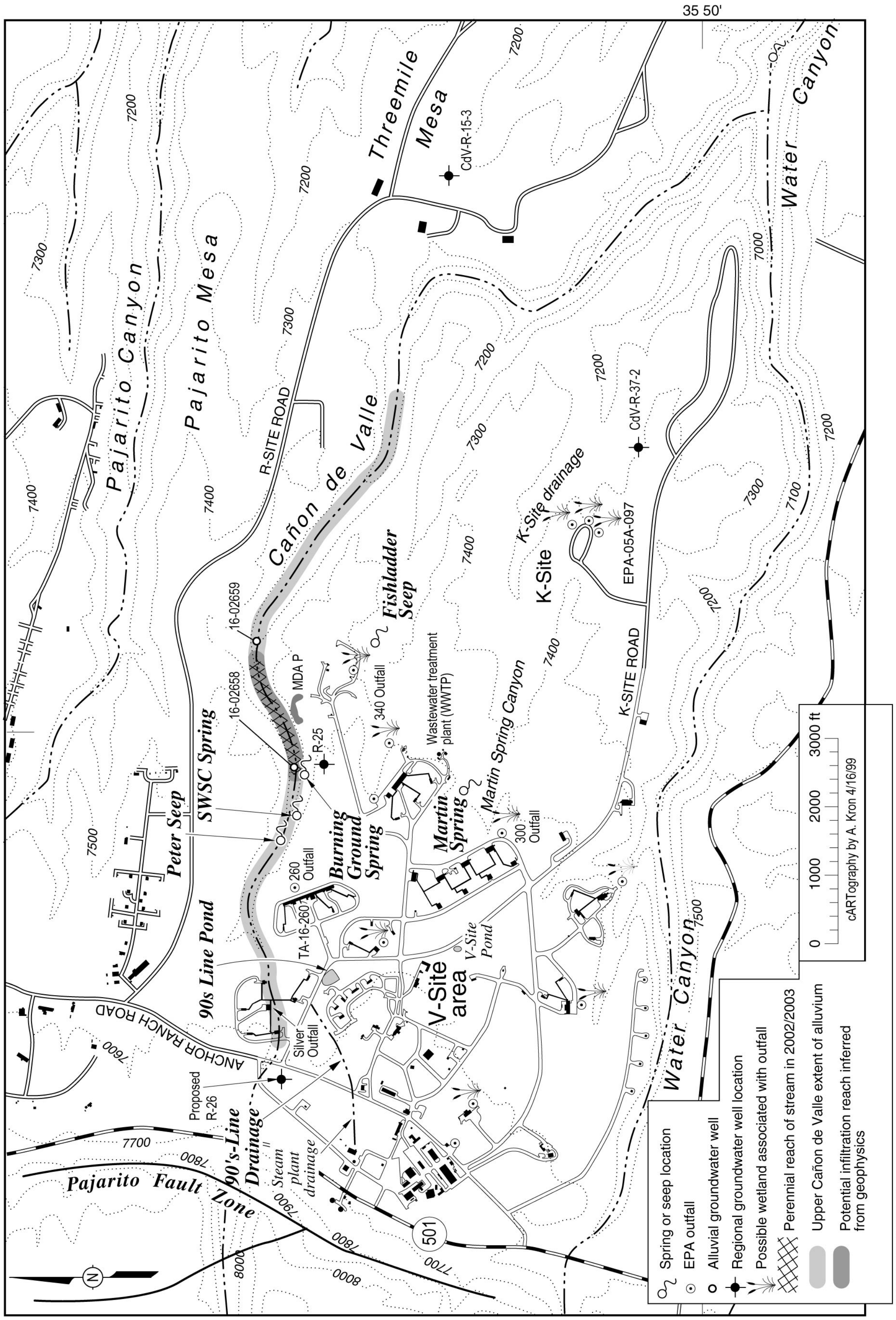

Figure 3.2-1. Map of surface physical features important for the SCM

Table 3.2-2
CMS COPC Screening Criteria for Canyon Waters

US EPA MCLs
EPA Region 6 Tap Water Screening Levels
NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103)
NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103)
2003 California Department of Health Service (DHS) Action Level
Prevalence of detection
Relationship with an anthropogenic source
Potential for adverse effects on regional groundwater

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A and B; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

After comparison with the regulatory and advisory thresholds cited above, each COPC is then examined with respect to its prevalence and distribution, suspected sources, and potential to adversely affect regional groundwater.

The CMS COPCs identified for Cañon de Valle and Martin Spring Canyon groundwater, surface water, and springs are also carried over to alluvial sediment in these locations, if they were detected in sediment. Such a translation recognizes that alluvial sediment is an integral part of the hydrogeologic system.

The process for canyon waters CMS COPC identification can be summarized as follows:

1. Evaluate the RFI COPCs with respect to the regulatory and advisory thresholds. RFI COPCs that exceed a CMS COPC screening limit solely because the upper detection limit exceeds a CMS COPC screening limit are not included, if the maximum detected value did not exceed a screening limit.

2. Evaluate the COPCs with respect to Phase III RFI risk assessment results, and

3. Evaluate the COPCs with respect to prevalence of detection, association with known anthropogenic sources, and potential to adversely affect regional groundwater.

Outside the outfall source area, this process essentially seeks to identify which chemicals are a concern from the standpoint of potential risk to regional groundwater, given that risks associated with site waters and sediment for an industrial exposure scenario were acceptable. Generally, the process focuses on HE and barium. A related discussion is presented in section 4, where ARARs and MCSs are identified.

Inside the outfall source area, the Phase III RFI COPCs are accepted as CMS COPCs, based on the results of the risk assessment for that area. A discussion of MCSs for this area is also presented in section 4.

3.2.1 Cañon de Valle CMS COPCs

Cañon de Valle surface water CMS COPCs are barium, RDX, DNX, MNX and TNT. For alluvial groundwater the CMS COPCs are barium, manganese, RDX, MNX and TNT. For alluvial sediment, the CMS COPCs are barium, RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.2.2 Martin Spring Canyon CMS COPCs

Martin Spring Canyon alluvial groundwater and alluvial sediment CMS COPCs are barium and RDX. In Martin Spring Canyon surface water, RDX is a CMS COPC. In addition, manganese is a CMS COPC for Martin Spring Canyon alluvial groundwater. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.2.3 Springs CMS COPCs

CMS COPCs for springs in Cañon de Valle and Martin Spring Canyon are RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.3 SCM Overview

The SCM attempts to explain the existing distribution of contamination in terms of the contaminant chemical properties, contaminant source, contaminant source release history, the natural hydrogeology of the area, and any other significant factors for, and driving forces behind, contaminant migration. As site investigation activities have proceeded through Phase III, the SCM has been refined.

The SCM, which is depicted in Figure 3.3-1, applies to a roughly triangular area that is bounded on the north by Cañon de Valle, on the south by Water Canyon, on the west by the Pajarito fault zone, and on the east by the confluence of Water Canyon and Cañon de Valle (see Figure 3.2-1, an area of roughly 3 mi^2). This area encompasses other historical contaminant sources, in addition to the TA-16-260 outfall. Thus, the SCM is applicable to all historical contaminant sources at TA-16, particularly those affecting waters. Within the SCM, contaminant transport pathways are associated with tuff, sediment, and waters. Saturated flow systems occur in many different forms, including perennially and intermittently saturated fracture and surge bed systems in tuff, and alluvial groundwater in Cañon de Valle and Martin Spring Canyon, SWSC Spring, Martin Spring, Burning Ground Spring, Fishladder Seep, Peter Seep, and the 90s Line Pond.

Figure 3.3-1 shows the key components of the SCM centered at the outfall source area. These components are the outfall source area and settling pond surge beds (1); the mesa vadose zone extending from the mesa top to the canyon bottom and consisting of fractured and non-fractured tuff (2); canyon alluvial sediments (3); canyon springs (4); canyon surface water (5); canyon alluvial groundwater (6); the vadose zone extending from the canyon bottom to groundwater (termed the deep vadose zone), including the perched groundwater (7); and the regional aquifer (8); as defined by monitoring well R-25. While the regional aquifer was not included in the scope of the Phase III RFI, key results from the installation and sampling of R-25 are important to a general understanding of the SCM. Similarly, while Martin Spring Canyon is not shown on this figure, components such as springs, alluvial sediment, alluvial groundwater, and fracture pathways to deeper zones, apply there as well. Figure 3.2-1 presents a map of the site with respect to physical features that are important in the SCM.

Sampling and analysis results from the RFI (Phases I, II, III) confirm that all components of the SCM are contaminated with HE, although the specific contaminants, their concentrations and the distribution of contamination vary. In addition to HE, other COPCs were also found. This CMS focuses on providing

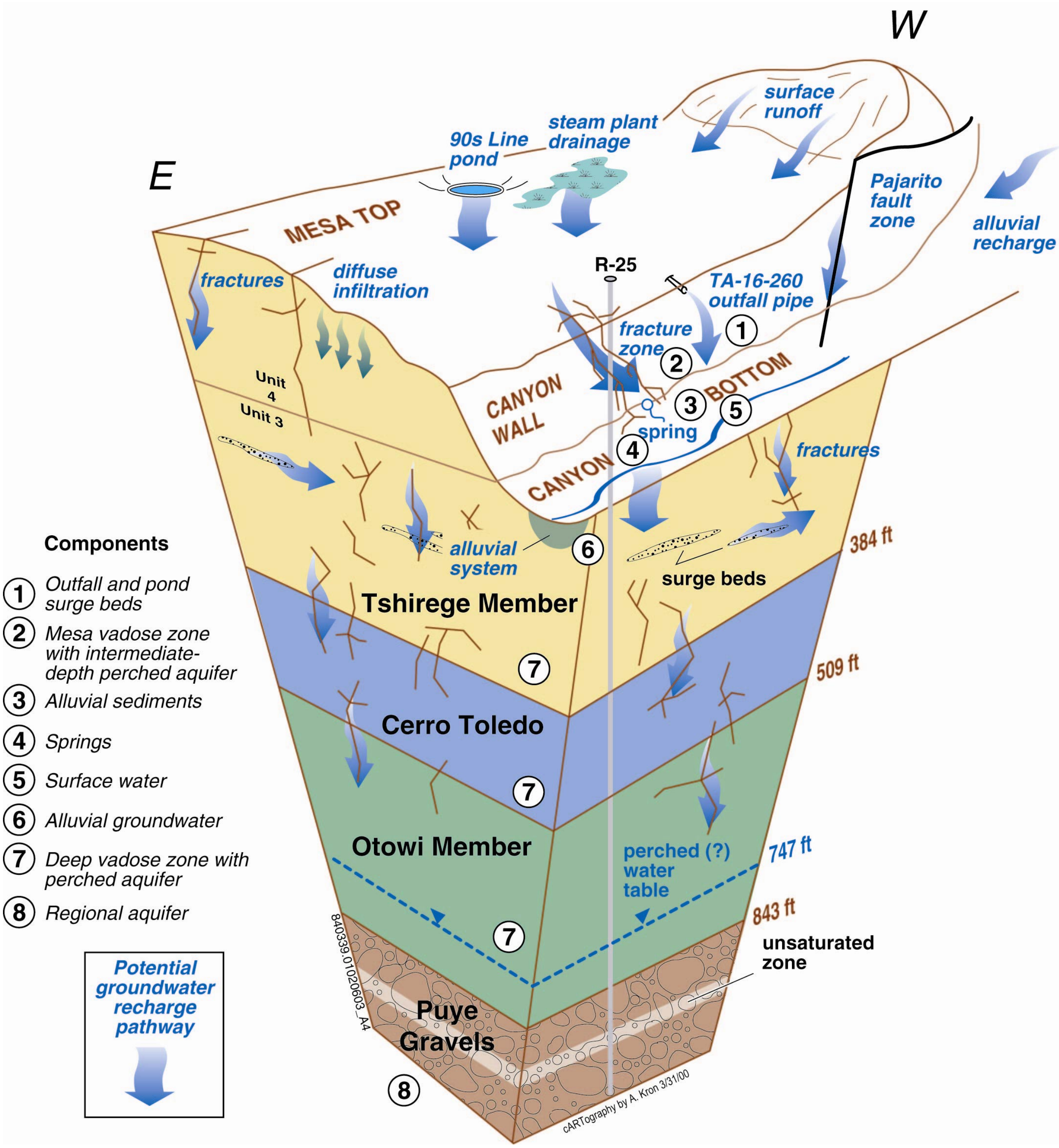

Figure 3.3-1. Hydrogeological and contaminant transport SCM for TA-16 and SWMU 16-021(c)-99

corrective measures for the following contaminated areas within the SCM (see Figure 3.3-1): the SWMU 16-021(c)-99 outfall source area and settling pond surge beds (component 1); the alluvial sediments, springs, surface water, and alluvial groundwater in Cañon de Valle (within approximately 7000 ft east of the outfall); and the sediments, springs, surface water, and alluvial groundwater in Martin Spring Canyon (components 3–6).

3.4 Component 1—Outfall Source Area and Surge Beds

The outfall source area and underlying surge beds are shown as component 1 on the SCM (Figure 3.3-1).

TA-16-260 outfall discharges during the past 50 yr served as a source for the HE and inorganic contamination found throughout the site (LANL 1998, 59891). Prior to the completion of the outfall source area IM, the principal contaminants in TA-16-260 outfall sediment were barium (up to 20,000 ppm) and HE (up to 20 wt%) (LANL 2002, 73706). Historically, discharge from the sumps at Building 260 to the outfall was reportedly as high as several million gal. per yr (LANL 1994, 76858). The outfall source area comprises a well-defined upper drainage channel that was fed directly by the building sumps, a settling pond, and a lower drainage channel that leads to Cañon de Valle. HE contamination in the outfall and drainage area has been recognized since at least 1960, when the first soil samples from the TA-16-260 outfall were analyzed.

The settling pond (and associated soil) which was removed during the 2000 IM (LANL 2002, 73706), measured approximately 50 ft long by 20 ft wide and was located within the upper drainage channel, approximately 45 ft below the TA-16-260 outfall. The drainage channel runs approximately 600 ft northeast from the outfall to the bottom of Cañon de Valle. A 15-ft, near-vertical cliff is located at a distance of approximately 400 ft from the outfall and marks the break between the upper and lower drainage channels. Prior to the IM, the upper part of the drainage channel (above the cliff) contained little vegetation and relatively little accumulated soil and sediment. The lower part of the drainage channel (below the cliff), which is steep and rocky, contained thick pockets of sediment.

Borings installed in the settling pond area revealed the presence of surge beds underlying the settling pond area at depths of approximately 17 and 45 ft. In the 17-ft bgs upper surge bed, RDX (4500 mg/kg), HMX (1700 mg/kg), and TNT (3500 mg/kg) were detected (LANL 1998, 59891). The 45-ft bgs lower surge bed contained RDX (4.4 mg/kg) and HMX (0.45 mg/kg) (LANL 2002, 73706). These surge beds (granular tuff with a sand-like texture) possess increased porosity and hydraulic conductivity and represent potential contaminant transport pathways leading away from the outfall source area. The lateral extent and continuity of the surge beds are unknown.

The outfall source area was substantially remediated when a large quantity of contaminated soil from the outfall and settling pond area was excavated and removed during the IM (LANL 2002, 73706). The main contaminants were barium, HE (HMX, RDX, and TNT), and HE-degradation products (dinitrotoluenes, A-DNT, and TNB). More than 1300 yd^3 of contaminated material containing an estimated 8500 kg of HE were removed from this area. The surge beds were not excavated during the IM. In general, excavation of the tuff did not prove feasible. Following IM excavation, the area of the settling pond was capped with a low permeability clay-soil mixture. Residual HE and barium contamination remains in pockets of soil distributed along the drainage channel. Although it contains elevated concentrations, the residual contaminated soil's total volume is estimated to be less than 100 yd^3. Figure 3.4-1 shows the outfall area and the location of post-IM sampling points.

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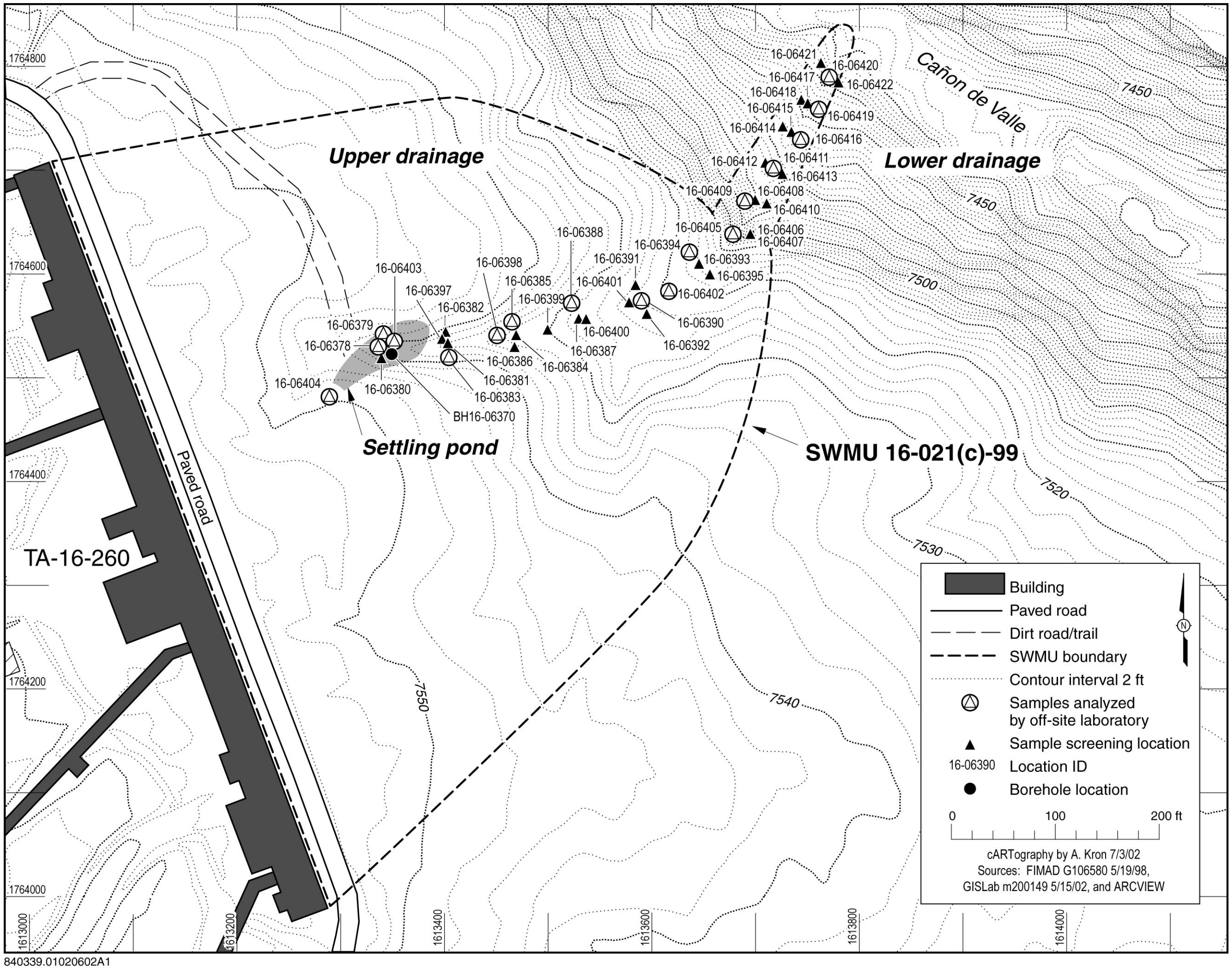

Figure 3.4-1. Outfall source area and the location of post-IM sampling points

Table 3.4-1 presents a summary of the sampling results for barium and HE in terms of distribution within post-IM and across soil and tuff. Post-removal concentration ranges, and the location ID for the maximum concentration, are summarized below:

Table 3.4-1
Summary of Barium and HE Post-IM Sampling (2000) Results

COPC	Media	Number of Analyses	Minimum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
Barium	Soil	16	148	3275	8200
	Tuff	4	890	1698	3000
HMX	Soil	16	1.10	465	2000
	Tuff	4	6.80	283	670
RDX	Soil	16	0.50	115	745
	Tuff	4	16.0	327	1,200
TNT	Soil	16	0.13	32.8	270
	Tuff	4	1.00	86.8	330

- Barium remains in concentrations ranging from 148 to 8200 mg/kg (location ID 16-06420) and was detected above the background value (BV) in all but one post-removal analytical sample.
- HMX remains in concentrations ranging from 1.1 to 2000 mg/kg (location ID 16-06409).
- RDX remains in concentrations ranging from 0.5 to 1200 mg/kg (location ID 16-06379).
- TNT remains in concentrations ranging from 0.13 to 330 mg/kg (location ID 16-06379).

Several additional HE compounds, HE-related compounds, and other organic and inorganic compounds are present in the drainage channel, at low concentrations. A complete description of these results can be found in the Phase III RFI report (LANL 2003, 77965).

The Phase III RFI COPCs for the outfall source area are aluminum, arsenic, barium, manganese, thallium, uranium, HMX, RDX, and TNT. As discussed in section 3.2 above, these Phase III RFI COPCs are accepted as CMS COPCs.

3.5 Component 2—Mesa Vadose Zone

The mesa vadose zone is the unsaturated area between the land surface at the top of the TA-16 mesa and the bottom of Cañon de Valle (Figure 3.3-1). This vadose zone is shallower in depth than the deep vadose zone (component 7) and encompasses the flow paths for springs, such as Burning Ground Spring and Martin Spring. In the Phase II RFI report, the principal contaminant flow paths within the mesa vadose zone were hypothesized to be ribbon-like structures (LANL 1998, 59891). This description, while not geologically specific, reflects a mesa vadose zone flow regime that is dominated by surge beds and fractures, both of which possess higher permeability than the surrounding non-fractured tuff. Intermittent groundwater has been encountered in wells within this zone, which the Phase III RFI characterized as an intermediate-depth perched aquifer.

As part of the Phase II RFI, five boreholes were drilled on the TA-16 mesa top in the vicinity of the former outfall, the 90s Line Pond, and the head of Martin Spring Canyon. The boreholes were drilled to depths between 91 and 207 ft and were completed as wells in order to characterize the intermediate-depth perched aquifer and define the nature and extent of contamination. The initial results of the drilling were reported in the Phase II RFI report (LANL 1998, 59891). The Phase III RFI data provide an updated assessment of the mesa vadose zone hydrogeology based on chloride, bromide, and stable isotope tracers; results of hydraulic testing of core; and groundwater chemistry data from samples collected from Well 16-02665 (Martin Spring Canyon) after completion of the Phase II RFI (post-1998).

Tuff samples from the five intermediate-depth boreholes and from others installed within the mesa vadose zone indicate no contamination in the subsurface intervals except in an uncased borehole drilled in the TA-16-260 settling pond (LANL 1998, 59891; LANL 2002, 73706). These results indicate that mesa vadose zone tuff contamination is primarily concentrated beneath the outfall source area. On occasion, however, groundwater samples from the intermediate-depth wells located in Martin Spring Canyon and the 90s Line Pond have contained contaminated groundwater. The latter result indicates the presence of contaminant inventories at the 90s Line Pond. The Martin Spring Canyon result is evidence for heterogeneous flow paths within the mesa vadose zone tuff, likely involving fractures and surge beds.

In terms of transport, tracer and isotopic studies provided information about how rapidly water and contaminants have been transported downward into the mesa from the outfall source areas. Data from key mesa vadose zone wells show that HE contaminants have moved from the top of the mesa down to at least 130 ft bgs in 50 yr or less. The breakthrough of bromide tracer at SWSC Spring and Burning Ground Spring within a few months is additional evidence for rapid contaminant transport along preferential pathways such as fractures and surge beds in the mesa vadose zone. Finally, the presence of HE contamination detected in the approximately 700-ft-bgs perched aquifer at R-25 (LANL 2003, 75986.2), and in the underlying regional aquifer, indicates that these transport pathways extend from the mesa (or canyon bottom) downward to these horizons.

Mesa vadose zone surface fracture mapping and fracture characterization of boreholes were conducted at MDA P (LANL 2003, 76876), which is located approximately 2000 ft east of the outfall source area. Surface fracture mapping indicated that the fracture set has a statistically significant north-northwest preferred orientation. Fracture dip angles vary from sub-horizontal to steep. Fracture densities of 20–40 fractures per 100 ft were observed, with fracture apertures generally 1–2 mm wide, although widths of 50 mm were observed. In six boreholes installed at MDA P, natural fractures were observed in all cores, but more commonly in welded tuff units. Fracture coatings consisted of clays and black manganese oxides.

The variable concentrations and presence of contaminants detected in the vadose zone at TA-16 are typical of fracture (and surge bed) controlled transport and have important implications for the CMS decision process. First, it is not possible at the present time to accurately quantify the inventory of contaminants in the mesa vadose zone. Future characterization efforts at TA-16 may provide a better estimate of contaminant inventories, although it is unlikely that a detailed inventory will ever be achieved. Second, remediation of the subsurface inventory is not possible if its location remains unknown. For these reasons, in addition to a lack of exposure pathway to humans, the mesa vadose zone is not explicitly considered for remediation, although the manifestations of the mesa vadose zone in the form of springs are addressed as component 4. Furthermore, the surge beds that were discussed as part of the outfall source area (component 1) can be viewed as part of the mesa vadose zone.

Other uncertainties in the mesa vadose zone SCM involve the effects of the 2000 Cerro Grande fire and the current forest thinning, both of which may have altered the runoff/recharge hydrology of the mesa.

3.6 Component 3—Cañon de Valle and Martin Spring Canyon Alluvial Sediment

Alluvial sediment is present in both Cañon de Valle and Martin Spring Canyon. Cañon de Valle and Martin Spring Canyon sediments were studied during geomorphic studies and as part of a Phase III RFI sediment resampling effort (LANL 2003, 77965) of Phase II RFI sampling points. These studies identified COPCs in sediment and they provide insight into the magnitude of HE and barium loading on sediments and the nature of sediment transport processes. A total of about 21,000 kg of barium is estimated to have been present in Cañon de Valle sediment before the Cerro Grande fire. About 62% is estimated to have been stored in fine-grained sediment deposits outside the active channel, about 10% was in the active channel, and the remainder was in coarse-grained deposits in abandoned channel units. This indicates that flood events play a key role in mobilizing contaminated sediments in and along the channel. Post-fire sediment sampling results indicate a substantial downstream redistribution of barium and RDX due to post-fire flooding. Estimates of the total inventory of HMX and RDX in Cañon de Valle sediment before the Cerro Grande fire indicate approximately 50 kg of HMX was present, 50% of which occurred in fine-grained sediment and 50% of which occurred in coarse-grained sediment. Approximately 5 kg of RDX is estimated to have been present, of which about 60% was found in fine-grained sediment.

In 2002, the resampling of a subset of the 1996 active channel sampling locations as part of the Phase III RFI allowed a comparison of the barium and RDX concentrations in 1994–6 with the concentrations in the channel 6 years after the termination of effluent releases from the outfall (Figure 3.6-1 and Figure 3.6-2). This period also includes the effects of post-fire floods. In the reaches sampled, barium and RDX concentrations in 2002 are much lower than in 1996. This indicates that much of the barium and RDX present in the active channel in these reaches in 1996 was scoured and suspended in subsequent floods and transported downstream, depleting the active channel inventory. The amount that was redeposited on abandoned channels and floodplains is unknown. Both plots support the inference that much of the contaminant inventory that was stored in the active channel in 1996 was remobilized and transported downstream prior to 2002, either in post-fire floods or in other storm runoff events (LANL 2003, 77965).

Post–Cerro Grande fire sampling for barium and RDX in Martin Spring Canyon indicated much lower concentrations and much smaller inventories than in Cañon de Valle. The estimated barium and RDX inventories in Martin Spring Canyon are approximately 820 kg and 0.2 kg, respectively.

For barium, RDX, and HMX, the contaminant mass estimate is limited by the depth of the geomorphic sampling (maximum of 2 ft bgs). Although borehole sampling results from alluvial well installation conducted during the Phase II RFI indicated minimal contamination at the saturated alluvial/tuff contact (LANL 1998, 59891), sediment samples were not collected in overlying saturated and unsaturated alluvial sediments. Consequently, the vertical distribution of contamination is unknown between approximately 2 ft bgs and the alluvial/tuff contact which is located at approximately 5–6 ft bgs.

Site maps of recent (1999–2002) Cañon de Valle alluvial sediment concentrations of barium and RDX in the active channel are presented as Figures 3.6-3 and 3.6-4, respectively. For Martin Spring Canyon, site maps of recent (2000) alluvial sediment concentrations of barium and RDX in the active channel are presented as Figures 3.6-5 and 3.6-6. These maps show the distribution of the two contaminants.

3.7 Component 4—Springs in Cañon de Valle and Martin Spring Canyon

The springs and seeps in Cañon de Valle and Martin Spring Canyon are labeled component 4 on Figure 3.3-1. Known springs and seeps include Burning Ground Spring, SWSC Spring, and Martin Spring. Based on water geochemistry results from surface and groundwater sampling detailed in the

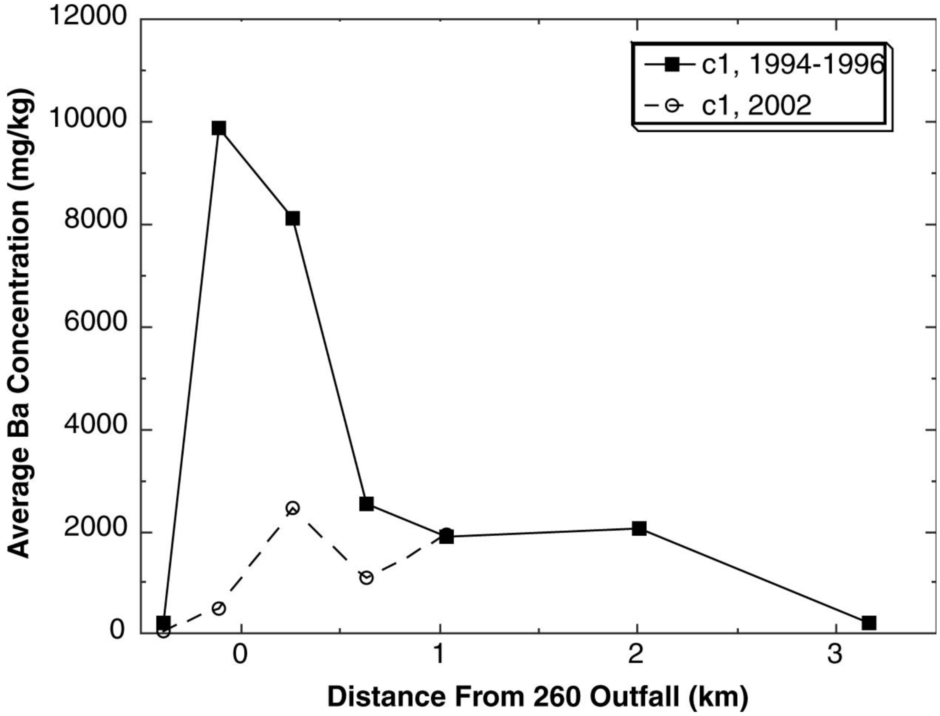

Figure 3.6-1. Plot of barium (Ba) concentrations (localized averages) in active channel samples (C1) in 1994–1996 and 2002

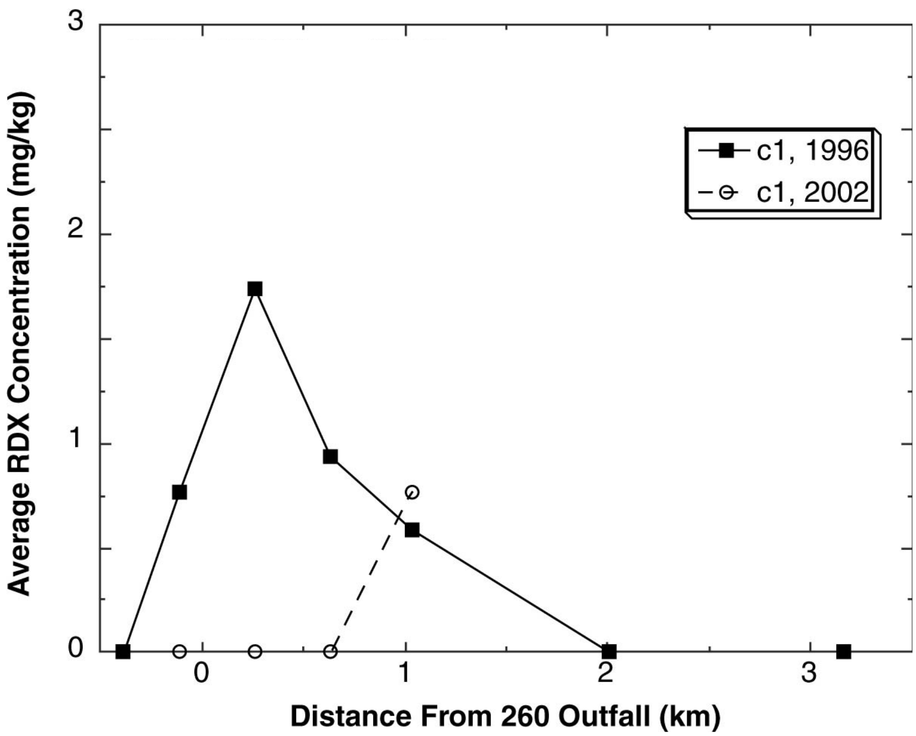

Figure 3.6-2. Plot of RDX concentrations (localized averages) in active channel samples (C1) in 1996 and 2002

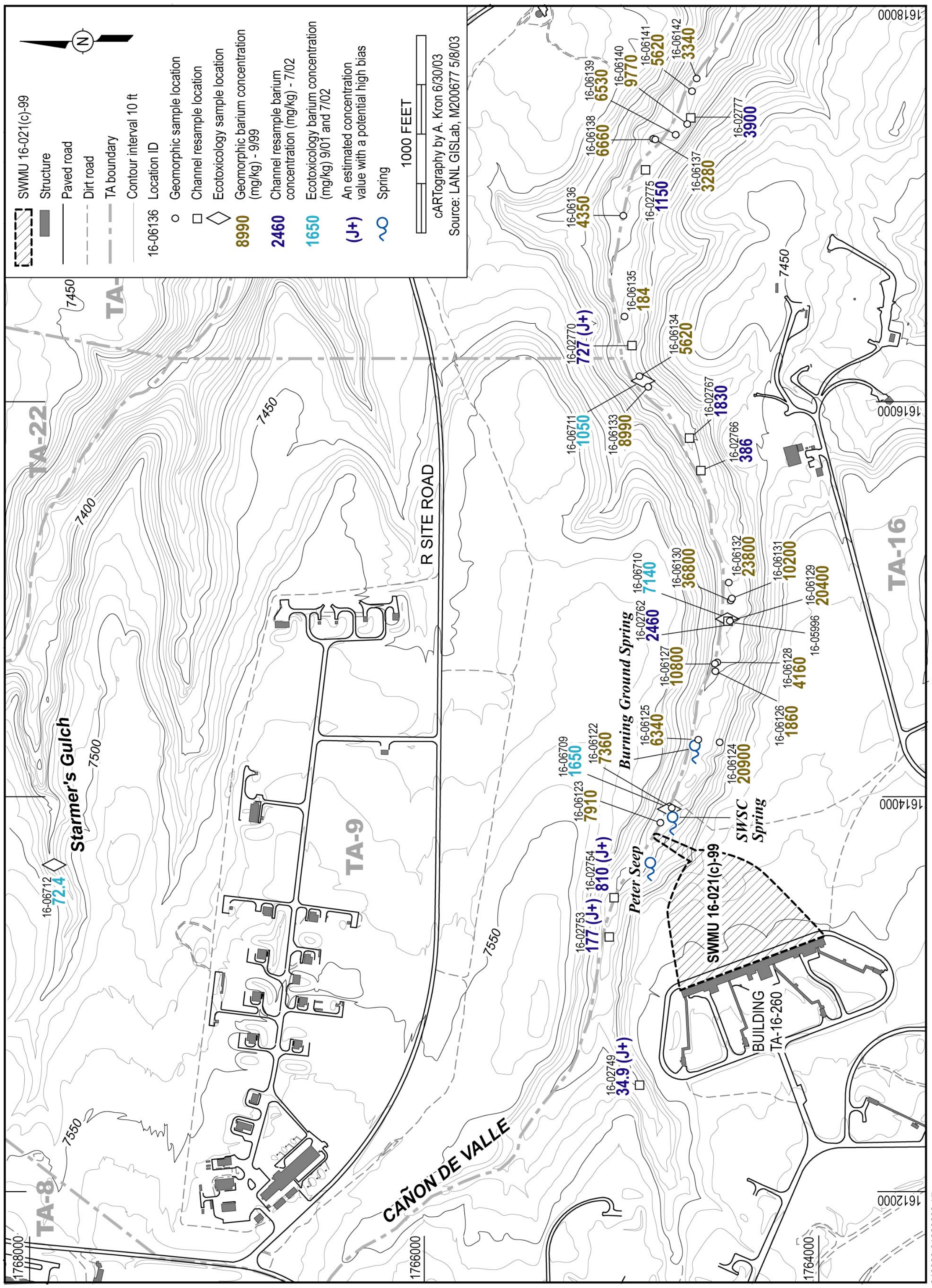

Figure 3.6-3. Recent (1999–2002) Cañon de Valle barium active channel alluvial sediment sampling results

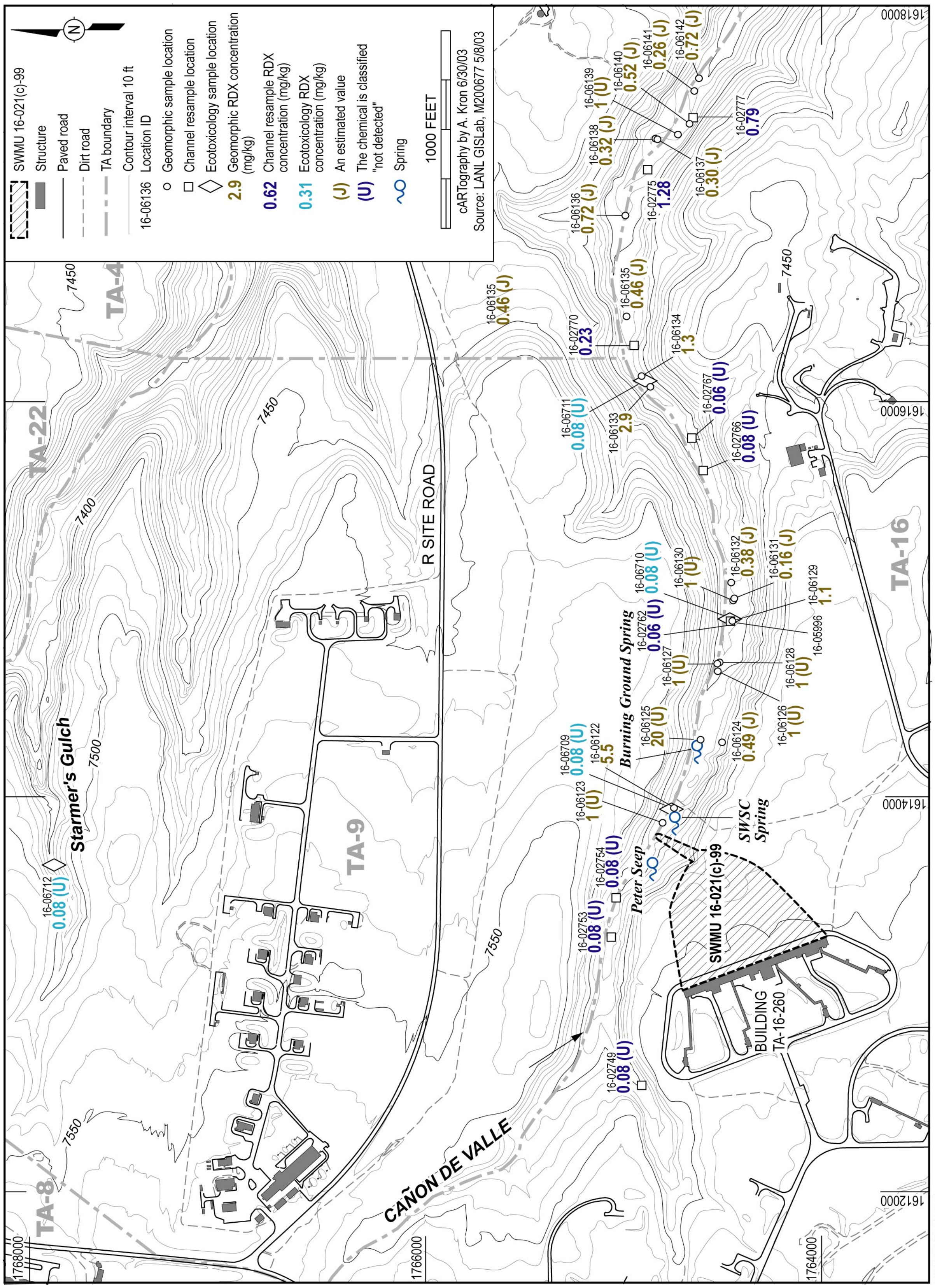

Figure 3.6-4. Recent (1999–2002) Cañon de Valle RDX sediment sampling results

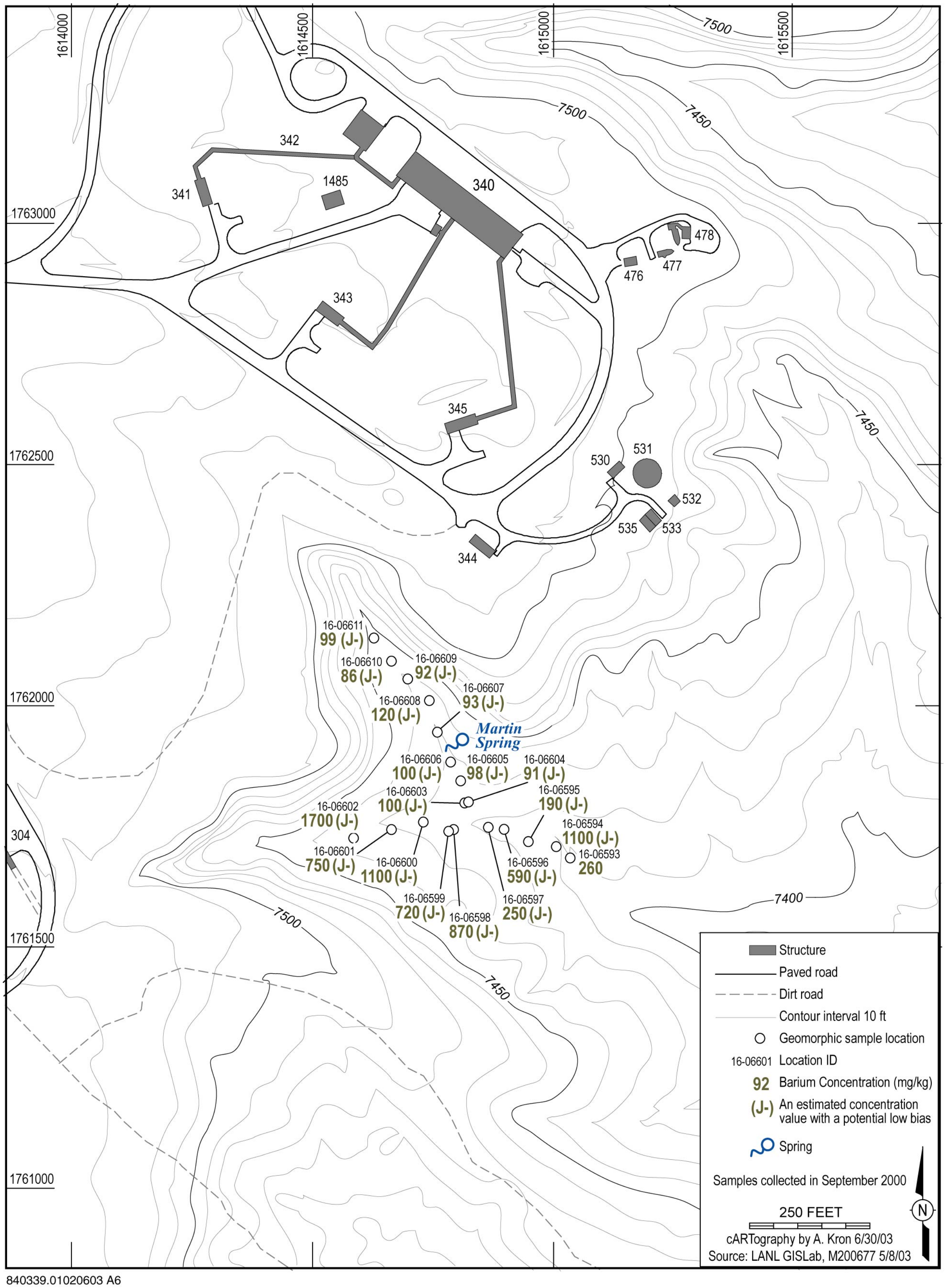

Figure 3.6-5. Martin Spring Canyon barium sediment sampling results from 2000

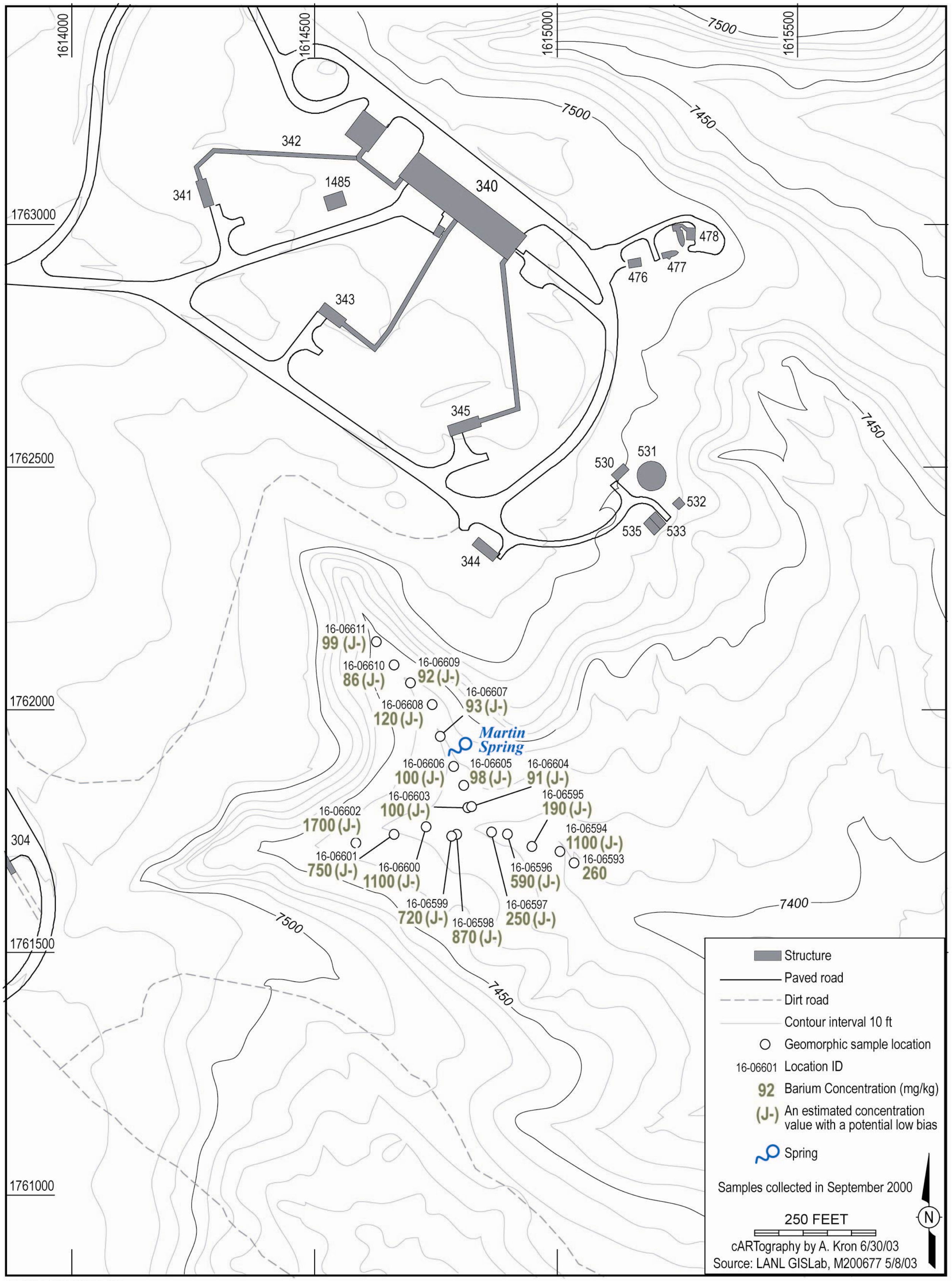

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Figure 3.6-6. Martin Spring Canyon RDX sediment sampling results from 2000

Phase III RFI (LANL 2003, 77965), it is considered possible that other, unknown springs or seeps may be discharging to the Cañon de Valle alluvial system. The current drought has substantially affected the flow rates from springs. Flow has decreased in Burning Ground Spring and flow from SWSC Spring and Martin Spring has stopped completely, as of this writing.

The Phase II and Phase III RFIs detected HE, barium, and other contaminants in SWSC Spring (in Cañon de Valle), Burning Ground Spring (in Cañon de Valle), and Martin Spring (in Martin Spring Canyon) (LANL 1998, 59891; LANL 2003, 77965). Key Phase II hypotheses concerning the SCM for the springs include

(1) The saturated systems that feed the springs may represent the discharge points of surge beds and fracture sets within the mesa;

(2) The springs are all located near the Unit 3/Unit 4 contact within the Tshirege Unit of the Bandelier Tuff, a zone characterized by several surge beds;

(3) The bromide tracer study demonstrates direct connectivity between the 260 outfall and SWSC Spring (and possibly Burning Ground Spring);

(4) The springs have multiple sources of groundwater recharge; and

(5) Contaminants in Martin Spring may come from a source other than the 260 outfall.

Martin Spring flow and chemistry are substantially different from the two Cañon de Valle springs.

Phase III RFI isotopic studies of the springs flow systems (LANL 2003, 77965) show that the springs have two main modes of recharge. These two modes can be described as (1) short residence-time pathways that are driven by individual rain or snowmelt events; and (2) slower, long residence-time pathways that provide “base flow” to the springs and whose flows are controlled more by longer-term climatic variations. The drought has lessened the frequency of the short residence-time recharge events, thus the contaminant concentrations observed during the drought are probably being transported via the slower, long residence-time base flow pathways. The stable isotope data indicate that base flow is largely recharged to the west, at elevations above TA-16 (and above any HE or barium contamination). Therefore, the base flow must be encountering a source of contamination in the mesa vadose zone as it travels to the springs.

Analyses of contaminant time-series data gathered since the IM was completed in 2000 and conducted as part of the Phase III RFI do not show any significant reduction in contaminant concentrations. This lack of reduction does not reflect the overall long-term effectiveness of the outfall source area IM; rather it is likely due to three factors: (1) the drought, (2) deeper vadose zone contamination and related inventory, and (3) the long residence-time component of springs flow. The drought has limited the transport of contaminants from shallow depths at the 260 outfall source area. Thus, there has not been enough water flow to flush out the existing contaminants. Contamination is still present in the vadose zone below the depths from which soil was removed during the IM, and this deeper contamination zone is what currently supplies the springs systems. The last factor might account for the lack of changes in springs contaminant concentrations in that analysis of trends in spring flow shows there is a long residence-time (base flow) component to springs discharge, on the order of several years.

The 2000 Cerro Grande fire and current forest thinning may alter the runoff/recharge relations on the mesa. If runoff increases as a result of loss of vegetative cover, recharge to the springs could decrease, thereby decreasing vadose zone transport of some contaminants. However, it is not known if the potential runoff/recharge shift would prove to be a substantial influence over the long term.

Representative Phase III RFI (LANL 2003, 77965) barium and RDX concentrations in site springs, surface water, and groundwater from 2000 to 2002 are shown in Figures 3.7-1 and 3.7-2, respectively.

3.8 Components 5 and 6—Canyon Surface Water and Alluvial Groundwater

Cañon de Valle and Martin Spring Canyon surface water and alluvial groundwater are important components of the SCM (Figure 3.3-1). Both represent potential human and ecological exposure sources and both are critical to the overall site hydrogeological regime which includes the regional groundwater. Surface water is present both perennially and intermittently along Cañon de Valle. The approximate extent of perennial surface water is shown in Figure 3.2-1.

Key hypotheses concerning the SCM include (1) surface runoff and spring flow contribute contaminants to the alluvial system, but the springs generally dilute the higher levels of contamination in the surface water and alluvial groundwater; (2) alluvial groundwater disappears downgradient from MDA P and therefore there may be a loss of water to underlying units; and (3) there appears to be mixing of alluvial groundwater and surface water downgradient from MDA P.

The Cañon de Valle saturated alluvium may be viewed as a fixed volume with inputs (springs, precipitation, and groundwater flow) and outputs (evapotranspiration and leakage into the underlying fractured tuff which lessens water volume). A conceptual water balance model is shown in Figure 3.8-1, in terms of gal. per ft of canyon per day. As detailed in the Phase III RFI report (LANL 2003, 77965), component flows were prepared using historical data on spring water flow; groundwater elevation in wells; historical averages for precipitation and evapotranspiration; and literature values for alluvial permeability, in the absence of actual data. Based on these component flows, the rate of infiltration was estimated.

Assuming a steady state, the rate of loss of groundwater to the underlying tuff is estimated to be approximately 2.6 gal. per day per ft of canyon.

In terms of water balance, the springs contribute substantial amounts of water to the canyon bottom; exchange also occurs between the surface water and alluvial groundwater and vice versa. These conditions affect contaminant distributions in the canyon bottom. Figure 3.8-2 presents examples of the effect of the springs, alluvial groundwater, and surface water interconnection on barium and RDX concentrations. Barium concentrations remain relatively consistent among the three types of water over low, medium, and high surface flow sampling events, probably due to buffering by barium-contaminated sediments. Alluvial groundwater barium concentrations are the highest, surface water concentrations are intermediate, and the springs concentrations are the lowest. These results show that the springs water dilutes the concentrations in the alluvial groundwater and surface water systems. The differences between the alluvial groundwater and surface water concentrations are largely controlled by the spatial distribution and buffering capacity of existing barium concentrations in the canyon sediment. For RDX, there is no consistency in contaminant concentrations. Springs water tends to have the lowest concentration and generally dilutes the alluvial groundwater and surface water.

Spatial trends of contaminants in surface water and alluvial groundwater, screening parameters, and flow provide other key insights into the alluvial system. Flow profiles indicate that there is a losing reach in the region between Burning Ground Spring and the area just upgradient from MDA P. In addition, temperature data, barium and RDX concentrations, and flow increases all indicate that alluvial

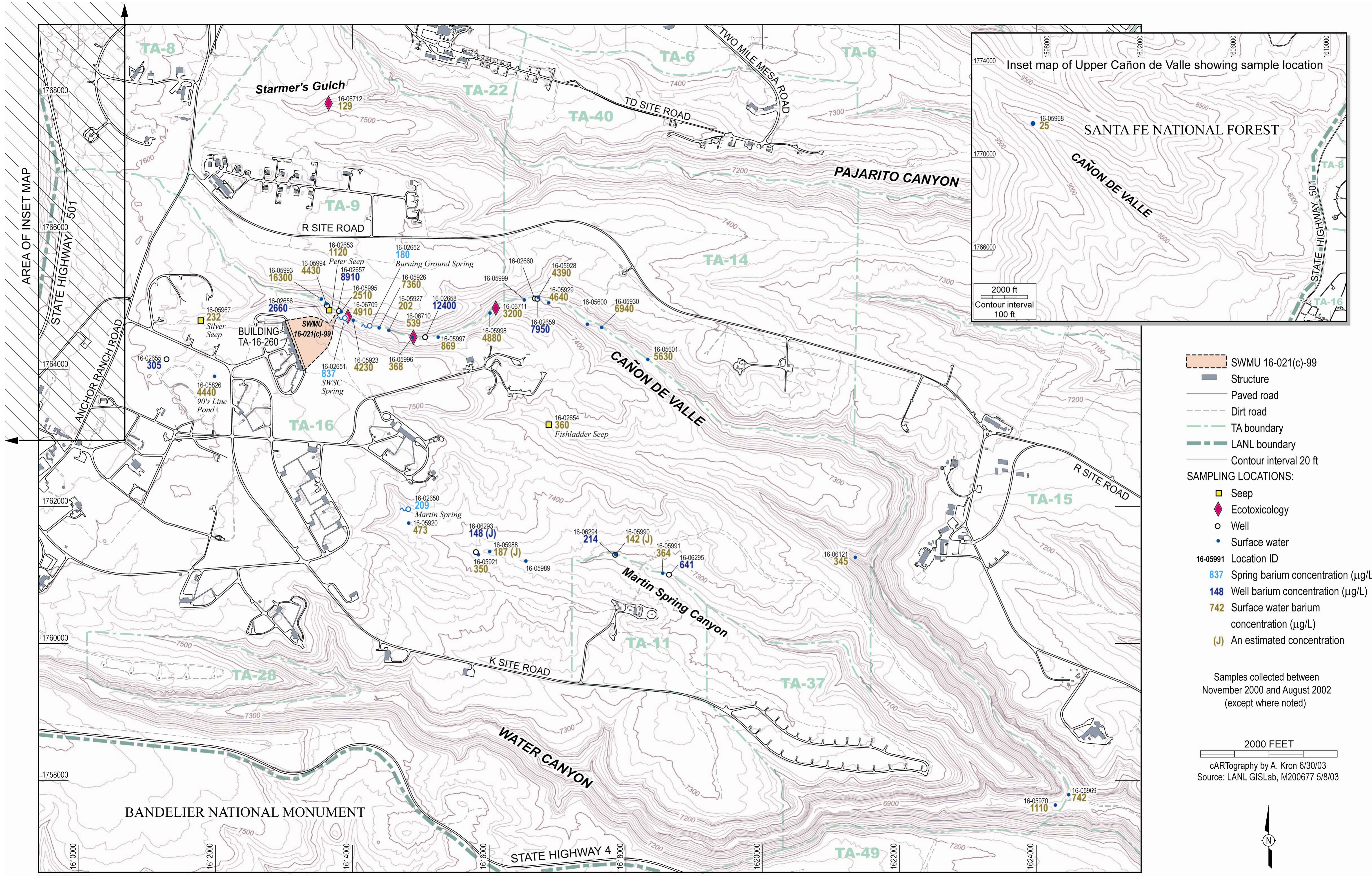

Figure 3.7-1. Representative barium concentrations in springs, surface water and alluvial groundwater from 2000-2002

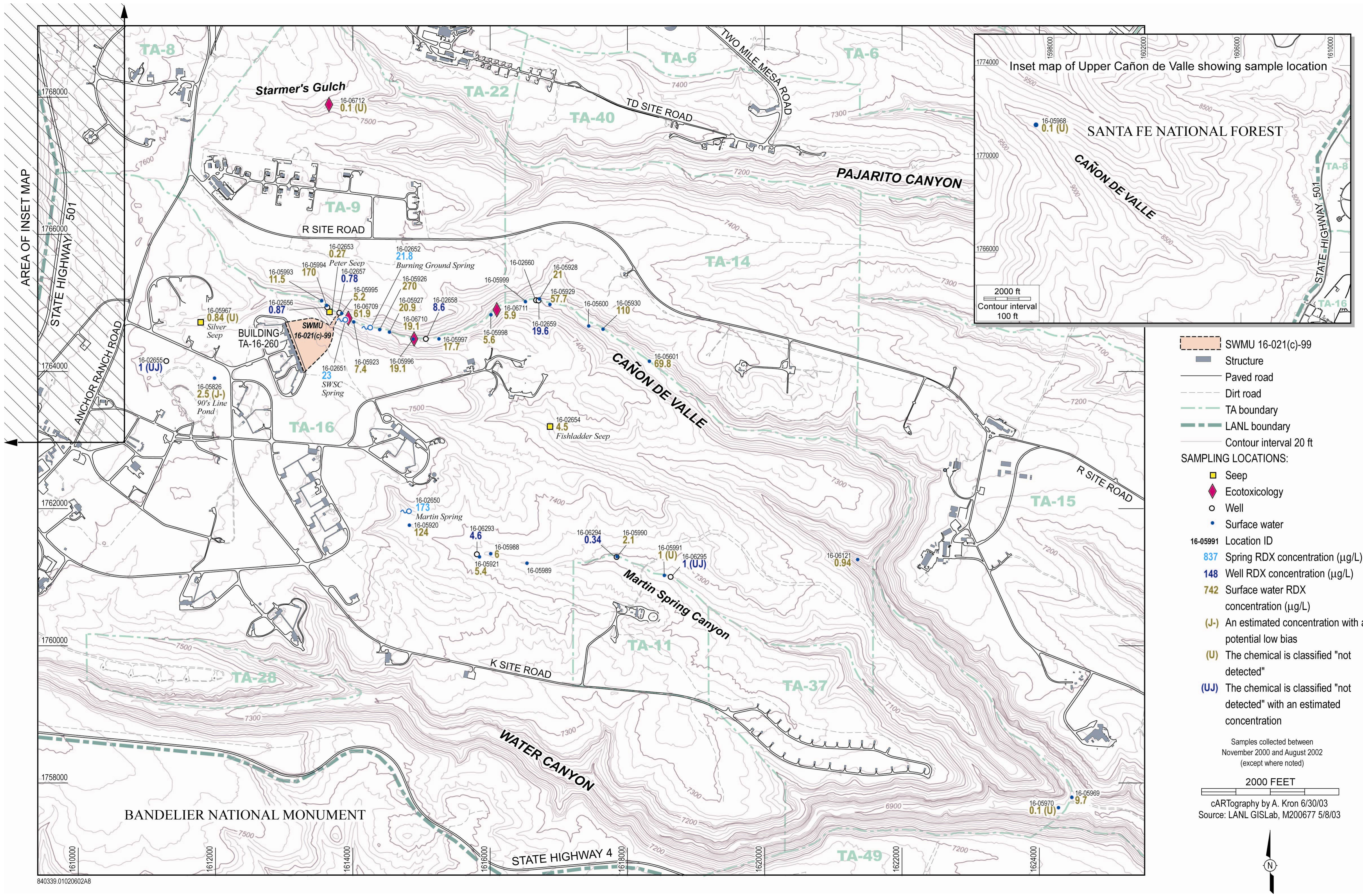

Figure 3.7-2. Representative RDX concentrations in springs, surface water and alluvial groundwater from 2000-2002

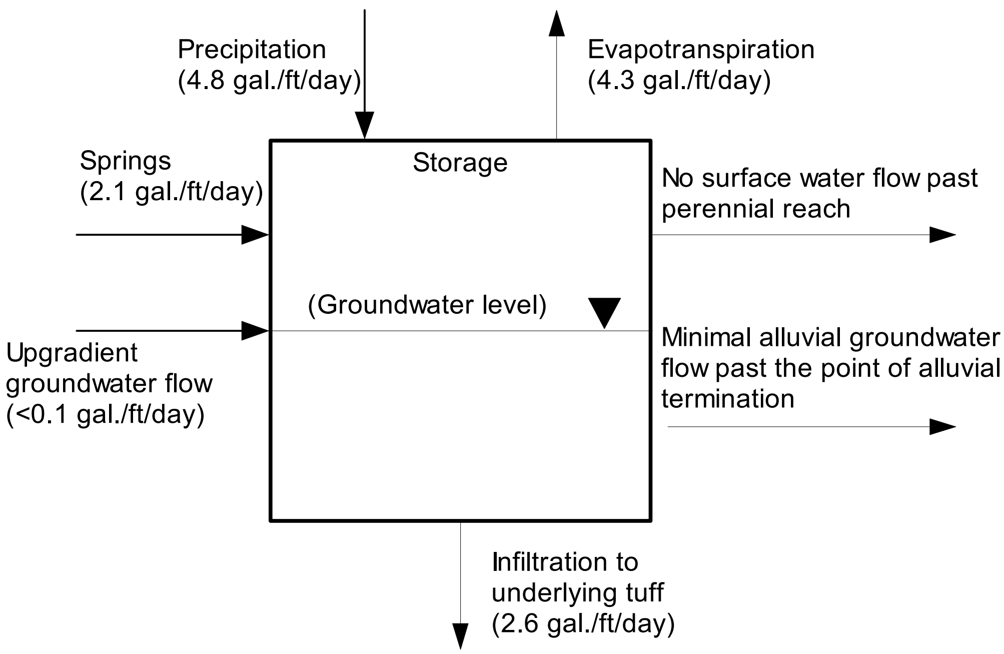

Figure 3.8-1. Conceptual water balance model for the Cañon de Valle alluvial system (in gal. per ft of canyon per day for an average water year)

groundwater may be discharging into the surface water system downgradient from Well 16-02659 (see Figure 3.2-1). The high RDX values in Well 16-02659 as compared with upgradient Well 16-02658 indicate that either RDX is being leached from secondary sources within the alluvial system or increased inputs into the alluvial groundwater system from higher concentration surface waters are occurring. In addition, the presence of both RDX and barium upgradient from the 260 outfall discharge point indicates that residual contamination at MDA R, the 90s Line Pond, as well as other upgradient sources may be contributing to the alluvial system.

The spatial trend for manganese concentrations in alluvial groundwater in Cañon de Valle indicates a strong positive correlation between manganese concentration and distance from the Cañon de Valle headwaters. In addition, manganese sediment concentrations are all within background. These facts indicate that naturally occurring manganese is dissolving as a result of reducing conditions present within alluvial groundwater, most likely as a result of the presence of organic matter. Whether this organic matter is naturally occurring or HE is not known.

Stable isotopic results indicate that surface waters respond much more rapidly to precipitation events and other discharges to the surface, whereas alluvial waters represent more well-mixed waters that have had time to interact with alluvial sediments.

Most of the data collected during the Phase III RFI indicate that the alluvial groundwater system in Cañon de Valle is heterogeneous in both contamination and hydrologic properties such as saturation. Contaminant concentrations in water do not represent a simple “plume” with decreasing concentrations from the source or center of the plume. Both RDX and barium increase and decrease in relative abundance in springs, surface waters, and alluvial groundwater. This is due to variable exchange

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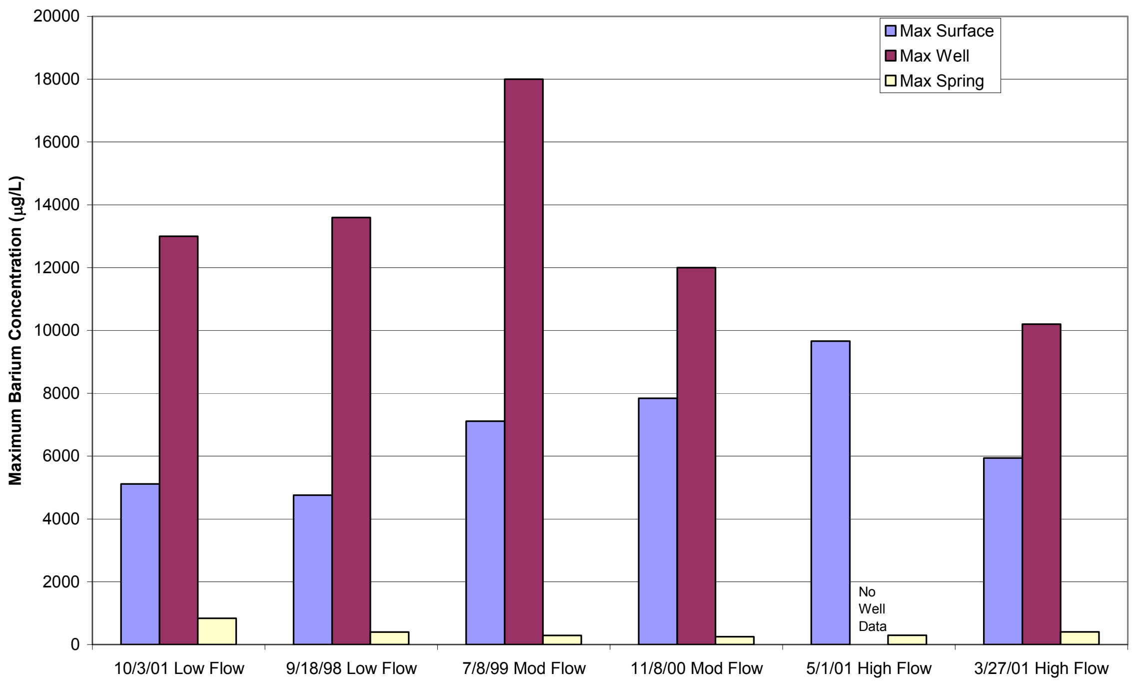

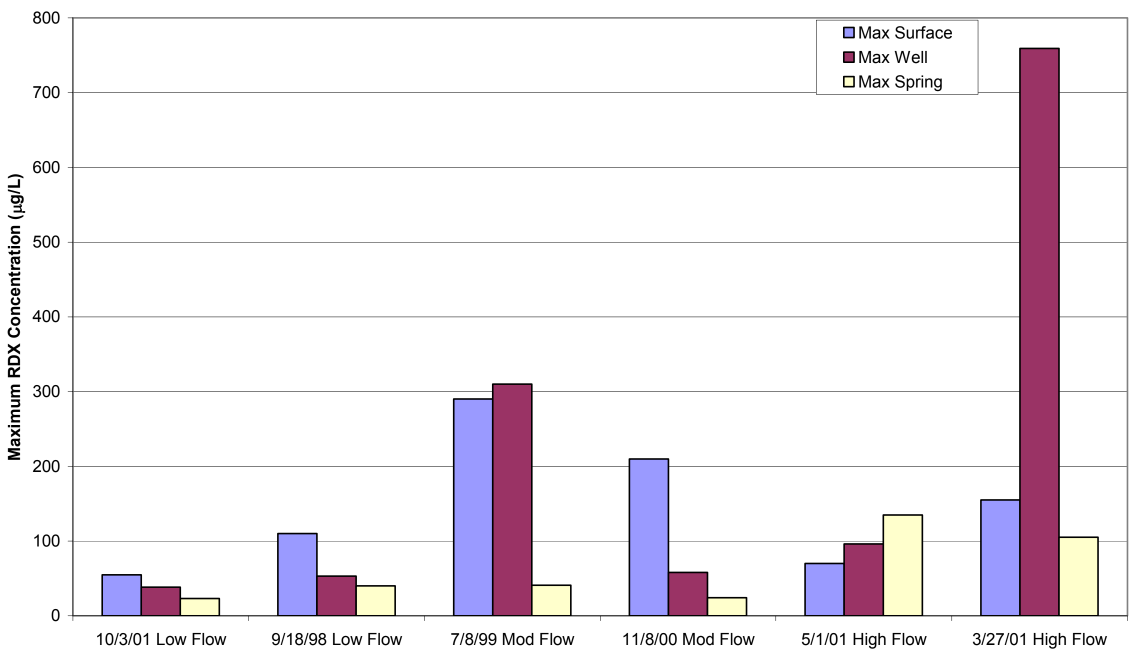

Figure 3.8-2. Comparison of barium (top) and RDX (bottom) concentrations among Cañon de Valle alluvial groundwater (Max. Well), springs (Max. Spring), and surface water (Max. Surface) for selected flow events from 1998 to 2002

between surface water and alluvial groundwater which is dependent on the flow regime; variable degrees of mobilization of vadose zone and alluvial sediments; location of contaminant inventories; and varying degrees of dilution from runoff, interflow, and vadose zone discharge. Similarly, the geophysics, the piezometer results, and the results of head monitoring in the alluvial wells indicate that the saturated system in the Cañon de Valle alluvium is heterogeneous with respect to saturation and permeability.

For Martin Spring Canyon, spring water provides alluvial groundwater and, prior to infiltration, surface water. Stormwater is an intermittent contributor to alluvial groundwater and surface water. As of this writing, Martin Spring has ceased to flow. Based on the SCM presented in the Phase III RFI report, Martin Spring served as the main source for Martin Spring Canyon contamination.

As part of Phase III RFI activities, a geophysical resistivity survey was conducted, the objectives of which included defining the lateral and vertical extent of saturated alluvium within Cañon de Valle along the survey lines and within the vicinity of established monitoring wells (LANL 2003, 77965). A secondary goal was to investigate potential vertical pathways for downward migration of meteoric water and groundwater to the Bandelier Tuff. A prominent low-resistivity feature was detected between alluvial groundwater monitoring wells 16-02658 and 16-02659 (see Figure 3.2-1 for locations of these wells). These zones are possible areas of saturation or elevated water content relative to the surrounding media, and they may indicate zones of enhanced groundwater recharge to the underlying tuff (although the correlation between resistivity and water content has not been field-verified at TA-16).

Representative Phase III RFI barium and RDX concentrations in surface water and alluvial groundwater are shown on Figures 3.7-1 and 3.7-2, respectively.

3.9 Components 7 and 8—Deep Vadose Zone and Regional Aquifer

The deep vadose zone and regional groundwater are labeled as components 7 and 8, respectively, on the SCM (Figure 3.3-1).

To better characterize the TA-16 deep vadose zone, two geophysical surveys were conducted as part of the Phase III RFI (LANL 2003, 77965) and the activities described in the CMS plan addendum (LANL 2003, 75986.2). The main objective of these surveys was to identify potential saturated zones deep in the mesa and the lateral extent of such zones. In 2001, an electromagnetic “flyover” survey was performed over the Laboratory. The survey data indicate a more conductive (presumably wetter, perhaps saturated) zone in the western half of the TA-16 mesa, ending in a steeply dipping zone of electrical conductivity in the vicinity of R-25. Wells CdV-R-37-2 and CdV-R-15-3 are located in the less conductive zone further to the east. These wells did not intercept the 700-ft-deep perched groundwater observed in R-25 (Kopp et al. 2002, 73707; Kopp et al. 2002, 73179.9). Zonge Engineering (Zonge) performed a controlled-source audio-frequency magneto-telluric (CSAMT) survey during 2002. The data indicate the presence of discrete, heterogeneous, sub-vertical, electrically conductive layers (presumably wetter, perhaps saturated) in Cañon de Valle and on the TA-16 mesa. The data also indicate a geophysical feature at R-25 which was interpreted to be the perched groundwater unit.

According to the geophysical surveys, the intermediate (approximately 700 ft) perched groundwater zone (and any associated contamination) below the TA-16 mesa is probably limited in extent. The Zonge data support the SCM hypothesis that vertical preferential pathways may be responsible for groundwater recharge and contaminant transport to perched groundwater zones (where present) and to the regional groundwater at R-25. Intermediate-depth wells, which are scheduled for 2003–2004, will provide further insight into vadose zone contamination and pathways.

In 1999, R-25 was drilled to a depth of 1942 ft from the mesa top above Cañon de Valle (see Figure 3.2-1) into regional groundwater. Based on the groundwater elevation in this well, confined conditions may be present. HE contamination (RDX, HMX, and TNT) was detected in R-25 during 1999 and continues to be detected (maximum detected RDX concentration is 75 µg/L) in quarterly samples (LANL 2003, 75986.2). Barium has been detected, but at low concentrations ranging from 2.4 to 73 µg/L (LANL 2001, 70295.5; LANL 2001, 71368.5; LANL 2002, 73712.5) that may be within background ranges. (A background study has not been completed for regional groundwater.)

The lack of contamination in the regional groundwater at monitoring wells CdV-R-37-2 and CdV-R-15-3 (Kopp et al. 2002, 73707; Kopp et al. 2002, 73179.9), which were designed as plume-definition wells and installed during 2001 and 2002, also places bounds on the extent of contamination within the framework of the SCM. The locations of these wells are shown on Figure 3.2-1. To assess the nature and extent of contamination, additional well installations are planned for the regional groundwater (LANL 2003, 75986.2).

3.10 Physical and Chemical Contaminant Characteristics and Environmental Fate

An important part of the site hydrogeological and contaminant transport SCM involves the chemical and physical properties of the contaminants and their behavior in the environment. Specific properties include the degree of saturation (barium minerals), the potential for ion exchange (barium) or adsorption (barium on metal oxides and HE on natural organic carbon), and the potential for natural attenuation and bioremediation.

The high specific gravity of RDX and HMX indicates that particulates of these compounds were probably deposited in the TA-16-260 outfall and settling pond, rather than carried into Cañon de Valle as particulates. Because of its lower specific gravity, this may not be true for TNT. The potential for particulate settling along the channel is also dependent on the flow velocity, flow rate, and residence time in the settling pond—all factors not studied during the operational period of the outfall. The probable lack of particulate transport into Cañon de Valle leaves transport of dissolved constituents within water discharged to the outfall as the primary transport mechanism for HE (and barium) into Cañon de Valle.

HE that is dissolved in groundwater partitions between a soluble and an adsorbed phase. Both tuff and sediment adsorb HE, though to a varying extent. On the basis of HE contaminant adsorption studies done on clays (Myers 2003, 76188), it can be inferred that tuff has a relatively low adsorption capacity (on the order of 1 mL/g) for RDX, HMX, and TNT. These constituents, however, are adsorbed onto organic carbon present in the Cañon de Valle alluvium, with the capacity for adsorption represented by the compound-specific organic carbon adsorption coefficient (K_{oc}). While the fraction organic carbon (FOC) in the alluvium is not known, FOC studies in Los Alamos Canyon (Hickmott 2003, 76190) indicate that the FOC ranges from 0.1% to 5%. Finer fractions, like fine sand and silt, which are representative of floodplain deposits, tend to be in the higher end of the FOC concentration range (e.g., 2 to 5%). Concentrations in the medium sand and larger fractions, which are representative of buried channel deposits, tend to be in the lower end of that range (e.g., 0.1 to 2%).

In contrast to HE, which does not dissociate in groundwater and is slightly soluble, barium nitrate dissociates into the barium cation and nitrate anion, and is freely soluble in water. In groundwater, barium will partition between dissolved, adsorbed, and solid phases, the latter including barite and witherite (LANL 1998, 59891). The respective partitioning fractions of the total barium inventory is not known. This uncertainty is important because certain barium phases, particularly barite and barium adsorbed by ion exchange, may not be available for groundwater transport, as discussed below.

Barium has an affinity for adsorption onto clays, oxides, and hydrous oxides, with literature values for equilibrium adsorption coefficients in soil ranging from 66 to 2800 mL/g (Myers 2003, 76188). While the concentrations of clays has not been studied in Cañon de Valle, clay content has been quantified for other canyons, and it is generally positively correlated with the fraction of fine particle size (Katzman 2003, 76850). For Cañon de Valle, the fine particle-size fraction appears to contain the highest contaminant inventories when compared to other geomorphic units, indicating that the clay content of the fine particle-size fraction may be higher. Barium adsorption onto these clay and oxide minerals takes the form of ion exchange and chemisorption, with adsorption onto clays primarily due to ion exchange. Furthermore, barium adsorption onto clay is thought to be irreversible under natural conditions. Once barium is adsorbed, it is immobilized or “locked down” on the clay surface (Myers 2003, 76188). Consequently, the ion exchange of barium on natural clay can serve as a means of immobilizing barium or retarding its movement in the environment.

A literature search for barium adsorption studies on tuff was conducted, but yielded no published results. The dynamics of barium adsorption onto both tuff and alluvial sediment and the relative fraction of barium partitioning between its various forms is an important uncertainty in the SCM. Not all the barium inventory may be available for transport, but the fraction that is unavailable is not known.

Based on the preceding discussion, Figure 3.10-1 shows the conceptual vadose zone distribution of barium and RDX, the two primary CMS COPCs present in Cañon de Valle alluvial sediment. In Cañon de Valle, the alluvial water table fluctuates seasonally due to precipitation. Rising groundwater levels will desorb barium that is reversibly adsorbed and will dissolve barium minerals, primarily witherite. Rising groundwater also causes the release of RDX-containing pore water that was previously trapped in the vadose zone. RDX and barium are also present as adsorbed phases, with barium adsorbed onto clay particulates and other mineral phases and RDX adsorbed onto organic carbon present in the sediment. Alternatively, falling groundwater tables may cause the evaporation of water and the precipitation of barium minerals. In either scenario, the presence of these forms of barium and RDX in alluvial sediments represents a widespread, continuing source that is mobilized by stormwater or a rising alluvial groundwater table associated with episodic precipitation events in Cañon de Valle.

The relative adsorption potential of barium and RDX is reflected in their respective contaminant distributions. In R-25, barium has been detected, but at low concentrations that are at least a factor of 10 below the NMWQCC standard of 1000 µg/L, whereas RDX has been detected at a maximum concentration of 75 µg/L, this despite the prevalence of high barium concentrations in Cañon de Valle alluvial groundwater. This difference might be related to the higher relative adsorption potential for barium onto sediment and tuff. While the tuff adsorption potential for barium is unknown, sediment strongly adsorbs barium, particularly fine-grained sediment. Although the preferential path from the alluvial groundwater to the regional groundwater consists mostly of fractures in tuff, fractures that directly underlie the saturated alluvium may be filled with sediment, which serves to adsorb and retard barium.

The potential for biodegradation is another chemical property important to the long-term environmental fate of HE. TNT degrades aerobically and anaerobically, with reduction of the nitroso groups, eventually leading to cleavage and assimilation or mineralization of a portion of the TNT carbon. Groundwater analytical data from Cañon de Valle indicate active TNT degradation, with breakdown products typically present in higher concentrations than TNT itself.

The biodegradation of RDX and HMX in the environment also occurs aerobically and anaerobically (Card and Autenrieth 1998, 76873). Anaerobic degradation rates are typically greater than aerobic rates. For either pathway, nutrient concentrations are also important. In subsurface regions of the SCM, including the mesa vadose zone, canyon alluvium, and alluvial groundwater, the rate of natural biodegradation of

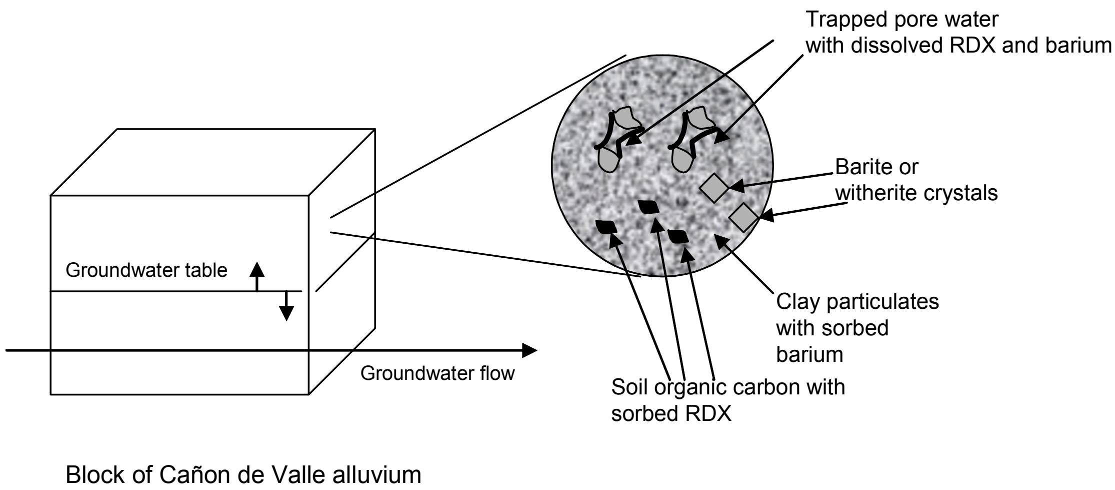

Figure 3.10-1. Conceptual distribution of RDX and barium in the Cañon de Valle vadose zone

RDX and HMX is likely to be low, given the lack of appropriate anaerobic conditions. The low concentrations of RDX breakdown products [MNX, DNX and hexahydro-1,3,5-trinitroso-1,3,5-triazine (TNX)] in groundwater and surface water support this hypothesis. RDX and HMX can also degrade chemically via an inorganic pH hydrolysis reaction (Layton et al. 1987, 14703); however, the potential for this degradation pathway at the site is unknown.

Barium does not biodegrade because it is an inorganic contaminant. As discussed above, the long-term environmental fate of barium is dependent upon its chemical state, whether precipitated, dissolved, or adsorbed.

3.11 SCM and Current Site Conditions Uncertainties

Despite the refinements made to the TA-16 SCM in the Phase III RFI (LANL 2003, 77965), uncertainties about the TA-16 system remain, as discussed below.

1. Characterization activities have not yet bounded the vertical extent of subsurface contamination beneath the potential source areas (other than the TA-16-260 source area) located on the mesa. Future drilling activities (e.g., at the 90s Line Pond) may address this uncertainty.

2. The uncertainties in the hydrogeology of the springs include the effects of terminating the TA-16-260 outfall and other discharges, the drought, the Cerro Grande fire, tree thinning, and the possibility of other springs or seeps discharging to the Cañon de Valle alluvial groundwater. As of this writing, Martin Spring is dry, and it is not known when flow will return. In addition, it is unclear if and when the benefits of the IM excavation at the outfall source area will be evident in Cañon de Valle springs (and in alluvial groundwater).

3. As noted in the 1998 Phase II RFI report, there is little evidence for a hydrogeological link between the TA-16-260 outfall and Martin Spring Canyon. Additional characterization performed since 1998 has reinforced the idea that the Martin Spring system is affected by contaminant sources other than the TA-16-260 outfall. There are other potential source areas, but these have not been positively identified as contamination contributors to Martin Spring Canyon. The planned mesa characterization through intermediate-depth borings should help address this uncertainty, as discussed in revision 1 to the CMS plan addendum (LANL 2003, 75986.2).

4. The hydrogeological interconnection between the canyon bottoms and the deeper groundwater systems, including the intermediate perched groundwater encountered in R-25 and the regional groundwater, is not well characterized. The lateral extent of the 700-ft perched groundwater encountered in R-25 is not well bounded (although monitoring wells CdV-R-15-3 and CdV-R-37-2 improved this). The Zonge geophysical survey conducted as part of the Phase III RFI (LANL 2003, 77965) indicates there may be an abrupt eastern boundary to the intermediate perched groundwater, but this has not been verified. These uncertainties will be addressed by other investigations proposed in revision 1 to the CMS plan addendum (LANL 2003, 75986.2).

5. Detailed characterization of the lateral distribution of contaminant concentrations within Cañon de Valle alluvium has not been completed. Of the estimated 7000 ft of suspected saturated alluvium downstream from the TA-16-260 outfall source area, monitoring wells are located along the first 4000 ft. In addition, alluvial groundwater and sediment characterization is incomplete in Cañon de Valle upstream from the confluence of Cañon de Valle with Water Canyon. The Canyons Team will sample the alluvial groundwater and sediment in these reaches as part of its investigation.

6. The permeability distribution in Cañon de Valle saturated alluvial sediment is not known. These data are important to refining the water balance and assessing the efficacy of groundwater remediation alternatives, and will be addressed by the CMI.

7. Potential areas of enhanced vertical groundwater infiltration within the Cañon de Valle alluvium can be inferred from geophysics resistivity results. The permeability of the sediment or fractures that comprise these areas is not known. Moreover, the correlation between geophysics resistivity data and water content has not been verified by field sampling. Additional subsurface investigations, as planned under revision 1 to the CMS plan addendum (LANL 2003, 75986.2), will help verify the geophysical interpretations.

4.0 MEDIA CLEANUP STANDARDS AND REMEDIAL ACTION OBJECTIVES

The fundamental objective of corrective action is to control or eliminate potential risks to human health and the environment by initiating remedies that reduce contaminated media concentrations to protective levels. During the CMS, accomplishing this objective is a twofold process involving the establishment of site-appropriate MCSs (addressed in this section) and the identification of one or more corrective measure alternatives (addressed in subsequent sections). In this section, a set of media- and contaminant- specific cleanup objectives are proposed for the outfall source area and Cañon de Valle and Martin Spring Canyon alluvial systems. Points of compliance (POCs) and a compliance time frame (CTF) are also proposed.

MCSs are generally derived from two sources: (1) existing state or federal standards determined to be ARARs and (2) a site-specific, human health and ecological risk assessment (EPA 1998, 80120). According to EPA guidance, use of ARARs is a CERCLA requirement that is also suited to the development of MCSs under RCRA. The process of MCS development for this CMS considers site-specific criteria such as:

- the presence of multiple contaminants in a medium at the site;
- cumulative risk exposure from other hazards not directly related to the analyzed release;
- the site's physical restrictions and accessibility;
- the land-use designation appropriate to the site (e.g. industrial); and
- the effectiveness, practicality, reliability, and cost of the selected corrective measures and the potential for achieving the MCS.

4.1 Identification of ARARs

Existing NMWQCC regulations 20 NMAC 6.2.3103 Parts A and B, for groundwater of less than 10,000 mg/L total dissolved solids (TDS) concentration establish contaminant concentration standards and specify a 10^{-5} cancer risk threshold for concentrations of toxic pollutants. Because the TDS concentration of alluvial groundwater is less than 10,000 mg/L, these regulations are proposed as site ARARs for alluvial groundwater. Because of the interchange between site surface water and alluvial groundwater, these ARARs are also proposed for surface water and spring water. In the discussion that follows alluvial groundwater, surface water and spring water are referred to as shallow site waters. With respect to the discussion in section 4.0, these ARARs, which are NMWQCC regulations, incorporate both standards and an acceptable risk threshold.

For alluvial sediment in the alluvial vadose zone, the proposed ARAR is the requirement that alluvial sediment contaminant concentrations should not cause shallow site water contaminant concentrations above the shallow site water ARAR cited above, as measured from the point of withdrawal (20 NMAC 6.2.4103).

Given the future industrial use of the site and the presence of regional groundwater beneath the site, there are two potential points of withdrawal. For incidental shallow site water ingestion associated with industrial use, the point of withdrawal is the shallow site water. For residential drinking water, the point of withdrawal is the location of the nearest municipal well that draws from regional groundwater. The latter point of withdrawal is applicable to shallow site water because of its potential to infiltrate to regional groundwater.

Potential risk shallow site water calculated during the Phase III RFI (LANL 2003, 77965) was acceptable. Potential risk associated with the transport of contaminated shallow site waters to regional groundwater and subsequent extraction for residential use has not been quantified. This potential risk will be determined during the regional groundwater CMS using a site-specific computer model to evaluate groundwater flow and solute transport to the closest municipal well.

The ARARs cited above are the basis for the MCSs for site shallow water and alluvial sediment. Based on the provisions of the ARARs, MCSs for all CMS COPCs are derived from either ARAR concentration standards or ARAR risk-based provisions for toxic pollutants based on potential risk to regional groundwater. For example, the MCS for barium is set by a concentration standard in 20 NMAC 6.2.3103

Part A. The calculation of risk-based MCSs for toxic pollutants for the residential drinking water pathway is deferred to the regional groundwater CMS.

Several CMS COPCs, such as RDX and TNT, are not currently listed in 20 NMAC 6.2.1101 as toxic pollutants, but are suspected carcinogens. For these compounds, a 10^{-5} acceptable cancer risk threshold, as established by the proposed ARARs, is proposed.

Although CMS COPCs such as RDX and TNT do not have MCSs resulting from this CMS (and therefore, in a strict sense, have no drivers for remediation under this CMS), it is appropriate for this CMS to develop corrective measure alternatives to address these CMS COPCs in addition to CMS COPCs with MCSs. Similar remediation technologies are suited to both, and remedial action in the shallow site water can be viewed as a measure of source control with respect to regional groundwater.

4.2 Outfall Source Area MCSs

4.2.1 Identification of Risk-Based MCSs for Soil and Tuff in the Outfall Source Area

Phase III RFI COPCs for the outfall source area are aluminum, arsenic, barium, manganese, thallium, uranium, HMX, RDX and TNT. As discussed in section 3.2 and in detail below, these Phase III RFI COPCs are retained as CMS COPCs.

The following exposure pathways were quantitatively evaluated in the human health risk assessment for the outfall source area soil that was conducted as part of the Phase III RFI (LANL 2003, 77965):

- inhalation of volatiles or dust particles;
- incidental ingestion, and
- dermal contact.

These pathways are the most likely for exposure pathways for human receptors at the outfall source area (LANL 1998, 59891; 2000, 64355.4). All human receptors are workers associated with industrial use of the site: the on-site environmental worker represents individuals involved in environmental monitoring, such as field sampling efforts; the trail user is a worker who uses the trails for recreation/exercise purposes such as walking or jogging; and construction workers are involved in more intrusive work activities, such as excavation.

Cumulative excess cancer risk to the environmental worker from potential exposures to COPCs in soil and tuff is slightly above the NMED's target level of 10^{-5} (NMED 2000, 68554), but within EPA's target risk range of 10^{-6} to 10^{-4} (EPA 1991, 76865). The cumulative excess cancer risk for the other receptors is below NMED's target level of 10^{-5} (NMED 2000, 68554). Noncancer hazard (HI) (>1.0) is associated with exposure to outfall source area COPCs for the construction worker but not the other receptors (HI<1.0).

The excess cancer risk for the environmental worker is due primarily to the presence of RDX and TNT. Site-specific screening action levels (SSALs) based on a 10^{-6} acceptable cancer risk threshold (the EPA ARAR) for RDX and TNT were calculated for outfall source area soil as part of the Phase II RFI (LANL 1998, 59891). These SSALs were developed in consultation with the NMED (LANL 1998, 59173) and in accordance with EPA guidance documents (EPA 1991, 58234; EPA 1998, 58751). The SSALs for RDX and TNT are 36.9 mg/kg and 135.0 mg/kg, respectively. The SSALs for RDX and TNT are proposed as MCSs for the outfall source area.

For the construction worker, the total HI from the Phase III RFI risk assessment was 1.9, of which 1.6 or 84% was attributed to TNT, RDX, and barium. Therefore, reduction of the HI below 1.0 will be the focus of remediation in the outfall source area. Post-remediation sampling will evaluate the concentrations of all the CMS COPCs in the calculation of the HI, but the residual concentrations of TNT, RDX and barium will determine whether the objective of attaining an HI<1.0 is met. In this calculation, the mean of post-remediation CMS COPC sampling results will be used, specifically the 95% upper confidence limit on the mean.

Because RDX and TNT are involved with both noncancer and cancer risks, the minimum of their respective MCSs are proposed as the site MCS.

The MCSs based on an HI <1.0 cannot be determined without post-remediation sampling results. An estimate of the MCS for barium, however, can be calculated if it is assumed that the post-remediation average concentrations of TNT and RDX are at their cancer risk MCSs for RDX and TNT, and that, furthermore, these cancer risk MCSs are the site MCSs. Following these assumptions, the barium MCS concentration would be approximately 10,000 mg/kg.

4.2.2 Outfall Source Area Surge Bed MCSs

The outfall source area risk assessments did not assess the contaminated surge beds beneath the source area because these areas are not directly accessible to humans. The concern with the surge beds lies in their potential to adversely affect groundwater, either by discharging to the alluvial groundwater systems or by discharging to regional groundwater via fracture and surge bed flow paths. Although placement of the settling pond cap as part of the outfall source area IM has alleviated the potential for ponding of water and subsequent infiltration of groundwater, subsurface fracture groundwater flow paths may still intercept the surge bed horizons.

Because of the absence of potential human exposure pathways and the lack of constant groundwater contact, MCSs for the surge beds are not defined and a best management practice (BMP) remedial objective that calls for the isolation or removal of the 17-ft surge bed is proposed. The focus of the BMP is the 17-ft surge bed, where RDX concentrations of approximately 900 mg/kg were encountered (LANL 1998, 59891), and not the 45-ft surge bed, where RDX concentrations of approximately 4 mg/kg were encountered. Other tuff discontinuities, such as powder beds, showed concentrations similar to those for the 45-ft surge bed, are similarly not addressed.

4.3 Proposed MCSs for Springs, Groundwater and Surface Water

The CMS COPCs for surface water, alluvial groundwater and springs in Cañon de Valle and Martin Spring Canyon are listed in section 3.2. The CMS COPCs include barium, manganese, RDX, DNX, MNX and TNT, though not all are present in every location.

For barium, the proposed MCS for alluvial groundwater and surface water consists of the barium NMWQCC standard for groundwater (1000 µg/L). For manganese, the proposed MCS consists of the manganese NMWQCC standard for groundwater (200 µg/L). If the manganese is naturally occurring, this MCS will not apply

RDX, DNX, MNX, and TNT do not have standards and are not listed as toxic pollutants subject to a 10^{-5} risk threshold. Nevertheless, as part of the industrial-trail user scenario, in the Phase III RFI (LANL 2003, 77965), cancer risks were calculated for these compounds as associated with incidental ingestion of site waters. The RFI determined that under this scenario the potential risk associated with site contaminants was less than 10^{-5}, which complies with the NMWQCC toxic pollutant ARAR.

Potential risks were not calculated for a second exposure scenario, residential ingestion of regional groundwater at the nearest municipal drinking water well. To date, no site-related contaminants have been detected at the closest municipal well, which is located approximately 4 mi from the site. Calculation of the potential risk and the corresponding MCSs for this scenario are deferred to the regional groundwater CMS. The regional groundwater CMS will calculate the potential risk and the risk-based MCSs for shallow groundwater by using a predictive groundwater transport model to calculate the transport of shallow site water contaminants to the closest municipal well.

At the present time, only an MCS for barium and manganese in groundwater and surface water is proposed. For other CMS COPCs in springs, surface water and groundwater, the MCSs will be developed as part of the regional groundwater CMS.

For all site waters, it is proposed that remediation is complete when the MCSs, developed either as part of this CMS or the regional groundwater CMS, are attained for eight consecutive quarters. This is consistent with current NMWQCC abatement standards in 20 NMAC 6.2.4103.

4.4 Proposed MCSs for Alluvial Sediment

The proposed ARAR for alluvial sediments stipulates that alluvial sediments not cause groundwater or surface water contaminant concentrations at the point of withdrawal that exceed the water ARARs. The alluvial sediment ARAR makes no distinction between groundwater and surface water because of the interchangeability of waters at the site.

For barium, the MCS for shallow site water is the NMWQCC standard. As discussed in section 3, the sediment-water partition coefficient for barium that describes the sediment barium concentration in equilibrium with a barium water concentration is not currently known. Therefore, testing of the sediment to determine compliance with the sediment ARAR is proposed using standard leaching test procedures, with test results averaged across the alluvial vadose zone in a statistically representative fashion.

For sediment CMS COPCs, such as RDX and TNT, without corresponding MCSs derived from NMWQCC standards, the sediment ARARs state that sediment concentration of contaminants not cause water contaminant concentrations to exceed a risk level of 10^{-5}. As discussed above, there are two points of shallow site water withdrawal: an industrial trail-user scenario in which shallow surface water is ingested and a regional groundwater drinking water scenario involving the nearest municipal well. Under the industrial trail-user scenario, site waters did not pose an unacceptable risk; and by inference, site alluvial sediments are not likely to cause water to exceed the risk threshold for this scenario.

Calculation of shallow site water MCSs that are protective of regional groundwater is deferred until completion of the regional groundwater CMS. Once established, these MCSs can be applied to leaching test results for sediments to determine compliance with the sediment ARAR. As with barium, the test results would be averaged in a statistically representative fashion across the alluvial vadose zone.

4.5 POCs

Compliance with the MCSs is determined at specified POCs. These are specific locations where regular sampling is conducted for the purpose of assessing progress in attaining the MCSs.

For the outfall source area, soils will be remediated to attain the risk-based MCSs. To determine compliance with the risk-based MCSs within the outfall source area, the POCs consist of post-remediation sampling points. The mean (95% upper confidence limit of the mean) would be calculated and compared to the MCSs to determine compliance.

For the outfall area settling pond 17-ft surge bed, a POC is not proposed, given that there are no MCSs. To gauge the success of the BMP for this area, however, a new groundwater well is proposed to be installed for the 17-ft surge bed horizon. This well will be used to test for the presence of contaminated groundwater within the surge bed.

The proposed groundwater POCs in Cañon de Valle consist of the five existing alluvial groundwater wells. The historical data that exists for these locations will enable a determination of remedial progress with respect to past trends. Progress in attaining the remedial objective of eight consecutive quarters of MCS compliance will also be determined at each POC.

For surface water, two POCs located along the perennial reach of surface water are proposed. The first surface water sampling point is proposed for the midpoint of the perennial reach; the second is proposed for the end of the perennial reach.

In Martin Spring Canyon, the three existing alluvial groundwater wells are proposed as the POCs. These wells may go dry, given that Martin Spring is currently dry. If Martin Spring stays dry, alluvial groundwater in Martin Spring Canyon may be seasonally, rather than permanently, present. Sampling of the POCs will be conducted during the seasonal periods when groundwater is present.

A single POC for Martin Spring surface water is proposed. Given that the spring has gone dry, surface water in Martin Spring may be limited to seasonal cycles or stormwater events. Sampling of the POC for compliance would be conducted during the periods when surface water is present.

For the springs in Cañon de Valle and Martin Spring Canyon, the proposed POC is spring water wherever it emerges from the ground. If spring flow is intermittent, sampling will be conducted during periods of flow.

For alluvial sediment, the proposed POCs are a statistically representative set of sediment sampling points at which samples would be collected and subjected to a leaching test to determine an equilibrium water contaminant concentration. The 95% upper confidence limit of the mean water concentration would then be calculated and compared to the water MCSs to determine compliance.

4.6 CTF

The CTF establishes the length of time required to attain the MCSs. A specific CTF is not proposed for the outfall source area, springs, or alluvial systems. Site conditions, including the magnitude and extent of contamination and potential risks, do not warrant the imposition of an urgent, set time frame in which the remedial objectives and MCSs must be attained. Rather, the time required to meet these targets will be used as an evaluation factor for remedial alternatives, recognizing that those alternatives that require less time to meet the remedial and MCSs are preferable.

5.0 SELECTION OF REMEDIATION TECHNOLOGIES AND SCREENING

5.1 Overview of the CMS Process

Prior sections of this CMS report have reviewed current site conditions, identified CMS COPCs for site media, and proposed MCSs and POCs. In the remaining sections of this report, remedial technologies are evaluated (section 5), corrective measure alternatives are formed using the screened technologies and evaluated (section 6), and the preferred corrective measure alternatives are proposed (section 7). The public enters the decision-making process following regulatory submittal of this document. The PIP is presented in Appendix D. Figure 5.1-1 presents a flow chart of the CMS process.

The focus of the remediation technology screening process is on barium and HE. Although manganese is listed as a CMS COPC for Cañon de Valle and Martin Spring groundwater, it is not known at present whether the presence of manganese is due to natural reducing conditions present in these canyons or is the result of reducing conditions caused by the presence of HE. In the latter case, the remediation of HE will alleviate these reducing conditions, and manganese groundwater concentrations will decrease.

5.2 Identification of Remediation Technologies

5.2.1 Sources for Technology Information

The process of selecting and evaluating corrective measure alternatives begins with reviewing all remediation technologies, both standard and innovative, that could be used to achieve the MCSs for the various site media. Sources of candidate technologies include literature reviews, working groups, and EPA databases.

Since January 1998, Laboratory personnel have participated in the DOE's Innovative Treatment and Remediation Demonstration (ITRD) Program's HE Advisory Group, a group whose goals are the identification and testing of potentially cost-saving remediation technologies for HE environmental contamination. The ITRD Program was designed to study HE and barium remediation technologies in both soils and water, focusing on the unique problems associated with DOE HE-processing facilities such as LANL and Pantex. Contamination at these sites differs from that found at many Department of Defense (DoD) sites because of the occurrence of barium and because the principal HEs used were HMX and RDX (the nitrosamines) rather than TNT and DNT (the nitroaromatics). In the ITRD Program, DOE facilities work cooperatively with the EPA, industry, national laboratories, and state and federal regulatory agencies to identify applicable, innovative, and cost-effective remedial technologies. For this CMS, the ITRD Program served as a resource for technologies and information about their effectiveness.

5.2.2 Overview of Technology Types

Remediation technologies may be broadly classified as either in situ (in place) or ex situ (removed from place). In situ technologies do not require removal of the media (i.e., in situ remediation of soils involves treatment in place rather than excavation). These definitions apply to site shallow groundwater, surface water, sediment, and soil.

Technologies can be further classified by their point of application and their operating principle. In general, in situ technologies have the advantage of minimally disrupting the local ecosystem, which, for Cañon de Valle, includes wetlands and a threatened and endangered species (the Mexican Spotted Owl).

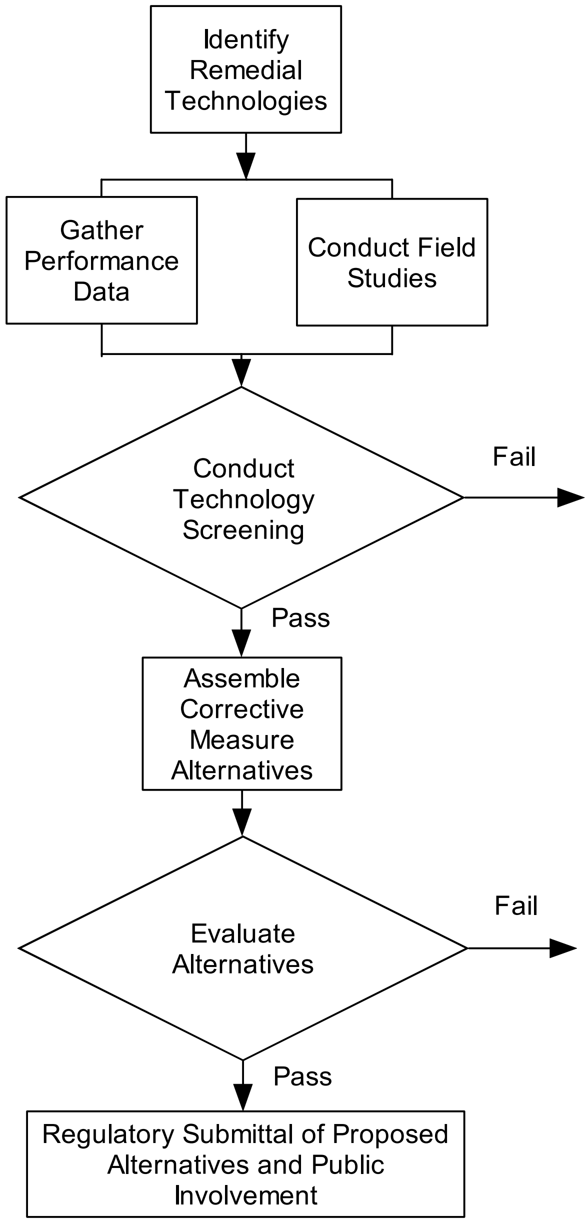

Figure 5.1-1. Flow chart of the CMS process for proposing alternatives

The disadvantages of in situ technologies include leaving contaminants or their byproducts in the environment and difficulties with demonstrating effectiveness and completion. Ex situ technologies, particularly when combined with off-site disposal, have the advantage of completely removing contaminants from the environment and the disadvantage of substantially disrupting the local ecosystem.

Containment technologies isolate the contamination and prevent migration and exposure. This isolation may prevent direct exposure or preclude contamination of other media, thereby preventing secondary exposure. One example of in situ technology is the capping of soils to prevent infiltration of surface water. One ex situ example is excavation of soils and their placement in a secure landfill.

Stabilization technologies limit the environmental movement of contaminants by altering the chemistry or physical state of the contaminant, usually by converting it into a non-soluble form. Like containment technologies, they may be either in situ or ex situ. Soil removal and stabilization at a secure landfill is an example of ex situ stabilization.

Other technologies destroy the contaminants and are typically ex situ. Examples include thermal destruction or incineration, chemical oxidation, and bioremediation, with bioremediation employed either in situ or ex situ. These are referred to, broadly, as thermal, physical-chemical, and biological treatment, respectively.

5.2.3 Standard Remediation Technologies

Several remediation technologies are considered standard proven technologies for the treatment of barium and HE in soil and water. Although they are standard, these technologies often have limitations regarding application and cost-effectiveness at a specific site. These limitations have been the impetus for the development of new innovative technology. Table 5.2-1 presents a list of standard remediation technologies that have been implemented on a production scale, in the field, for HE and barium at the Laboratory and at other sites across the country.

Table 5.2-1
Standard Technologies for Remediation of HE and Barium

Ex Situ Treatment of Soils
• Incineration • Thermal desorption • Stabilization and landfilling (for hazardous soils) • Landfilling without treatment (for nonhazardous soils) • Composting • Bioremediation and landfilling
In Situ Treatment of Soils
Low permeability caps Impermeable covers
Ex Situ Treatment of Water
• GAC[a] treatment for organic HE

[a] GAC = granulated activated carbon.

5.2.4 Innovative Remediation Technologies

Innovative technologies hold the promise of increased effectiveness and lower cost when compared to standard technologies. Any innovative technology needs to be compared with the standard baseline technologies to determine if there is any overall benefit to schedule, performance, cost, or regulatory acceptability.

The ITRD Program identified a list of innovative treatment technologies for in situ or ex situ applications at the Laboratory and at Pantex (LANL 1998, 62413.3). This list is shown in Table 5.2-2. Since the ITRD HE Advisory Group first met in 1998, several of these technologies have undergone significant development.

To augment the ITRD findings, a literature review was conducted for this CMS to gather additional information about technology performance status and data. For example, zero valent iron (ZVI) has shown promise as a technology for groundwater remediation of organic HE constituents when it is deployed as part of a permeable reactive barrier (PRB) (Wildman and Alvarez 2001, 80123). Similarly, calcium sulfate has shown promise for the immobilization of barium in groundwater by forming relatively insoluble barium sulfate (barite) (Wilkens et al. 2001, 79572).

5.3 Screening of Standard and Innovative Technologies

5.3.1 ITRD HE Working Group Screening of Technologies

Using the identified innovative technologies in Table 5.2-2, the ITRD HE Advisory Group screened each one for its applicability to sites at the Laboratory and Pantex (LANL 1998, 62413.3). To help with this evaluation effort, Pantex and the Laboratory provided detailed information about site monitoring, contaminant distribution, and geotechnical data to the ITRD HE Advisory Group. Additionally, the group toured SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon. The screening factors included the following requirements:

- Be protective of human health and the environment
- Attain likely MCSs
- Control the sources of releases to reduce or eliminate, to the extent practicable, further releases that may pose a potential unacceptable risk to human health and the environment
- Comply with standards for management of wastes

As a result of the screening, the innovative technologies shown in Table 5.3-1 were retained for further evaluation for use at SWMU 16-021(c)-99 and affected areas. Evaluation included pilot-scale testing. Some of the technologies eliminated by the ITRD, such as natural attenuation, were reconsidered for this CMS because of advances in the technology or advances in site characterization.

5.3.2 Recent Technology Pilot and Field Studies

To date, phytoremediation, composting, and chemical treatment using ZVI pilot-treatment studies have been completed by ITRD members and collaborators. Other important studies not listed in Table 5.3-1 include the Pantex in situ bioremediation field study (EPA 1996, 79573). These studies, as well as others, are described in greater detail below.

Table 5.2-2
Innovative Remediation Technologies Identified by the ITRD HE Advisory Group

Technology Name	Technology Class	In situ/Ex situ Medium
Bioaugmentation Biosep/DuPont process	Biological	In situ soils
Biodegradation(aerobic, anaerobic) with gas and liquid phase additions	Biological	In situ soils
Biodegradation with thermal enhancement	Biological	In situ soils
Biodegradation with natural attenuation	Biological	In situ soils
Biodegradation—phytoextraction	Biological	In situ soils
Soil flushing	Physical-chemical	In situ soils
Potassium permanganate treatment	Physical-chemical	In situ soils
Cobalt-60 irradiation	Physical-chemical	In situ soils
Fenton's reactions	Physical-chemical	In situ soils
Chemoxidation	Physical-chemical	In situ soils
Soil heating with soil vapor extractions	Thermal	In situ soils
Soil vitrification	Thermal	In situ soils
Radio frequency heating	Thermal	In situ soils
Steam stripping	Thermal	In situ soils
Downhole burner (disco)	Thermal	In situ soils
Composting	Biological	Ex situ soils
Bioslurry—white rot fungi, bioslurry—indigenous microbes	Biological	Ex situ soils
Bioslurry-gas phase additions	Biological	Ex situ soils
ZVI abiotic reduction	Physical-chemical	Ex situ soils
Solvent extraction	Physical-chemical	Ex situ soils
Fenton's reagent	Physical-chemical	Ex situ soils
Base hydrolysis with humic acid	Physical-chemical	Ex situ soils
Solvated electrons	Physical-chemical	Ex situ soils
Gamma irradiation	Physical-chemical	Ex situ soils
Molten salt	Physical-chemical	Ex situ soils
Electron beam	Physical-chemical	Ex situ soils
UV[a]/peroxide	Physical-chemical	Ex situ surface and groundwater
Peroxone	Physical-chemical	Ex situ surface and groundwater
Titanium oxide/UV	Physical-chemical	Ex situ surface and groundwater
Phytoremediation	Biological	In situ surface and groundwater
Electron beam	Physical-chemical	Ex situ surface and groundwater
ZVI	Physical-chemical	Ex situ surface and groundwater
Supercritical water oxidation	Physical-chemical	Ex situ surface and groundwater
Biotreatment	Biological	Ex situ surface and groundwater
Reactive barriers	Physical-chemical	Ex situ/in situ surface and groundwater

[a] UV = ultraviolet.

Table 5.3-1
Innovative Technologies Recommended for Further Study by ITRD HE Advisory Group

Technology	Media	Nature of Pilot Study
Chemical treatment/ZVI	Soil	Laboratory-scale
Bioslurry with ZVI	Soil	Laboratory -scale
Phytoremediation	Water	Pilot-scale
Passive barrier	Water	Laboratory- and pilot-scale
Bioremediation—vapor phase augmented	Soil	Pilot-scale
Composting	Soil	Pilot-scale

5.3.2.1 Martin Spring Canyon Stormwater Filter: Field Study

A pair of stormwater filters was installed at Martin Spring (IT Corporation 2001, 80122) as part of a feasibility study for treatment of HE- and barium-contaminated springs water. The filters were designed and constructed by StormWater Management, Inc., of Portland, Oregon (Figure 5.3-1). Stormwater filters are commonly used to treat runoff from parking lots. To treat both the barium and HE, it was necessary to install two separate units, each with a different filter medium. The first unit contains GAC to remove HE, and the second unit contains ion exchange resin to remove barium. The units were plumbed in series such that springs water first encountered the GAC filter, then the ion exchange resin filter.

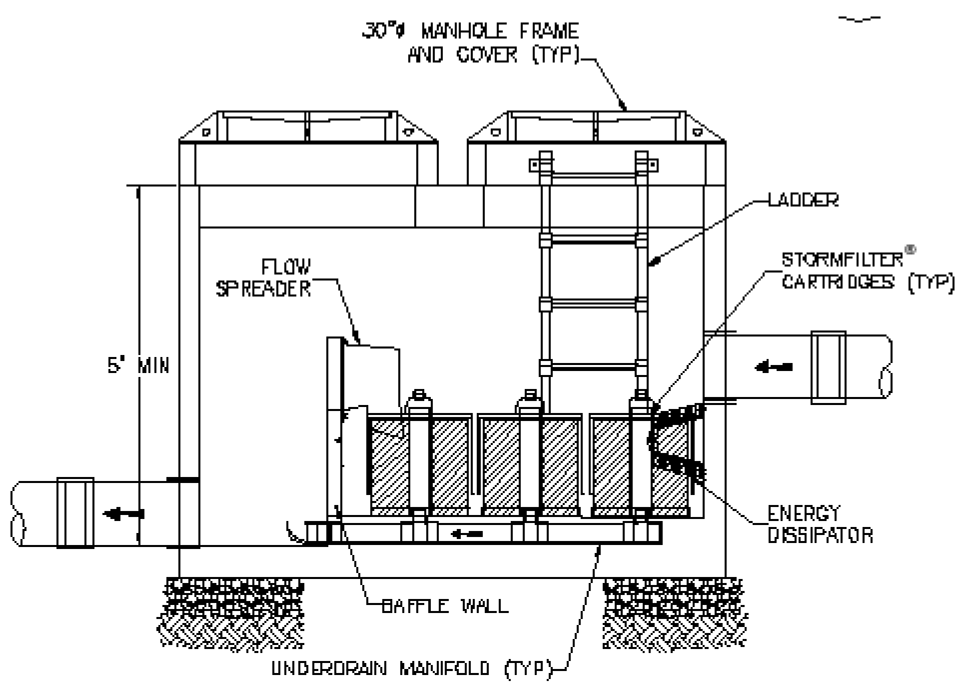

Figure 5.3-1. Typical stormwater filter, side view
(diagram courtesy of StormWater Management, Inc.)

For RDX, the units have performed well to date, but barium breakthrough has been detected earlier than anticipated, the cause of which is not known.

5.3.2.2 Phytoremediation: Field Study

HE has been shown to degrade in constructed wetlands (Sikora et al. 1997, 80124). Natural wetlands may also have some HE degradation ability. At Burning Ground Spring, a 200 m^2 natural wetland area is present between the spring outlet and the confluence with the main Cañon de Valle channel. This wetland was the focus of an investigation into the potential for phytoremediation of RDX and TNT (IT Corporation 2002, 79576). Concentrations of the parent compounds and primary metabolites were monitored at several locations within the wetland. The study also examined the capability of the dominant plant species to take up RDX. These plant species include sago pondweed (*Potamogeofpectinatus L.*), water stargrass (*Heteranthera dubia*), elodea (*Elodea canadensis*), parrotfeather (*Myriophyllum aquaticum*), reed canary grass (*Phalaris arundinacea L.*), wool grass (*Scirpus cyperinus*), and sweetflag (*Acorus calamus L.*). The specific objectives were to

- monitor levels of RDX and TNT breakdown products across the Burning Ground Spring wetland and determine if any reduction in parent compound concentration by wetland plants can be detected,
- monitor concentrations of primary metabolic breakdown products to help determine if degradation of RDX and TNT is occurring in the wetlands,
- observe seasonal trends in HE concentrations and wetland degradation performance, and
- conduct bench-scale laboratory studies of selected wetland plant species that are present at the Burning Ground Spring site and determine if they are capable of taking up HE.

The overall objective of the study was to assess the effectiveness of wetlands as an in situ treatment technology for the HE-contaminated surface waters present in Cañon de Valle.

The results from the Burning Ground Spring wetland investigation indicate that, under the current surface water flow pattern and retention time from the spring outlet to the confluence with Cañon de Valle, there is no evidence for a reduction in RDX and TNT concentrations from phytoremediation. Certain locations within the wetland, however, showed evidence of RDX biodegradation caused by microbial degradation. This indicates that the wetland area could be modified to enhance the microbial degradation processes (e.g., increasing water residence time under anaerobic conditions).

5.3.2.3 TNT and RDX Removal Using ZVI

In 1997, University of Nebraska researchers conducted laboratory tests of ZVI's ability to remove TNT and RDX from water and soils. The effectiveness of ZVI in removing TNT and RDX from contaminated soil slurries in the laboratory indicates that ZVI might be successfully used to remediate these compounds from contaminated soil and water on a field scale (Hundal et al. 1997, 79575).

5.3.2.4 Composting and ZVI: Field Study

In 2000, a pilot-scale composting study was conducted at TA-16 (IT Corporation 2002, 79577). The study used surface soils from the outfall source area (prior to the IM excavation of these soils) to test both a conventional composting process and the Grace Bioremediation Technologies Daramend™ ZVI treatment process (EPA 1996, 79573). This study investigated technologies that could, to varying degrees, effectively treat the highly contaminated HE and barium soils in the outfall source area. In the study, ammonium sulfate was used to immobilize barium through the formation of a relatively insoluble barium sulfate precipitate (barite). Ammonium sulfate was also a soluble-nitrogen source for the compost.

Conventional composting achieved substantial reductions in total HE concentrations, with HE levels likely meeting or exceeding potential appropriate treatment goals for the outfall source area drainage channel derived wastes. Barium was effectively stabilized by the ammonium sulfate. The most significant limitations of conventional composting are the time required for treatment, the space requirements, and the large increase in waste volume; amendments comprise approximately 70% of the waste. Daramend™ did not perform as well as conventional composting, and potential HE treatment goals were not reached; however, in other studies (EPA 1996, 79573) Daramend™ successfully reduced HE concentrations to levels comparable to those achieved through conventional composting and the process remains potentially advantageous due to its minimal increase in waste volume.

Pilot testing of both methods have shown that elevated temperatures and the maintenance of anoxic reducing conditions are critical for success. The composting experiments were negatively affected by large diurnal fluctuations in ambient air temperature due to the low thermal mass of the treatment piles. The Daramend™ experiments were subject to moisture-content control problems due to uneven drying rates within the small treatment piles and the non-uniform distribution of added water which was, in turn, due to the limitations of hand mixing methods. Both temperature and moisture requirements would be easier to meet in the field, where the larger masses of soil would reduce rapid soil drying and diurnal temperature fluctuations.

For the IM treatment of soils, excavation and off-site disposal were selected over on-site treatment such as composting. This decision was made on the basis of cost and on the time and space required for on-site composting of excavated soils.

5.3.2.5 Pantex In Situ Bioremediation of HE-Contaminated Soils: Field Study

The first pilot-scale field demonstration of a technology for in situ remediation of vadose zone soils contaminated with HE was conducted at Pantex in 1999–2000 (Rainwater et al. 2002, 79752). The HE of concern at the demonstration site were RDX, TNT, and TNB. To stimulate the anaerobic conditions required for biodegradation, the system used nitrogen injection through a well array to flood the vadose zone. After 300 days of operation, the concentrations of HE were reduced by approximately one-third. While promising, applying this technology in Cañon de Valle would be difficult, given the long narrow configuration of the canyon and the difficulty of attaining an adequate nitrogen flooding of the soil.

5.3.2.6 Massachusetts Military Reservation, Camp Edwards: Innovative Technology Evaluation

An innovative technology evaluation program was initiated by the US Army and National Guard Bureau in March 2000 to identify and investigate promising innovative technologies for remediating soil and groundwater contaminated with explosives at Camp Edwards (Weeks and Veenstra 2001, 79580). This program specifically targeted technologies and vendors that had demonstrated success with remediating HE-contaminated soils. Promising technologies for soil and groundwater remediation were selected for laboratory treatability studies based upon each vendor’s response to a request for a proposal specific to Camp Edwards. The technologies chosen for the soil program were composting, solid-phase bioremediation, low temperature thermal destruction (LTTD), bioslurry, chemical oxidation, and chemical reduction. Using soils from the Known Distance Rocket Range at Camp Edwards, treatability studies were performed for composting, solid-phase bioremediation, LTTD, and bioslurry. Although the soil contained RDX, TNT, HMX, dieldrin, lead, and other contaminants, the goal of the studies was to address explosives. The study obtained the following results:

- Composting successfully treated washed (by soil washing) soils and partially succeeded in degrading HE compounds in unwashed soils. The results indicated that HMX concentrations were reduced to cleanup goals; however, RDX concentrations were not reduced to levels below cleanup goals.
- Solid-phase bioremediation using the Daramend™ process, which uses ZVI, effectively degraded HE compounds to levels below soil cleanup goals in one of the two studies performed on the washed soils and in one of the two studies performed on the unwashed soils.
- Low-temperature thermal destruction appears to effectively reduce the concentrations of HE compounds to levels below soil cleanup goals in unwashed and washed soils at temperatures of 250oC and 300oC.
- Bioslurry results using intermittently stirred reactors met soil cleanup goals over a period of 35 days in both unwashed and washed soils. Soil cleanup goals were met only in the continuously stirred reactors using previously washed soils.
- Chemical oxidation (using Fenton's Reagent) partially succeeded in degrading explosive compounds in washed soils. Concentrations of explosive compounds were reduced, but not to levels below cleanup goals.
- Using ZVI with the addition of aluminum sulfate, chemical reduction was effective in washed soils. Concentrations of explosive compounds were reduced to levels below cleanup goals. Tests were not conducted on unwashed soils.

5.3.3 Screening of All Technologies

The candidate technologies from all sources, including the ITRD HE Advisory Group and literature searches, are presented in Table 5.3-2, along with the screening evaluations. The evaluation of screening factors is summarized in this table through a plus (+) and minus (–) system. In the evaluation, feasibility, given site-specific conditions, is weighted more heavily than other factors. This is because feasibility assesses whether the technology is applicable from a practical standpoint. Advancement of a technology to the next stage of the CMS process (development and evaluation of corrective measure alternatives), is indicated by either a <u>yes</u> or <u>no</u>. A more complete description of the evaluation of each technology is presented below.

5.3.3.1 Ex Situ Treatment of Soils

The ex situ treatment of soil implies that soil is excavated and either treated on-site or treated, and disposed of, off-site. In the case of off-site treatment, clean soil is imported. Assuming a 2-km excavation length in Cañon de Valle, and a cross-sectional area of 10 m^2, the volume of excavated soil is approximately 20,000 m^3. This volume is probably conservative given the fact that the width of the active channel in several areas of Cañon de Valle is less than 1 m across. Soil contamination, however, may not be limited to the active channel (LANL 2003, 77965). Moreover, post-excavation soil swell may increase

Table 5.3-2
Final Screening of Remedial Technologies

Technology Name	Protection of Human Health and the Environment	Ability to Meet Media Cleanup Standards	Ability to Control Releases	Compliance with Standards for Management of Wastes	Feasibility Given Site-Specific Conditions	Retained for Further Evaluation?
Ex Situ Treatment of Soils						
Incineration	+[a]	+	+	+	-[b]	No
Low-temperature thermal destruction	+	+	+	+	-	No
Soil washing	+	+	+	+	-	No
Off-Site landfilling (nonhazardous soils)	+	+	+	+	+	Yes
Off-Site stabilization	+	+	+	+	+	Yes[c]
Soil bioslurry	+	+	+	+	+	Yes[c]
Composting (including accelerated)	+	+	+	+	+	Yes[c]
In Situ Treatment of Soils						
Composting	-	-	-	+	-	No
Bioremediation (vapor-phase augmented)	-	-	-	+	-	No
Low permeability cap (source area)	+	+	+	+	+	Yes
Grouting of source area surge beds	+	+	+	+	+	Yes
Stabilization of barium by sulfate addition	+	+	+	+	-	No
Flushing of alluvial sediments	+	+	+	+	+	Yes
Ex Situ Treatment of Groundwater						
GAC treatment for RDX	+	+	+	+	+	Yes
Ion exchange treatment for barium	+	+	+	+	+	Yes
In Situ Treatment of Groundwater						
PRBs—GAC	+	+	+	+	+	Yes
PRBs—ZVI	+	+	+	+	+	Yes
Stormwater filters	+	+	+	+	+	Yes
Slurry walls	-	-	-	-	-	No
Phytoremediation	-	-	-	+	-	No
Monitored natural attenuation	-	-	-	N/A[d]	-	No

[a] + = favorable. [b] - = unfavorable [c] Likely to be feasible for off-site hazardous treatment only.
[d] N/A = not applicable.
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the in situ volume by 10%. Alternatively, a limited excavation of areas with elevated concentration may be feasible if more restricted excavation length and corresponding soil volume are removed.

In general, excavating areas such as the one that contains Cañon de Valle alluvial sediments is problematic due to National Environmental Policy Act (NEPA) and wetlands concerns, including the disturbance of wetlands and Mexican Spotted Owl habitat. Nevertheless, excavation could be effective if coupled with the appropriate remediation technologies, and the anticipated soil volume is not prohibitive. Excavation and candidate treatment technologies have been developed into corrective measure alternatives and are evaluated in section 6.

(a) Incineration

Incineration was first demonstrated on explosives-contaminated soil in 1982 at the Savannah Army Depot (Sisk 1998, 58940). Projects have been completed at four sites, with costs that range from $250 to $600 per ton. Pilot-scale feed rates were 200–400 lb/hr, and full-scale rates are estimated to be 20–40 ton/hr. The advantages of incineration are (1) it is a process that can handle a wide range of waste characteristics and contaminant concentrations, (2) it has a large treatment rate, (3) it has little downtime, (4) it is not affected by the weather, and (5) it can treat both liquids and solids. Incineration has been used to treat explosive compounds and reduce levels to 1 mg/kg. Neither incineration nor any thermal treatment removes inorganic barium. Consequently, other technologies, such as soil washing with water, must be used in tandem with thermal treatment.

The disadvantages of incineration include a negative public perception, the need for air pollution control equipment and air permitting to control byproducts, high mobilization and demobilization costs ($2–3.5 million), and the energy-intensive nature of the process. On average, 2 yr are required to obtain regulatory approval for incineration.

In general, on-site treatments of remediation wastes will require a corrective action management unit (CAMU) permit. The CAMU permitting alone may require several years. The difficulties involved in obtaining a CAMU permit meant that off-site disposal was favored for the IM remediation project (LANL 2000, 64355.4).

On the basis of the preceding discussion, incineration is not retained as a preferred technology, despite its proven ability to meet standards. Primarily because of the high permitting costs and negative public perception, and the relatively small volume of soil that is anticipated, its feasibility is unfavorable and it is not retained for further evaluation.

(b) Low-Temperature Thermal Destruction

Low-temperature thermal destruction is similar to incineration, except that lower temperatures are used. In this process, soil containing trace explosives residues is heated in a rotary kiln to volatilize or desorb contaminants. Volatilized contaminants are destroyed in a thermal oxidizer or adsorbed onto carbon. Thermal desorber units are typically smaller than incineration units and require less mobilization expense and consequently less threshold soil volumes to justify their use. Consequently, per-ton costs are less than incineration (approximately $150 per ton). Like incineration projects, thermal desorber projects require an extended permitting process, including a trial testing period. Although the process is similar in operating principle to incineration, the public and regulatory perception is somewhat better, and it has been widely used for soil remediation, primarily for petroleum hydrocarbon and chlorinated hydrocarbon remediation. Like incineration, thermal desorption will not remove barium, which would require a technology such as soil washing for removal.

As an on-site treatment requiring a RCRA CAMU permit, thermal desorption would require a lengthy permitting process. Moreover, given the successful IM remedial action, which used off-site soil disposal cost-effectively, on-site treatments are at an economic disadvantage. Therefore, any on-site treatment would have to show significant cost advantages over off-site disposal.

Schedule and cost requirements dictated by the CAMU permitting required for on-site treatment however, place on-site treatment in general at a disadvantage, especially for the relatively small volume ($20,000\ m^3$) of soil in this case. For these reasons, the feasibility of thermal desorption is unfavorable and it is not retained for further evaluation.

(c) Soil Washing

Soil washing has been shown to be effective for such HE as RDX and TNT (Weeks and Veenstra 2001, 79580). Soil washing also removes barium, if it is present in a soluble form such as witherite (barium carbonate). Soil washing has been successfully used in technology demonstration projects and in full-scale site-remediation projects (EPA 1993, 79565). To treat barium-containing wash water, sulfate precipitation or ion exchange would be used. The average cost for soil washing is $170 per ton, including excavation (Federal Remediation Technologies Roundtable 2002, 79570).

The principle of soil washing is largely based on separating soil particles by size and density, which takes advantage of preferential HE adsorption onto the FOC within soil. In essence, the process is one of waste volume reduction, with the FOC subjected to other treatment, or off-site disposal. The clean fraction is returned to the excavation.

As an on-site treatment, soil washing would require a CAMU permit, so it suffers from the same disadvantages as incineration and low-temperature thermal destruction. Moreover, soil washing must be implemented with other technologies that address HE. For these reasons, the feasibility of soil washing is unfavorable and it is not retained for further evaluation.

(d) Off-site Landfilling without Treatment (Nonhazardous Soils)

Off-site landfilling was used successfully on nonhazardous soil during the IM remediation of the outfall source area (LANL 2002, 73706). Hazardous wastes were shipped to Waste Management's Chemical Waste Management (CWM) Subtitle C facility in Lake Charles, Louisiana, where the waste was treated using their EPA-approved bioremediation process. Nonhazardous wastes were loaded directly from the pile into 30 yd^3 end-dumps and shipped to Waste Management's industrial waste landfill in Rio Rancho, New Mexico, at a cost of approximately $50 per ton. Off-site landfilling requires compliance with land disposal restriction (LDR) under RCRA. Because of its successful implementation at TA-16 as part of the 260 IM and MDA P (LANL 2003, 76876) projects, and the assumption that most soils, sediments, and tuff should qualify as nonhazardous, this technology is retained for further evaluation.

(e) Off-site Stabilization

Stabilization of HE-contaminated soil has been demonstrated at the Umatilla Army Depot site (EPA 1995, 58942; Channel 1996, 58943). Stabilization was the selected remedy for the Umatilla Army Depot Burning Ground because its soil contained metals as well as explosives. Incineration was also evaluated, but addressing the metals would have required stabilization after incineration, for a total cost of $15 million. The cost of stabilization alone was estimated at $4 million. An on-site landfill accepted the stabilized soil, which had to meet toxicity characteristic leaching procedure (TCLP) criteria for metals as well as separate leaching criteria for HE. Laboratory- and pilot-scale tests were performed using combinations of Portland cement, fly ash, and GAC as amendments. Carbon in the cement mix improves performance, 5% GAC provides optimal performance. The full-scale recipe used only 10% Portland cement, no fly ash and 1–1.5% GAC. This reduced recipe caused about 10% of the waste to fail TCLP, requiring breakup and retreatment. Approximately 30,000 tons of soil was processed, at a cost of approximately $5 million.

The Umatilla Army Depot stabilization operation had a capacity of 80 ton/hr and a cost of $170 per ton (turnkey). It is estimated that costs at other sites would range from approximately $150 to $200 per ton (turnkey costs). There is about a 50% increase in volume over the starting amount. To better stabilize barium as insoluble barium sulfate, stabilization amendments could also include sulfates. At the Laboratory's MDA P, stabilization was used on barium-hazardous soils at a cost, including transportation and treatment at a Texas landfill, of approximately $250 per ton (Criswell 2003, 80121).

The cost of stabilizing nonhazardous soils precludes its application to the outfall source area soils and nonhazardous canyon alluvial sediments. If hazardous soils or sediments were encountered, however, stabilization is a feasible ex situ technology. Judging by the existing barium sediment concentrations in Cañon de Valle, barium-hazardous sediments may be encountered during the excavation of Cañon de Valle. Based on the preceding discussion, stabilization is retained for further evaluation.

(f) Soil Bioslurry

Slurry phase biotreatment was demonstrated successfully at the Joliet Army Ammunition Plant in 1995 and 1996 and at the Iowa Army Ammunition Plant in 1997 and 1998 (US Army Environmental Center 2003, 79578). Bioslurry consistently achieved removal rates above 99%, with a high rate of mineralization. These studies, which were performed in support of feasibility studies at Joliet and Iowa Army Ammunition Plants, developed comprehensive concept designs and cost estimates for full-scale application of aerobic and anaerobic bioslurry processes. The studies found that bioslurry systems have higher construction and facility costs, but lower operation and maintenance costs, when compared to composting. An estimated unit cost of $230–270 per ton is close to that of composting.

Bioslurry was evaluated as an HE soil-remediation technology as part of treatability studies conducted at the Massachusetts Military Reservation, Camp Edwards (Weeks and Veenstra 2003, 79580). The tests used previously treated (by soil washing) and untreated soils. The results successfully met soil cleanup goals over a period of 35 days in both the unwashed and washed soils.

Bioslurry is feasible for the off-site treatment of soils, and is retained for further evaluation. Like stabilization, it is a candidate technology for the off-site treatment of hazardous soils and sediments only.

(g) Composting

The broad category of composting includes conventional composting (land-farming) and accelerated composting processes such as Daramend™ (EPA 1996, 79573), a composting process with ZVI soil amendments, and Chemical Waste Management's two-stage, solid-phase (TOSS) composting process (Waste Management, Inc. 2003, 79582), which was used for the off-site treatment of hazardous soils from the IM excavation of the outfall source area (LANL 2002, 73706). The underlying operating principle of each is bioremediation, and excavation is generally required prior to composting so that the soil can be worked.

Both the Daramend™ and the more conventional composting technologies were evaluated in the feasibility study conducted at TA-16 (see section 5.3.2). TOSS is a two-stage solid-phase bioremediation technology that involves both anaerobic and aerobic treatment stages. For the first stage, HE-contaminated soil is combined with a carbon source, an innoculum, vitamins, and water to achieve anaerobic conditions. The resulting mixture is formed into a static pile or placed in a bermed construction area or box to facilitate the chemical reduction of nitroaromatic and nitramine explosives. For the second stage, the anaerobically treated soil is combined with yard waste compost and built into an aerated biopile. The biopile may be aerated by forced air which is conveyed through perforated piping buried within the pile or by turning the pile with a compost turner.

Previous testing of TOSS has demonstrated TNT-removal efficiencies that are greater than 99% (Waste Management, Inc. 2003, 79582). Moreover, TOSS was used successfully as an off-site treatment for the hazardous soils excavated during the IM remediation at the outfall source area, as referenced above.

For the IM at the outfall source area, composting was ruled out as a method for treating on-site hazardous and nonhazardous soils on the basis of cost, time needed for treatment, and space considerations. Based on the preceding information, composting by TOSS is retained for further evaluation as an off-site treatment of hazardous soil, sediments, or tuff, but not as an on-site treatment.

5.3.3.2 In Situ Treatment of Soils

(a) Composting

While shown to be effective ex situ (see section 5.3.2), composting either the outfall source area soils or canyon alluvial sediments in situ would not be feasible, given the requirement for soil amendment and working of the soil. Moreover, the small volume of outfall source area soils (less than 100 yd^3), precludes cost-effective in situ treatment. For these reasons, composting is not retained for further evaluation as an in situ treatment.

(b) Bioremediation with Vapor-Phase Augmentation

Used at Pantex as part of a feasibility study (Rainwater et al. 2002, 79752), this technology used nitrogen injection through a five-spot injection well pattern to flood the vadose zone, thereby stimulating the anaerobic conditions required for biodegradation (see section 5.3.2). After 300 days of operation, the concentrations of HE were reduced by approximately one-third. Although it is promising, application of this technology at Cañon de Valle would be difficult, given the long narrow configuration of the canyon and the difficulty of attaining adequate nitrogen flooding of the soil. For these reasons, this bioremediation technology is not retained for further study.

(c) Low Permeability Cap

Installing a low permeability cap in Cañon de Valle to prevent the further leaching of HE from canyon alluvial sediments by precipitation would not be effective or practical. According to the SCM, residual barium and HE is present in the vadose zone and could be mobilized by rising alluvial groundwater. A cap would not address groundwater. Moreover, installation is not practical given the long narrow configuration of the canyon and the lack of a well-defined area of sediment contamination.

A low permeability cap was installed for the outfall source area settling pond as part of the IM. The purpose of the cap was to preclude the infiltration of stormwater into lower horizons, including the surge beds. Because the cap is in place and is presumably effective, it will be retained as a technology for the outfall source area, including the surge beds.

(d) Grouting of Source Area Surge Beds

In situ grouting with clay-based grouts has been used to isolate mine waste drainage (EPA and DOE 1997, 79569) and prevent underflow in dams (USGS 2001, 79579). Isolating the surge bed within the outfall source area by grouting would prevent groundwater flow into the contaminated areas of the surge beds. Contamination would remain in place, but would be isolated from further contaminant transport. Grouting is feasible because the surge beds possess a relatively higher permeability than the surrounding tuff. An implementation would require (1) better definition of the extent of the surge beds, and (2) the installation of boreholes for grouting. Grouting is retained for further evaluation.

(e) Barium Stabilization by Sulfate Addition

The in situ stabilization of barium in sediments entails mixing in calcium sulfate to enable the formation of insoluble barium sulfate (McGraw 2003, 80700). While this would be feasible ex situ, the in situ application would be difficult to implement given the requirements of sediment amendment and of mixing for several (in Cañon de Valle), potentially at depths of up to 5 ft. Such a disruption to the canyon is not likely to be feasible, given wetlands and NEPA concerns. While ex situ treatments requiring excavation pose similar disruptions, the general effectiveness of ex situ over in situ favors ex situ technologies. For these reasons, this technology is not retained for further evaluation.

(f) Flushing of Alluvial Sediments

Soil flushing is a process, which is naturally ongoing in canyon alluvial sediments, by which precipitation and stormwater serve to flush contaminants. According to the SCM, the canyon sediments, both saturated and unsaturated, contain HE and barium residues that are mobilized by water. These HE and barium residues may take several forms, including sorbed, dissolved, and, in the case of barium, precipitated. Remediation by soil flushing removes and captures the flushed contaminants. Natural flushing is slow, particularly under drought conditions. Induced flushing adds water to accelerate the process.

Either natural stormwater or induced flushing must be coupled with another technology that captures or treats the resulting contaminated water. Otherwise, the resulting groundwater may infiltrate into underlying tuff and potentially migrate to the regional aquifer. At TA-16, where protecting the underlying regional aquifer is a focus, the control of flushed water is a concern, particularly because the water creates a higher static head, which may increase vertical infiltration. Two technologies for containing the resulting contaminated water are (1) groundwater recovery and treatment, and (2) a system which treats groundwater as it flows through the PRB.

In the initial technology screening conducted by the HE Advisory Group as part of the CMS plan (LANL 1998, 62413.3), the potential for failing to contain soil-flushing water was cited as a negative factor. Subsequent Phase III RFI geophysics conducted in Cañon de Valle, however, identified canyon regions that are likely to be areas of enhanced infiltration (LANL 2003, 77965). These potential infiltration areas could allow proper placement of groundwater recovery or PRB systems so that flushing water would be treated prior to infiltration. These groundwater recovery or treatment systems may consist of recovery wells, interceptor trenches, or PRBs. On the basis of the preceding discussion, soil flushing is retained for further evaluation.

5.3.3.3 Ex Situ Treatment of Groundwater

Ex situ treatment of groundwater involves recovering groundwater with wells or recovery trenches, treating the water in a central above-ground treatment plant, and then discharging the treated water back into the alluvium. The methods for groundwater recovery, including wells and interceptor trenches, are further evaluated in section 6.

(a) GAC Treatment for RDX

Treating RDX with GAC has been done successfully on field-scale HE-remediation projects (Card and Autenrieth 1998, 76873; Federal Remediation Technologies Roundtable 2002, 79570; Pantex Plant 2003, 79784). GAC's high capacity to adsorb RDX and the simplicity of the technology make it attractive for use in RDX groundwater treatment plants. GAC treatment may also be useful for an in situ application such as a PRB or stormwater filter. On this basis of prior treatment success, the technology is retained for further evaluation.

(b) Ion Exchange Treatment for Barium

Ion exchange treatment of dissolved barium has been used with success on several field-scale projects (American Water Works Association 1990, 80125). In a treatment plant setting, ion exchange treatment typically consists of packed beds of sorbent, either ion exchange resin or clay beds such as zeolites. As part of the Martin Spring stormwater filter study, ion exchange was used for barium, but premature breakthrough, which may have resulted from mechanical difficulties with the stormwater filter was a problem (IT Corporation 2001, 80122).

The preferential adsorption of barium onto ion exchange resin can cause difficulties and expense with the regeneration of the resin. This may favor natural zeolites or conditioned clays that are less expensive and can be landfilled. On the basis of this discussion, ion exchange for barium is retained for further evaluation.

5.3.3.4 In Situ Treatment of Groundwater

(a) PRBs

Within the last 10 yr, PRBs have been developed for the treatment of dissolved groundwater contaminants, particularly recalcitrant contaminants such as chlorinated volatile organics which do not readily biodegrade. When compared to ex situ groundwater recovery and treatment, PRBs offer several advantages, primarily the potential for low operating costs due to low maintenance of an in situ system. A conceptual drawing of a PRB is shown in Figure 5.3-2.

PRBs commonly contain ZVI, the oxidation of which helps to create reducing conditions needed for the degradation of contaminants. To treat barium, a PRB using calcium sulfate to form immobile barium sulfate has also been reported (Wilkens et al. 2001, 79572) (EPA 2003, 79568). While GAC PRBs have not been found in the literature, in principle, GAC PRBs should also be effective given the effectiveness of ex situ GAC groundwater treatment for RDX.

In the laboratory, ZVI has shown promise as an in situ treatment of explosives residues, such as RDX, in groundwater. A ZVI PRB in Cañon de Valle would likely consist of a ZVI-containing PRB in which ZVI was deployed as an active medium. In the form of a bed of iron filings and inert media, such as pea gravel, a ZVI PRB degrades RDX while groundwater flows through the PRB. The technology can be deployed alone, or in combination with other technologies such as soil flushing. Although the exact mechanism is unknown, the reducing environment of the zero valent metal is thought to promote the reductive degradation of RDX. Recently, an anaerobic bioremediation component was shown to be an important part of the process (EPA 2000, 79567). Based on the ability of PRBs to successfully treat other

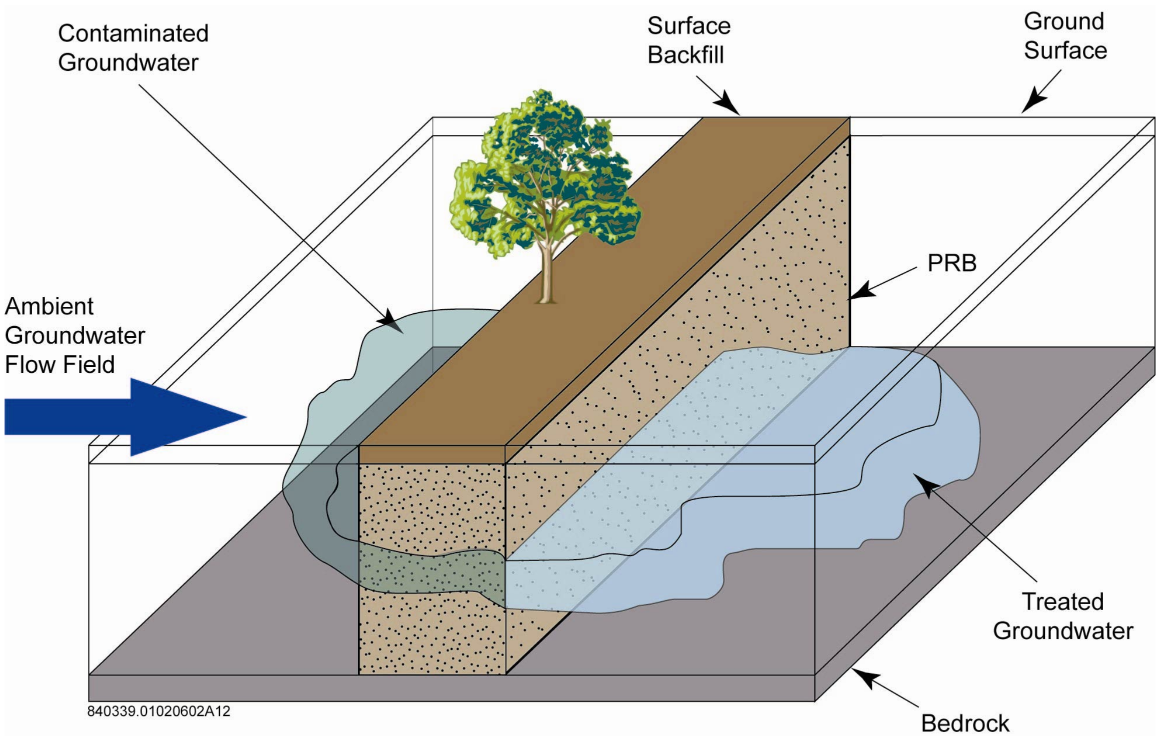

Figure 5.3-2. Conceptual drawing of a PRB

contaminants, and their potential to successfully treat RDX and barium, the technology is retained for further evaluation.

(b) Stormwater Filters

As part of a field feasibility study, stormwater filters were installed in Martin Spring Canyon (IT Corporation 2001, 80122). These filters used GAC to treat RDX and ion exchange resin to treat barium (see section 5.3.2). The filters proved to be effective for RDX, though barium showed breakthrough, which may have been due to mechanical difficulties. The filters are an attractive option because of their relatively low cost (approximately $60,000) and suitability for use at the springs. Stormwater filters could potentially be combined with other technologies such as PRBs. Despite the difficulties experienced with barium in the field study, the technology is retained for further evaluation.

(c) Slurry Walls

Slurry wall technology is used to either divert groundwater from contaminated soils or prevent contamination of clean soils. In addition, slurry walls can also be used to direct groundwater through a PRB. In Cañon de Valle, use of a slurry wall is difficult to envision, given that the canyon vadose zone sediments are already contaminated with barium and RDX. A slurry wall may have some utility during canyon excavation to divert groundwater around the excavation, but given the shallow depth of the alluvium, a recovery trench is more suitable. In addition, given the narrow configuration (approximately 10-20 ft wide) of Cañon de Valle alluvium, use of a slurry wall to deflect groundwater through a PRB would not be required. For these reasons, slurry wall technology is not retained for further evaluation.

(d) Phytoremediation

Phytoremediation did not effectively remediate such HE as TNT and RDX (IT Corporation 2002, 79576) as part of a wetland system at Burning Ground Spring (see section 5.3.2). Some evidence of RDX degradation was detected, but it was attributed to an anaerobic microbial pathway. Implementation would require alternate aerobic/anaerobic zones, which would entail alternately flooded and dry zones. Zones of flooding have the potential to increase vertical infiltration of contaminated groundwater. The slow rate of degradation, coupled with practical problems, precludes this technology from further evaluation.

(e) Monitored Natural Attenuation (MNA)

Natural attenuation is defined as dilution, dispersion, volatilization, adsorption, biodegradation, and abiotic reactions that reduce contaminant concentrations in site groundwater or soil over time. MNA is a site remediation alternative in which the progress of natural attenuation is monitored by periodic testing. Its use has been prompted by the observation that sites such as petroleum hydrocarbon contamination sites often clean themselves up over a period of a few years, principally by natural biodegradation. By contrast with petroleum hydrocarbons, however, natural attenuation of HE compounds is not well documented. It is generally thought to be slow because of the recalcitrance of HE organic compounds such as RDX and HMX to biodegradation, except under unusually anaerobic conditions. One exception is TNT, which is generally more receptive to natural biodegradation.

As an inorganic contaminant, barium is not biodegradable. Barium, however, an opportunity for MNA because of its propensity to adsorb onto clay and other minerals through an ion exchange or adsorption process. Furthermore, once sorbed, the barium may stay “locked down,” making it unavailable for further migration. This may explain why RDX has been observed at relatively high concentrations in groundwater from regional aquifer well R-25 with respect to RDX concentrations in Cañon de Valle alluvial groundwater, whereas barium has been detected at relatively low concentrations (less than 100 µg/L), despite its presence at higher relative concentrations in alluvial groundwater and sediment over a long reach of Cañon de Valle. At present, however, the process is not well understood, nor has it been characterized for site-specific conditions.

For the above reasons, MNA is not retained for further evaluation for the purposes this CMS, however, it may be a viable option for the regional groundwater corrective measure (contaminant migration pathways to potential receptors are longer for regional groundwater).

6.0 DEVELOPMENT AND EVALUATION OF CORRECTIVE MEASURE ALTERNATIVES

6.1 Assembly of Remediation Technologies into Corrective Measure Alternatives

The identification and screening of remediation technologies identified potentially applicable technologies, both standard and innovative, that are capable of attainment of MCSs and remedial objectives for the site. In this section, those technologies are assembled into corrective measure alternatives and associated conceptual designs and subjected to evaluation. This evaluation yields the preferred alternative that is proposed for a specific area of the site. Depending on the site conditions, corrective measure alternatives may consist of one or more technologies. Moreover, the alternatives are not mutually exclusive; a combination of one or more alternatives may be preferred.

The focus of the remedial alternatives is barium and HE. Although manganese is listed as a CMS COPC for Cañon de Valle and Martin Spring groundwater, it is not known at present whether the presence of manganese is due to natural reducing conditions present in these canyons or is the result of reducing conditions caused by the presence of HE. In the latter case, the remediation of HE will alleviate these reducing conditions, and manganese groundwater concentrations will decrease.

Based on remedial objectives developed in section 4, the following areas of the site are the focus of this CMS:

- Outfall source area residual soils and tuff,
- Outfall source area settling pond and 17-ft surge bed,
- Cañon de Valle springs, surface water, alluvial sediment, and alluvial groundwater,
- Martin Spring Canyon spring, surface water, alluvial sediment, and alluvial groundwater.

Table 6.1-1 presents the candidate corrective measure alternatives for these areas. For the outfall source area, excluding the settling pond, the sole alternative is soil removal and off-site disposal. Tuff is not addressed by this alternative, only soil. The mean tuff barium and TNT concentrations do not exceed the MCSs (as estimated in section 4.0) outside of the settling pond. For RDX, the mean tuff concentration is slightly above (45 mg/kg) the MCS for RDX (36.9 mg/kg); however, tuff does not pose the same degree of potential hazard as soil with regard to dust generation during potential construction.

Alternatives for the outfall source area settling pond 17-ft surge bed (referred to as the surge bed hereafter) are:

- excavation and off-site disposal of the surge bed and cap installation (replacement of the existing cap) on the settling pond;
- in-situ grouting of the surge bed and maintenance of the existing settling pond cap; and,
- maintenance of the existing settling pond cap but no action for the surge bed.

For Cañon de Valle and Martin Spring Canyon springs and alluvial systems, three alternatives consisting of several technologies are described. These are:

- alluvial sediment excavation for HE and barium and off-site disposal, with stormwater filters for springs;
- natural flushing of sediments for HE and barium removal coupled with PRB (ZVI or GAC and calcium sulfate) alluvial groundwater treatment (for HE and barium) and stormwater filter treatment for springs; and,
- natural and induced flushing of sediment (for HE and barium) and recovery of spring and groundwater and treatment in a central treatment system, followed by injection discharge of treated water (induced flushing) to alluvial sediment.

6.2 Process for Evaluation of Corrective Measure Alternatives

Corrective measure alternatives are compared and contrasted using criteria established in the CMS Plan (LANL 1998, 62413.3), including:

- performance and reliability,

Table 6.1-1
Proposed Corrective Measure Alternatives

Site Area	Alternative Number	Description
Outfall source area (excluding settling pond)	I.1	Soil removal and off-site treatment and disposal
Outfall source area settling pond and 17-ft surge bed	II.1	Excavation and offsite disposal of the 17-ft surge bed and replacement/maintenance of the existing cap
	II.2	In situ grouting of the 17-ft surge bed and maintenance of the existing cap
	II.3	Maintenance of existing cap and no action for the surge beds
Canyon springs and alluvial system	III.1	Sediment excavation and offsite disposal, with storm water filters for springs
	III.2	Natural flushing of sediments coupled with PRB[a] (ZVI[b] or GAC[c] and calcium sulfate) alluvial groundwater treatment and storm water filter treatment for springs
	III.3	Natural/induced flushing of sediments and recovery of spring and groundwater (by interceptor trenches) and treatment in a central treatment system

[a] PRB = permeable reactive barrier.
[b] ZVI = zero valent.
[c] GAC = granulated activated carbon.

- reduction of toxicity, mobility, or volumes of contaminants or wastes,
- effectiveness in achieving MCSs,
- time required for implementation,
- ease of installation,
- long-term reliability,
- institutional constraints,
- mitigation of human health and environmental exposures,
- other considerations, such as safety and waste minimization; and
- cost.

These criteria are compliant with Task VIII of Module VIII of the Hazardous Waste Facility Permit for Los Alamos National Laboratory (NM0890010515) (EPA 1994, 44146) and RCRA CA guidance (55 FR 30798; 61 FR 19432), though ordered differently. Sections 6.2.1 through 6.2.11 further explain these criteria.

6.2.1 Performance and Reliability

These criteria are used to assess both the effectiveness of considered remedial approaches in controlling the source of release and the impacts associated with the potential remedy. The effectiveness of remedial approaches at similar sites and under analogous conditions is considered.

6.2.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

This criterion is used to evaluate whether the proposed alternatives are effective at reducing the contamination at the site and determines if the remedy successfully eliminates or reduces the toxicity, reduces the ability of the contaminant(s) to move, or substantially decreases the volume.

6.2.3 Effectiveness of Remedy in Achieving Target Concentrations

This criterion is used to assess each alternative with regard to its ability to achieve the target MCSs.

6.2.4 Time Required for Implementation

This criterion is used to assess the time required to implement each potential alternative and the time anticipated to see the results. The setup and implementation of an alternative includes the design, mobilization, demobilization, construction, permitting, establishment of a monitoring system, and waste acceptance for off-site disposal. For hazardous waste treatment, permits are required prior to construction.

6.2.5 Ease of Installation

The ease of installation criterion is used to consider the degree of difficulty that implementing the alternatives will entail. Examples of site conditions that may affect implementation include depth to water table, heterogeneity of surface and subsurface materials, terrain, and site location. Other conditions include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities.

6.2.6 Long-Term Reliability

Evaluation of long-term reliability is used to assess the alternatives with respect to length of time that an alternative can be maintained in an effective condition.

6.2.7 Institutional Constraints

This criterion is used to consider the alternative’s regulatory requirements, including federal, state, local, and public health regulations, or permitting requirements that may substantially affect the implementation of the alternatives.

The laws and regulations that may apply to the SWMU 16-021(c)-99 CMS under the proposed EPA Subpart S and Module VIII of the Laboratory’s Hazard Waste Facility Permit (EPA 1994, 44146); the medium (e.g., surface water or soil) to which each relevant regulation applies; and the wetlands permitting process and threatened and endangered species protection under NEPA are discussed hereafter. Wetlands issues pose a major institutional requirement that may preclude certain corrective measure alternatives.

Generator and Transporter Requirements Any action resulting in the generation of hazardous and solid wastes under the CMS will comply with the regulations under 20 NMAC 4.1.100 which adopts 40 CFR Part 260 et seq. for hazardous waste management. These requirements will also apply to the hazardous and solid wastes generated during the treatment of soils and water.

Land Disposal Restrictions The restrictions on the land disposal of hazardous wastes address mitigation of the hazards that are posed by waste constituents. All SWMU 16-021(c)-99 activities that generate hazardous waste as part of the RCRA corrective action will comply with the LDR requirements of 20 NMAC 4.1.400 which adopts 40 CFR Part 268. If a media is treated in situ and a waste is not generated, the LDRs do not apply, as stated in the Federal Register Volume 63, pages 28556-28634, published May 26, 1998. However, any ex-situ CMS treatment (soil or water) that generates a waste is required to comply with LDR requirements.

Public Participation and Community Relations RCRA § 7004 encourages public participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program activities. The Public Participation and Community Relations regulation is currently implemented in the RRES-RS project through community interactions with stakeholders such as Citizen's Advisory Board, the Northern New Mexico pueblos, the County of Los Alamos, and officials of the community. Public participation activities specific to SWMU 16-021(c)-99 are included in Appendix D as part of the PIP.

The National Environmental Policy Act Section 102(2)(c) of the National Environmental Policy Act (NEPA) requires that all federal agencies prepare an environmental assessment (EA) for all major federal actions that have the potential of affecting the quality of the human environment. The DOE has established procedures for compliance with NEPA. These procedures are defined in 10 CFR 1021 and 40 CFR 1500–1508. Before implementing a CMS alternative, all NEPA procedures will be completed. The environmental safety and health (ESH) questionnaire will be completed and reviewed by the Laboratory's NEPA team. A significant NEPA issue for this CMS is the presence of the threatened Mexican Spotted Owl. Other NEPA issues relevant to the site are covered under the wetlands section which follows hereafter. Because of the importance of NEPA issues at this site, the permitting process is described in detail.

Wetlands Permitting Process Figure 6.2-1 illustrates of the wetlands permitting process. This process which is applicable to projects in most states is more specialized for projects in Northern New Mexico, where projects are subject to the Albuquerque District Regulatory Office of the United States Army Corps of Engineers (USACE). The USACE is charged with enforcing Section 404 of the Clean Water Act (CWA) subject to the review and authority of the EPA Office of Wetland Protection.

Wetlands Identification

The permitting process begins with a determination of the applicability to the subject project of the requirements of Section 404 of the CWA. Applicability is established based on two primary components: (1) the proposed project must contain jurisdictional waters, and (2) these waters are expected to be affected by dredge and fill activities during project construction or operation. With respect to the Section 404 permit, jurisdictional waters include navigable waters of the US, interstate waters (lakes, rivers, and streams), interstate wetlands, all impoundments of these waters, and tributaries to these waters. For federally funded projects, determination of the presence of jurisdictional waters typically

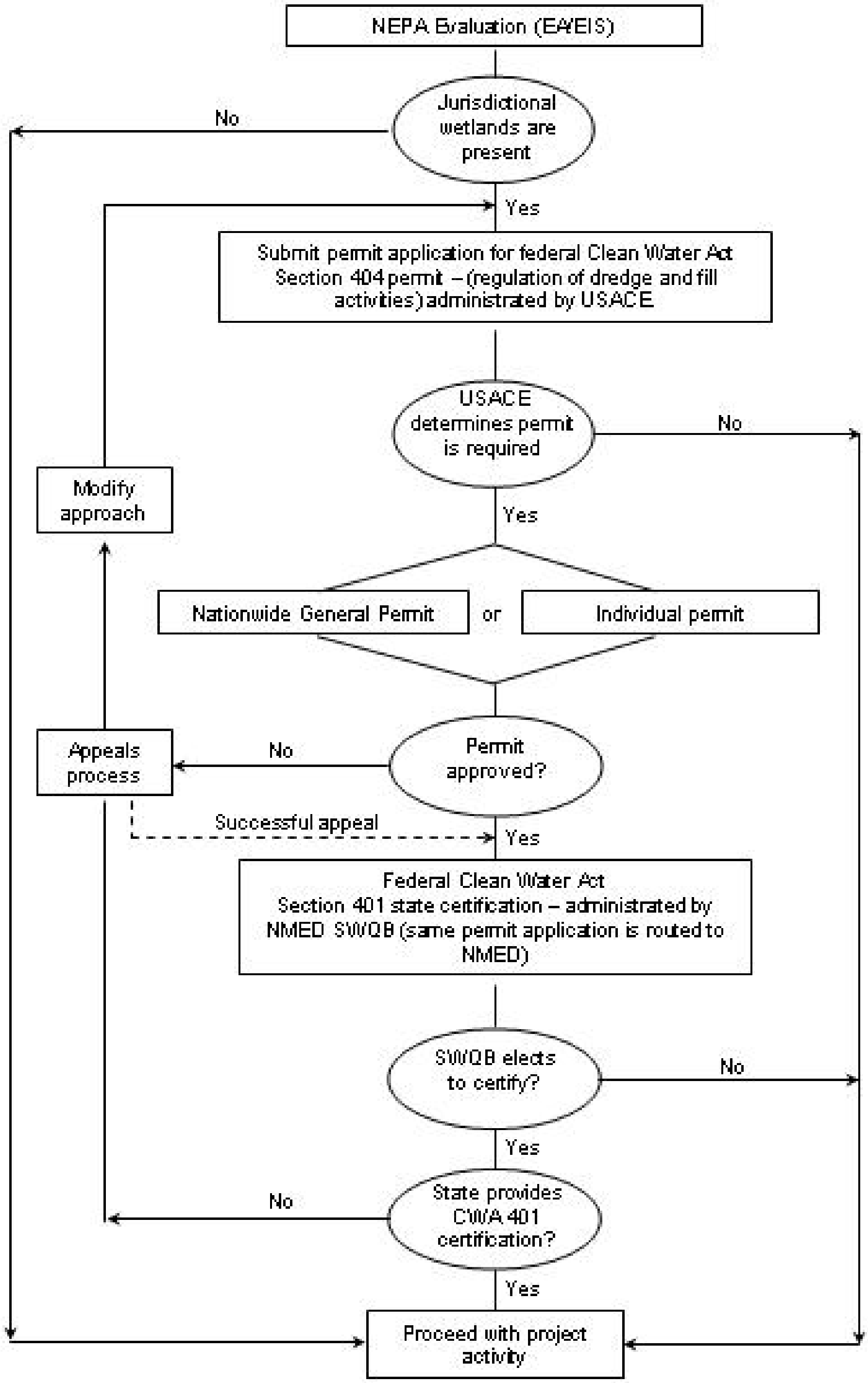

Figure 6.2-1. Flowchart of wetlands permitting process

occurs during the NEPA review phase of the project; either through an EA or an environmental impact statement (EIS). Wetlands are determined to be present according to the findings of a review of vegetation, soil, and hydrologic indicators.

404 Applicability Determination and Submittal of Section 404 Permit to USACE

After establishing that jurisdictional waters are present, the applicability of Section 404 is evaluated with regard to types of activities expected to occur during construction and long-term operation of the project. In general, the USACE has determined that activities that involve placement of fill material, ditching, levee construction, road construction, or land-clearing in an area that could affect jurisdictional waters require permitting under Section 404 of the CWA. If there is any question about the applicability of the Section 404 permit, or the type of permit for which to apply, arrangements can be made through the USACE Albuquerque district secretary for consultation. Officially, the determination of applicability is made by the USACE district office after formal review of the Section 404 Permit application for the project.

In New Mexico, application is submitted for the Section 404 permit by use of a joint application for a permit through the Department of Army and the Surface Water Quality Bureau (SWQB). In general, the joint permit application requires the following:

- information about the applicant;
- name of project and affected water bodies;
- nature, purpose, and duration of the project activity;
- reason(s) for discharge of dredged or fill material into wetlands or water body;
- maps illustrating limits of wetlands or water bodies to be dredged or upland areas to receive dredge discharges; and
- description of water quality impacts and mitigation measures.

USACE Determines if Permit Required

Based on the criteria presented, the Albuquerque District of the USACE determines if a Section 404 permit is required for the project. For projects that require Section 404 permitting, there are two general permitting options. A particular project may be permitted as an individual or under a pre-existing nationwide permit (NWP). The USACE has developed 39 NWPs that address types of typical construction projects and activities whose wetland impacts are considered minimal. The specific NWP for the cleanup of hazardous and toxic wastes in NWP 39, which provides exemption for activities contained entirely on sites under the regulations of the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA). In general, issues related to the NWPs are discussed through consultation with the USACE before the application is made, and the applying party understands whether or not an NWP can be obtained and what the permit requirements entail.

USACE Permit Approval

After the applicability of Section 404 applicability is established and the application is made for the permit, the USACE makes a determination as to whether the project can be permitted under either an individual permit or NWP. The review process takes 45 days for NWPs and from 60 to 120 days for individual permits. If an individual permit is sought, a public review and response period is required, and the USACE conducts or updates the NEPA EA or EIS for the project. The process of conducting additional NEPA evaluation opens the project to scrutiny of all areas covered by NEPA, including, but not limited to, threatened and endangered species, natural and cultural resources, historical properties, and public involvement.

In general, permits are not issued if

- there is a practicable alternative which would have less impact;
- the discharge would violate any applicable federal legal standards;
- it would result in significant degradation of waters of the US and
- unless appropriate and practicable steps have been taken to minimize potential adverse effects.
- Permit denials of individual or NWP permit components can be appealed subject to the provisions of 33 CFR Part 331. The appeals process can take up to a maximum of 180 days.
- *CWA Section 401 State Certification*

Under Section 401 of the CWA, the State of New Mexico has the option to certify any Section 402 or 404 CWA permits or licenses. If the certification option is exercised, the state can deny, approve, or approve conditionally the subject permit. In New Mexico, the SWQB of the NMED is charged with this responsibility. Typically, SWQB approval requires that the project be in accordance with applicable state laws and regulations, such as the New Mexico Surface Water Quality Standards.

In general, the NMED elects to certify Section 404 NWPs if affected streams are perennial or intermittent. Certification is typically waived for small ephemeral streams. All Section 404 individual permits undergo state certification. The state has up to 60 days to conduct or waive Section 401 certification. If for any reason a Section 404 permit cannot be certified under Section 401, the applicant has to make appropriate modifications (e.g., mitigation measures, engineering controls, best management practices), and resubmit the permit application through the process.

The Clean Water Act The CWA requirements apply to the CMS at SWMU 16-021(c)-99 if additional discharges, impacts to stormwater, or release of treatment agents will result from implementing the CMS. Under the proposed corrective measure alternatives, only groundwater treatment uses chemicals that may be subject to provisions of the CWA.

The Clean Air Act The Clean Air Act is not applicable for the CMS because there are no anticipated air releases. Typically, dust is mitigated for health and safety reasons during excavation activities.

The Toxic Substances Control Act The Toxic Substances Control Act(TSCA) is not applicable to the CMS at SWMU 16-021(c)-99 because no significant TSCA constituents are present.

NMED Groundwater Discharge Permit

A groundwater discharge permit is required for any discharge of treated groundwater to the subsurface. An application and permitting process involves development of a sampling and analysis plan to ensure that the discharge meets discharge standards.

6.2.8 Mitigation of Human Health and Environmental Exposures

Each alternative was evaluated with respect to its capability to mitigate short- and long-term potential risks to human receptors both during and after implementation. There were no associated environmental risks to ecological receptors (LANL 2003, 77965).

6.2.9 Cost

The relative costs of each alternative were compared. The cost estimate for each alternative included costs for each phase of implementation, including design construction and operations and maintenance (O&M). In accordance with RCRA guidance (55 FR 30798; 61 FR 19432), a 30-yr lifetime is assumed. Costs are reported in terms of capital and installation costs and 30-yr O&M costs, which are presented in terms of net present value (NPV), assuming a discount rate of 5%, net of inflation. Wherever possible, costs are based on prior projects at the Laboratory. The costs estimates are accurate to approximately plus or minus 15%.

Costs were divided into design, permitting, installation, and operations and maintenance activities. Costs for all proposed alternatives are presented in Appendix C.

6.2.10 Other Considerations

Additional criteria important in the evaluation of the alternatives include:

- public acceptance of feasible technologies;
- the safety of nearby environments as well as workers during implementation; and
- energy efficiency, pollution prevention and waste minimization, and resource conservation.

6.3 Outfall Source Area

One alternative is proposed for this area: soil removal and off-site treatment and disposal. The volume of residual soil to be removed is expected to be less than 100 yd^3.

6.3.1 Soil Removal and Off-Site Disposal (Alternative I.1)

Under this alternative, outfall source area soils with levels of contamination that exceed the MCSs are removed by excavation and disposed of off site in a permitted landfill. The focus of the remediation will be on barium, TNT and RDX, because these comprise the majority of the potential non-cancer and cancer risk in the outfall source area. This alternative excludes contaminated tuff underneath the existing cap system within the settling pond. The previously completed IM removed the majority of highly contaminated soil. Currently, a maximum of 100 yd^3 of soil with contamination levels above the MCSs remain in isolated pockets in the area.

Because of the presence of hazardous concentrations of HE, the IM used expensive remote excavation methods. Based on analytical results, the remaining soils do not pose an explosive hazard and can be removed by skid loaders and hand digging. On-site field analytical techniques, such as immunoassay methods, are proposed to be employed to ensure that all soil with contamination levels that exceed the soil MCSs are removed and that soils meet the LDRs. If acceptable for disposal, soils will be loaded into roll-off bins for transport to a licensed disposal facility. If hazardous soils are encountered, they will be disposed of off site and treated by a licensed hazardous waste treatment facility. Treatment by the facility will consist of bioremediation for HE, which was shown to be a successful form of treatment for both MDA P and outfall source area soils excavated during the IM. Soils that are hazardous for barium would be treated by stabilization.

6.3.2 Evaluation of Alternatives

6.3.2.1 Performance and Reliability

Because soil removal and off-site disposal offer the potential of removing all residual soil with contaminant levels above the MCSs, it thereby precludes exposure to contaminants at levels above the MCSs. The performance and reliability for this alternative are high.

6.3.2.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

Soil removal and off-site disposal of soils with contaminant levels above the MCSs reduce the toxicity of the remaining soil. A requirement for off site disposal in a hazardous waste landfill is that the LDRs are met, which by definition limits contaminant mobility. This alternative does not increase or reduce the volume of excavated soil. Based on available soil analytical data, hazardous wastes are not expected.

6.3.2.3 Effectiveness of Remedy in Achieving Target Concentrations

Soil removal and off-site disposal are effective at achieving the MCSs for contaminant concentrations within the outfall source area. Under this alternative contaminated soil is physically removed from the site and is no longer accessible.

6.3.2.4 Time Required for Implementation

For soil removal, the time required to meet the MCSs at the site is simply the time required to complete the field excavation. Excavation activities, including mobilization, excavation, waste manifesting, post-removal confirmation sampling, and demobilization for soils with contaminant levels above the MCSs for barium, RDX and TNT will likely require from two to four weeks to complete.

6.3.2.5 Ease of Installation

Excavation of the outfall and related areas was conducted as part of the IM (LANL 2002, 73706). The greatest challenge for soil removal is the identification, through the detection of contaminant levels above the MCSs, of soils to be excavated. Ideally, field analytical methods for the identification of RDX, TNT and barium will be used to minimize the analysis time required to identify the vertical and horizontal limits of excavation.

6.3.2.6 Long-Term Reliability

Soil removal and off-site disposal of the remaining outfall soil are reliable because soils are removed from the site. Provided the soil meets the required LDRs, there would be no residual liability as a result of off-site disposal.

6.3.2.7 Institutional Constraints

Soil excavation was conducted as part of the IM. Local institutional constraints attendant upon the removal of a maximum of 100 yd^3 of soils are expected to be minimal, with the exception that institutional activities at TA-16 may impose limits on the operational hours. To qualify for off-site disposal, excavated soils must meet the LDRs, but given the success of the IM and the relatively lower concentrations of COPCs detected for residual soil, meeting these requirements should not be a problem.

6.3.2.8 Mitigation of Human Health and Environmental Exposures

Excavation and off-site disposal of soil with contaminant levels above the MCSs offer the best way to attain MCSs in the outfall source area. Both potential human health and environmental risks will be obviated by this action.

6.3.2.9 Costs

The total costs for this alternative (see Appendix C) are estimated to be $162,000.

6.3.2.10 Other Considerations

The public has already accepted the use of soil removal both at the outfall source area as part of the IM and at MDA P. Therefore, public acceptance of soil removal at the outfall source area is expected. NEPA concerns should not be a factor given that the outfall source area is not located on the canyon floor where wetlands are located. Due to the small expected volume of soil (100 yd^3 or less), waste minimization is not a factor. Likewise, safety is not expected to be a major concern.

6.4 Outfall Source Area Settling Pond and Surge Bed

6.4.1 Excavation and Disposal of the Surge Bed (Alternative II.1)

In this alternative, blasting is used to break up the tuff overlying the surge bed, after which the tuff and surge bed are excavated. Before excavation, three additional borings are installed to better define the extent of the surge bed. After excavation, the settling pond cap is replaced, and long-term monitoring and maintenance, including sampling of a new groundwater monitoring well, are implemented.

During the IM, excavation of the tuff was attempted using a 60,000-lb. track-mounted excavator, and the rate of excavation progress was slow. Drilling and blasting of the intact tuff overlying the surge bed to break up the intact rock would allow excavation to proceed at a faster pace. Pneumatic drills would be used to install the borings for the blasting charges. After blasting and excavation to the surge bed horizon, the surge bed would be excavated and hauled off site for disposal. These wastes will likely be hazardous, and treatment at the accepting facility by bioremediation would be required. Off-site bioremediation of hazardous wastes was successfully used on hazardous HE waste from the outfall source area IM. Tuff would be returned to the excavation. In this way off site hauling of waste would be minimized.

The cap system, consisting of two barriers, was installed in the settling pond area as part of the IM. Under all alternatives for this area, this cap system will be either left in place or replaced. The purpose of the system is to provide hydrologic barriers to water infiltration so that migration of residual HE and barium under the caps is minimized.

The first barrier was installed at the final depth of the settling pond excavation (in tuff at the bottom of the excavation test pit), which ranged from 3 to 4 ft. below ground surface (bgs). The surface of the test pit was covered with several inches of hydrated 3/8 bentonite. The pit was then filled with processed castoff aggregate and compacted with the wheeled loader. The rock layer was subsequently covered with an 8-in. layer of crushed tuff amended with 2.5% (by weight) dry bentonite and 1.5% hydrated bentonite. This layer was also compacted with a wheeled loader.

The second barrier was installed at the depth of the soil/tuff interface. The barrier consisted of multiple compacted 4-in. lifts of crushed tuff amended with 2.5% (by weight) dry bentonite (approximately twenty 50-lb bags of 3/8 bentonite per lift). Each lift was manually mixed with rakes to ensure blending of the bentonite and crushed tuff. Following blending, the lifts were compacted with the wheeled loader. Four lifts were installed in this manner. The fourth layer was amended with 1.5% bentonite and was hydrated following placement. A finish cap of compacted crushed tuff was placed over the hydrated layer, bringing the average total thickness of the barrier to 20 in. In total, this barrier consisted of 40 yd^3 of crushed tuff amended with ninety-eight 50-lb bags of 3/8 bentonite. The saturated permeability of the barriers is estimated to be less than 1×10^{-7} cm/s.

6.4.2 In-Situ Grouting of the Surge Bed with Existing Settling Pond Cap Maintenance (Alternative II.2)

In this alternative, the extent of the surge bed is first defined using three additional borings and sampling. The surge bed is then isolated with a clay-based grout applied by pressure grouting through boreholes that intercept the surge bed. A monitoring well on the downgradient edge of the surge bed is proposed so that the effectiveness of the grouting can be determined. Under this alternative, the existing settling pond cap is maintained following repair, if necessary, of borehole areas.

6.4.3 No Action for the Surge Bed and Maintenance of Existing Cap (Alternative II.3)

Under this alternative, the existing cap would be inspected and maintained to ensure that surface water cannot infiltrate lower horizons, including the 17-ft surge bed. The weakness of this alternative is its inability to control the potential for subsurface fracture to allow lateral groundwater flow to the surge bed. This preferential pathway is discussed in section 6.4.4.

6.4.4 Evaluation of Alternatives

6.4.4.1 Performance and Reliability

If the surge bed is defined and excavated to its full extent, then excavation of the surge bed would be a removal action that would reduce the potential for contaminant migration. However, the complete extent of the surge-bed is not known, and excavation to its full extent may not be practical.

Grouting the surge bed offers a means of isolating the surge bed from groundwater and thereby reducing the potential migration of contaminants. Grouting is expected to be reliable because the grout is essentially impermeable to water. Grouting is more practical with regard to the extent of the surge bed. Unlike excavation, which may prove impractical if the surge bed is too extensive, grouting can be feasibly expanded outside the practical and economic limits of excavation.

Alone, maintenance of the existing cap system, with no action for the surge bed, would preclude surface water infiltration but not groundwater contact with the surge bed via a lateral, upgradient fracture pathway. If groundwater contact does not occur through this pathway, then the existing cap itself and its occlusion of surface water will suffice for the long term. However, additional site characterization is required to determine if the lateral subsurface pathway is important.

In the face of these considerations and uncertainties, grouting offers a superiority of performance and reliability over excavation. Both excavation and grouting are preferable to maintenance of the existing cap alone.

6.4.4.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

Excavation of the surge bed would serve to remove barium and HE in the surge bed, thereby reducing their potential mobility. Although excavation does not eliminate the potential for fracture groundwater flow, the contamination in the surge bed would be removed. Grouting both isolates the surge bed and reduces contaminant mobility. Grouting potentially offers superior isolation than excavation because excavation of the entire surge bed may not be practical, whereas the feasibility grouting is less sensitive to the extent. The capping alternative might preclude stormwater contact, but it would not preclude groundwater contact that might occur with the surge bed through lateral fractures.

Under the excavation alternative, contaminated surge bed materials would be hauled off site for disposal in an approved landfill. This alternative does not destroy or reduce the toxicity of the contaminants; rather, it would transfer the contaminants to a permitted landfill. Contaminant mobility would be reduced because disposal in the landfill would eliminate direct contaminant contact with groundwater. Moreover, the waste would be required to meet LDRs that preclude contaminant migration.

Given these considerations, the grouting alternative is rated more favorably than excavation. Both excavation and grouting alternatives are rated more favorably than cap maintenance alone.

6.4.4.3 Effectiveness of Remedy in Achieving Target Concentrations

An MCS was not established for the surge bed. Rather, a BMP objective that seeks to preclude potential for contaminant migration from the surge bed was established. As discussed above, the alternatives differ in their ability to prevent potential groundwater contamination, which is integral to the attainment of the BMP objective.

Groundwater flow via upgradient, lateral fractures has the potential for intercepting the surge bed and transporting contaminants. The goal of the excavation of the surge bed is to remove as much highly contaminated material as is possible from the surge bed. Grouting isolates the contaminated material and prevents contact with groundwater. Accordingly, excavation and grouting alternatives are rated higher than the capping alternative.

6.4.4.4 Time Required for Implementation

Definition of the extent of the surge bed using three borings is a part of both the excavation and grouting alternatives. Up to six months or more may be required to complete such an investigation. Following the investigation, the actual implementation will require another six months for planning and execution.

The capping alternative is already in place at the site. The capping alternative is therefore rated higher than the other alternatives with respect to this criterion.

6.4.4.5 Ease of Installation

Implementation of the excavation alternative, including blasting, would not be difficult. First, the backfill and cap system placed during the IM would be removed. Drilling and blasting of the overlying tuff would then proceed, followed by excavation of the surge bed. Site restoration would consist of backfilling of the tuff rubble, followed by the installation of a replacement low permeability cap system. Given the proximity to existing operations within Building 260, blasting may pose institutional difficulties, as discussed in section 6.4.4.7.

Following installation of the three borings for further surge bed definition, grouting of the surge bed would be conducted in new or existing boreholes. If the existing cap is penetrated, it would be repaired.

Obviously, ease of installation is greatest for the existing cap system, followed by grouting, then excavation.

6.4.4.6 Long-Term Reliability

As discussed, both excavation and grouting are more reliable than a cap alone, because HE and barium in the surge bed are either no longer physically present or are isolated. Grouting has the advantage of allowing the surge bed to be over-grouted (grouted beyond its apparent extent), whereas over-excavation of the surge bed, if extensive, may prove difficult. For these reasons, grouting is rated higher for long-term reliability than excavation. Both alternatives are superior to maintenance of the cap alone.

6.4.4.7 Institutional Constraints

Excavation of the surge bed, including the use of blasting, may encounter institutional constraints in the form of Building 260 restrictions. These constraints may range from limitations on operational hours to a prohibition on blasting, in which case the excavation alternative is not feasible. The former constraint would be applicable to grouting operations as well. It is less critical for cap maintenance. NEPA concerns should not be a factor for any of these alternatives. Based on these considerations, the capping alternative would face fewer institutional constraints with regard to implementation.

6.4.4.8 Mitigation of Human Health and Environmental Exposures

The presence of the cap in all alternatives precludes contact with contaminated tuff within the settling pond area, thereby mitigating potential risks to a construction worker, although the MCSs are not met.

With regard to the surge bed, a concern is the potential to cause groundwater contamination. Both grouting and excavation isolate or remove (respectively) HE and barium contamination in the surge bed. As stated earlier, cap maintenance by itself does not address lateral groundwater flow in fractures that may intercept the surge bed, causing the potential for contaminant migration. Accordingly, both grouting and excavation are rated as superior to cap maintenance alone.

6.4.4.9 Costs

Capital and 30-yr O&M costs for these alternatives are shown in Table 6.4-1.

6.4.4.10 Other Considerations

Either excavation or grouting alternatives for the surge bed would likely be preferred by the public over a no action alternative. In general, the public favors removal of contamination rather than contaminant isolation. Alternative II.1 involves blasting and excavation in rock (tuff). Safety concerns are greater with this alternative than with the grouting alternative (II.2). The cap maintenance alternative has the fewest safety concerns, and also generates the least quantity of waste.

6.4.5 Uncertainties and Additional Data Requirements

The extent of the surge bed and the extent of the contamination require further definition. These will be addressed by the boring installations completed as part of the alternative implementation. The importance of mesa vadose-zone fracture groundwater flow into the surge bed area is also not known. Uncertainty in this flow influences the consideration of alternatives. If such flow is not present, then the existing cap

Table 6.4-1
Outfall Source Area Settling Pond 17-ft Surge Bed Alternative Costs

Site Area	Alternative Number	Description	Capital Costs	30 Year O&M Costs (NPV)	Total Cost (NPV)
Outfall source area settling pond 17-foot surge bed	II.1	Excavation and offsite disposal of the 17-ft surge bed and replacement/maintenance of the existing cap	$ 293,000	$ 105,000	$ 398,000
	II.2	In situ grouting of the surge beds and maintenance of the existing cap	$ 211,000	$ 105,000	$ 316,000
	II.3	Maintenance of existing cap and no action for the surge beds	N/A	$ 105,000	$ 105,000

N/A = not applicable

protects against infiltration from the surface, which is the only other source of groundwater, and further measures may not be required.

6.5 Canyon Springs and Alluvial System

The canyon springs and alluvial system encompass springs, surface water, alluvial sediment and alluvial groundwater in both Cañon de Valle and Martin Spring Canyon. For HE and barium, three corrective measure alternatives consisting of several technologies are proposed for these areas. These alternatives differ markedly in the aggressiveness of the approach, the time frame for effectiveness, and the impacts to the canyons.

Excavation of sediments (Alternative III.1) is an aggressive approach whose goal is to remove HE and barium contaminated sediments within either limited sections of the canyons or throughout the entire contaminated length. The advantage of excavation is that such a removal action could obviate the need for groundwater or surface water remediation. As discussed in earlier sections, however, unidentified contaminated seeps or springs may contribute contaminated water to the alluvium. Moreover, other historical sources within the drainage basin may result in the recontamination of the Cañon de Valle sediments. Given the presence of these historical sources, long-term control of groundwater and surface water in the canyon might be required even if excavation were implemented.

The disadvantage of excavation is that it would disrupt the riparian system, including wetlands, although presumably site restoration could restore wetlands damage. To permit excavation, it is likely that an EIS, as opposed to a simpler and less onerous EA, would be required. The other alternatives preserve the current state of the canyon and rely on containment and treatment of springs and groundwater, with sediment remediation by natural or induced sediment flushing, rather than removal. Inherently, these containment/treatment alternatives remove contaminated mass much more slowly than excavation.

In the sections that follow, the alternatives for the springs and the canyon alluvial system are described in greater detail and are compared using the evaluation criteria.

6.5.1 Excavation and Off-site Disposal (Alternative III.1)

In this alternative, canyon sediment, surface and alluvial soils would be excavated to the extent practical. Excavated soil and sediment would be disposed of off site. The canyons would then be restored as closely as possible to their natural condition. Either a limited or extensive excavation could be conducted. For HE and barium, however, the most recent site data (reviewed in section 3) do not support a limited excavation. Although HE and barium sediment contamination appear concentrated in the upper reach of Cañon de Valle before the floods associated with the Cerro Grande fire occurred, post-flood sampling results do not indicate such concentrations (see Figures 3.6-1 and 3.6-2). The sediment contaminant trends indicated by these sampling results, however, apply only to the upper 2 ft bgs, where all RFI sediment sampling was conducted. Deeper sampling may reveal other trends.

In the absence of sediment contaminant concentrations that would indicate a more limited excavation, Cañon de Valle alluvium would be excavated to a distance of approximately 6600 ft east from the former outfall. Assuming a cross-sectional area of 100 ft^2 gives a sediment volume of 25,000 yd^3. This volume calculation is likely to be a conservative one and is assumed to include the Martin Spring Canyon sediments and any post-excavation soil volume increase (soil swell).

Excavation would cause substantial disruption of the Cañon de Valle riparian system. A permit from the US Army Corps of Engineers would be likely to be required under the wetlands permitting process described in section 6.2. This permit may entail an EIS, rather than an EA. In addition to a factor of 10 increase in expense, an EIS would also require up an additional 2 yrs for completion. NEPA issues, such as disruption of the Mexican Spotted Owl habitat, also require consideration. These permitting issues, although potentially difficult, could be mitigated by the intended objective (remediation) and a commitment to restore wetlands destroyed by the excavation.

Upstream of the excavation, alluvial groundwater flow would be diverted around the excavation using an interceptor trench and one or more bypass pipes. Surface water and springs would be similarly diverted around the excavation. Following installation of bypass pipes, time would be required to drain as much water as possible from the soils.

Two haul roads into the Cañon de Valle would have to be constructed. Alternatively, a conveyor system could be used. Excavation would be conducted during the dry season to minimize the volume of wet soils. A staging area would be required for the stockpiling and sampling of soils. Soils with any degree of saturation would require drainage and air-drying to minimize hauling expenses for off-site disposal.

The limits of the excavation would be defined by the available sediment sampling data and by additional sediment sampling data collected along the upper reach of Cañon de Valle and Martin Spring Canyon. Currently, the data is available for sediments to approximately 2 ft bgs in depth. This limited data set indicates that barium-hazardous sediments are present, and would be shipped off-site for stabilization. For purposes of the cost estimate for this alternative, half of the soil volume is assumed to contain hazardous levels of barium. For the MDA P project, barium-hazardous soil was hauled to Texas for stabilization at a cost of approximately $250 per ton. For both the 260 IM and MDA P, nonhazardous soil was transported for disposal at an industrial landfill in Albuquerque at a cost of approximately $50 per ton.

Restoration of the site would require post-excavation sampling, importation of clean fill similar in hydraulic conductivity to the native sediments, and restoration of wetlands and vegetation. Restoration of surface water flow might present difficulties because of the unique configuration of soil and sediment types that give rise to surface water. Should these difficulties arise, installation of buried tanks at existing springs and seeps to form wildlife watering ponds could be an alternative.

Under this alternative (as well as Alternative III.2), one stormwater filter would be installed on each spring for treatment. The filter would use GAC to treat HE. A typical stormwater filter consists of a steel or pre-cast concrete tank with an inlet and outlet for the surface water and treatment modules for contaminant removal. Water flows in and out of the tank by gravity, and is treated by the treatment modules inside of the tank (see Figure 5.2.3) Two stormwater filters have already been installed in Martin Spring Canyon (see section 5.2).

Monitoring requirements for this alternative would consist of the installation and sampling of seven new alluvial wells after excavation. Five wells would be installed in Cañon de Valle (to replace the five lost to excavation) and three wells would be installed in Martin Spring Canyon (to replace the three wells lost to excavation).

6.5.2 Flushing of Sediments, PRB Groundwater Treatment, and Stormwater Filters for Springs (Alternative III.2)

Rather than excavate contaminated sediment, both Alternatives III.2 and III.3 rely on the flushing of contaminated sediment by groundwater and stormwater to remove contaminants. In the case of the PRB option, the flushing is natural and occurs as a result of precipitation events only. In the case of the groundwater recovery and central treatment option, the flushing is both natural and induced, the latter consisting of reinjection of treated spring water and groundwater.

Both of these alternatives recognize that within the Cañon de Valle drainage lie several historical sources in addition to SWMU 16-021(c)-99. Given these other sources, excavation of the Cañon de Valle sediment alone might not suffice to control potential infiltration of contaminated groundwater, and additional means of long-term groundwater control and treatment within Cañon de Valle would be necessary. Conversely, control and treatment of contaminated groundwater without excavation would be sufficient to reduce or eliminate groundwater infiltration in Cañon de Valle, and would not destroy canyon wetlands or be subject to NEPA regulations associated with excavation.

As characterized in the SCM, stormwater is a major factor in contaminant transport through the canyon alluvium. Stormwater causes the mobilization of sediment contaminants by leaching of surficial sediments and by increasing the groundwater elevation in the alluvium, both leading to subsequent downgradient transport. Stormwater also causes transport of contaminated sediments. If stormwater in the form of either surface or groundwater, can be controlled and remediated prior to infiltration to deeper underlying units, then precipitation events and ensuing stormwater can achieve alluvial sediment remediation by flushing out the water soluble contaminants. The disadvantage of natural flushing is that precipitation is less frequent under the current drought conditions.

In this alternative, the treatment technology for the remediation of groundwater is a PRB composed of either ZVI or GAC for HE such as RDX and calcium sulfate for barium stabilization. The choice between ZVI or GAC will be made as part of the CMI process and the additional testing that will be conducted as part of the CMI. To control the flushed water and prevent infiltration into the deep vadose zone, several PRBs are proposed. The PRBs would be designed to treat baseline groundwater flow and storm surges, from both hydraulic and contaminant loading standpoints.

PRBs have been developed within the last 10 years for the treatment of dissolved groundwater contaminants, particularly contaminants such as chlorinated VOCs and compounds such as HE that do not readily biodegrade. Commonly, PRBs contain zero valence metal, the oxidation of which helps to create the reducing conditions necessary for the degradation of these compounds. The exact mechanism of ZVI contaminant destruction is unknown; however, recent evidence indicates that a bioremediation component may play a stronger role. Although the proof of the concept is limited to laboratory studies, the technology is promising enough to warrant consideration, along with GAC, as a component of the PRB corrective measure alternative.

A conceptual drawing of a PRB is shown in Figure 5.3-2. PRB installation involves cutting a deep trench perpendicular to groundwater flow and then filling the trench with the active components, such as iron filings (in the case of a ZVI), and inert sand. The permeability of a PRB is designed to be higher than the native aquifer material so that groundwater will flow freely through the barrier. The installation depth of a PRB is critical to ensuring that underflow bypassing of the PRB is avoided. The thickness of the PRB also is critical because thickness relates to the residence-time required for contaminant degradation.

A ZVI PRB composed of iron filings that are exposed to groundwater will eventually rust away, requiring the replacement of the ZVI. The lifetime of the ZVI is dependent on the flow velocity through the PRB, the PRB thickness, and the geochemistry of the groundwater. In general, it is difficult to predict the lifetime of the ZVI bed. Similarly, GAC will eventually require replacement because HE, as well as naturally occurring humic organic compounds, will deplete the bed. Further testing of both GAC and ZVI will be conducted as part of the CMI. For the purposes of this CMS, ZVI or GAC bed replacement at the end of 15 years is assumed.

To treat barium contaminated groundwater, a bed of calcium sulfate can be added to the PRB, so that the barium precipitates as barium sulfate and is immobilized. Fouling of the calcium sulfate bed and a reduction in permeability and effectiveness is an operational concern, and bed replacement may be required.

PRBs are generally expensive to install, but inexpensive to operate. There are no pumps or electricity required. Groundwater flows through the PRB at rates determined by aquifer hydraulic gradients and permeability. Overall remediation rates can be slow if the groundwater flow rate and pore volume changeout rates are low. Typically, PRBs are more often employed as barriers to prevent further groundwater contaminant migration than as methods for remediating an existing groundwater plume. In Cañon de Valle, the alluvium pinches out approximately 7000 ft from the outfall. In this sense, the Cañon de Valle alluvial plume of contaminants is already self-limiting, and a PRB barrier at the end would be effective only for storm surges that advance the saturated edge. Once these storm surges are past, the saturated edge of the Cañon de Valle alluvium will retreat again.

Because the Cañon de Valle alluvium pinches out, the Cañon de Valle alluvium is essentially a fixed alluvial volume with a limited extent. Within this extent, the amount of water in storage depends on the rate of inflow and outflow (see section 3). If the leakage is constant throughout the reach, then PRBs would probably not be cost effective. If the infiltration is preferential in certain reaches of Cañon de Valle, then the strategic placement of a PRB in these areas may reduce the number of PRBs (or interceptor trenches under Alternative III.3). In fact, evidence presented in the Phase III RFI (LANL 2003, 77965) supports the presence of reaches of preferential infiltration along Cañon de Valle.

A conceptual layout of this alternative is shown in Figure 6.5-1. The system for Cañon de Valle consists of three PRBs placed in front of suspected area of enhanced groundwater infiltration and near the point of alluvium termination (the extent of alluvium is shown in Figure 3.2-1). Except for the eastern-most PRB, surface water is not treated by the PRB. A major component of surface water, spring water, is treated by stormwater filters placed on the springs. For the eastern-most PRB, an infiltration gallery would be constructed on the upgradient side of the PRB to enable the infiltration of stormwater and surface water surges into groundwater, where the waters are treated by the PRB. Without such an infiltration gallery, storm surges of contaminated surface water might bypass the PRB treatment configuration.

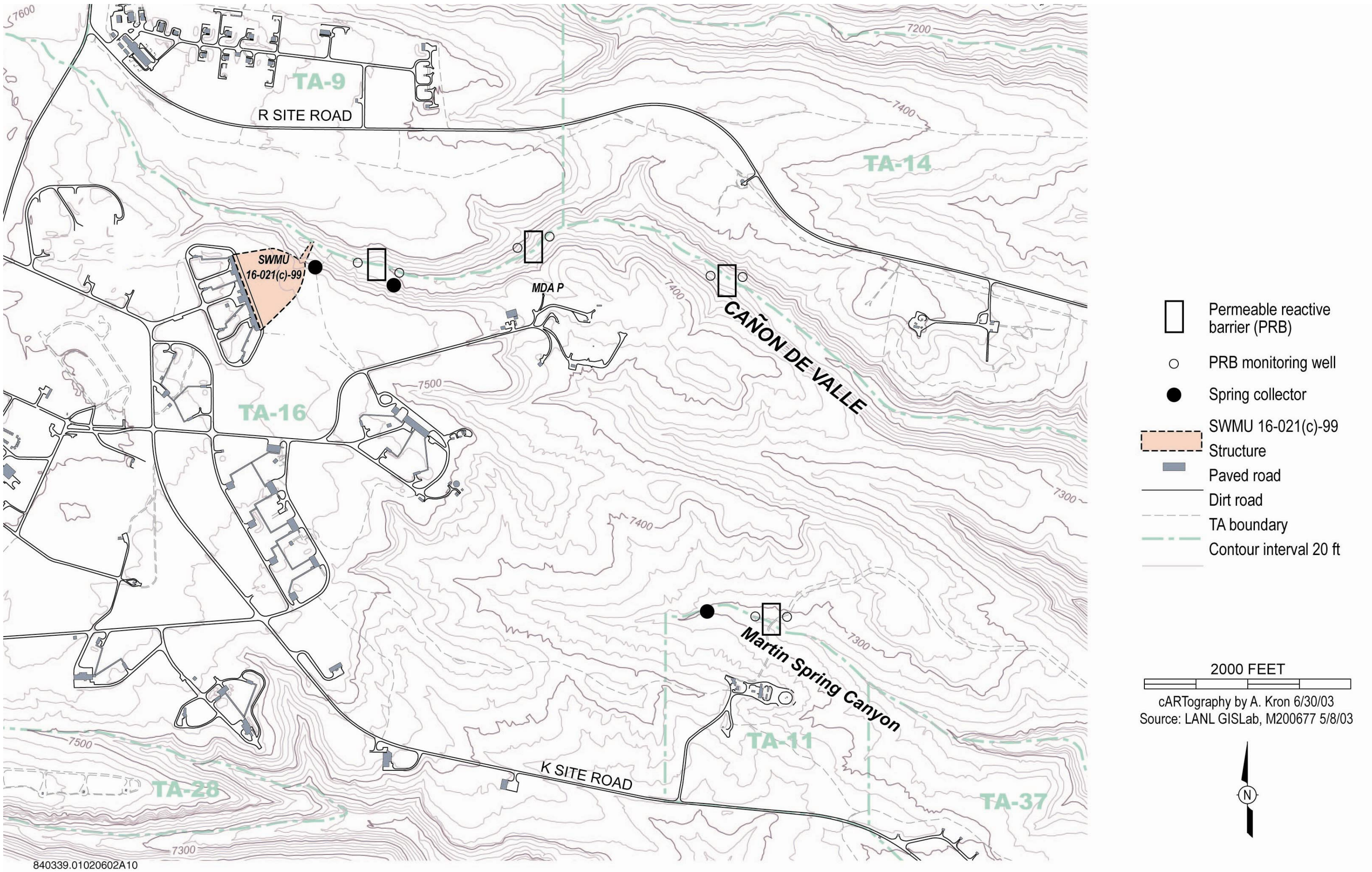

Figure 6.5-1. Conceptual layout of Alternative III.2 PRBs along Cañon de Valle and Martin Spring Canyon

For Martin Spring Canyon, one PRB is placed downgradient from Martin Spring. The spring collectors (stormwater filters) are shown in Figure 6.5-1. Each spring collector system will consist of a stormwater filters for organic HE, such as RDX. Given the presence of the stormwater filters on Martin Spring, the purpose of the PRB in this location is to treat stormwater surges of groundwater and surface water not emanating from the spring.

Monitoring of the effectiveness of the PRB involves the installation of two monitoring wells per PRB, one upgradient and one downgradient. A total of eight new monitoring wells accompany this alternative.

6.5.3 Flushing of Sediments with Water Treatment in a Central Treatment Plant (Alternative III.3)

The third alternative (Alternative III.3) consists of a series of groundwater interceptor trenches installed in Cañon de Valle and Martin Spring Canyon for the recovery of groundwater. As in the second alternative (Alternative III.2), stormwater surges of surface water would be controlled by the final interceptor trench through use of an adjacent upgradient infiltration gallery. Otherwise, surface water is not treated. For springs, which comprise the primary source of surface water, spring collector catch basins would be installed at the spring outlet. All water would be piped and treated in a central treatment plant and returned through upstream injection wells to alluvial groundwater. Although recovery wells, rather than interceptor trenches are an option, low transmissivity, which is associated with a thin saturated groundwater alluvium and potentially low or variable hydraulic conductivity, implies that interceptor trenches would be more effective.

This alternative also relies on natural precipitation events for flushing of surficial sediments, but in contrast to the second alternative (Alternative III.2), natural flushing is supplemented by induced flushing consisting of the upstream reinjection of treated water into alluvial groundwater. In this manner, flushing of the groundwater horizon is enhanced. Stormwater surges, with their higher volumes for both groundwater and surface water, present an opportunity to expedite flushing because the increased volume can be recycled between interceptor trenches and injection wells. The danger of recycling a higher volume of water is that the likelihood of infiltration may be increased; however, the contaminant concentrations of the groundwater water will have been reduced by treatment. As in the first alternative, drought conditions adversely affect the rate of sediment remediation.

A conceptual layout of the system is shown in Figure 6.5-2. A series of five groundwater interceptor trenches and five injection wells are located along the Cañon de Valle. At the last (eastern-most) interceptor trench, an infiltration gallery captures storm surges of surface water, causing infiltration to groundwater and capture in the interceptor trench. Spring waters are intercepted using a spring collector catch basin at spring outlets. All intercepted water is pumped to a central treatment plant located adjacent to MDA P, where it is treated by GAC and ion exchange (either resin or zeolite), followed by discharge to a series of injection wells. Injection wells will consist of 12- or 24- in. wells that will be installed using a backhoe or bucket rig. Injection flow rates to the injection wells can be balanced to allow for a natural flux of groundwater and surface water through the entire system, or injected water can be focused on a specific interceptor trench/injection well pair in an attempt to concentrate the flushing action along a particular reach.

As part of this alternative, two alluvial groundwater monitoring wells would be installed for each interceptor trench, one upgradient and one downgradient. These well would be used to determine the effectiveness of the interceptor trench with regard to hydraulic control of groundwater. The monitoring plan for this alternative consists of the sampling of these twelve new wells (ten in Cañon de Valle and two

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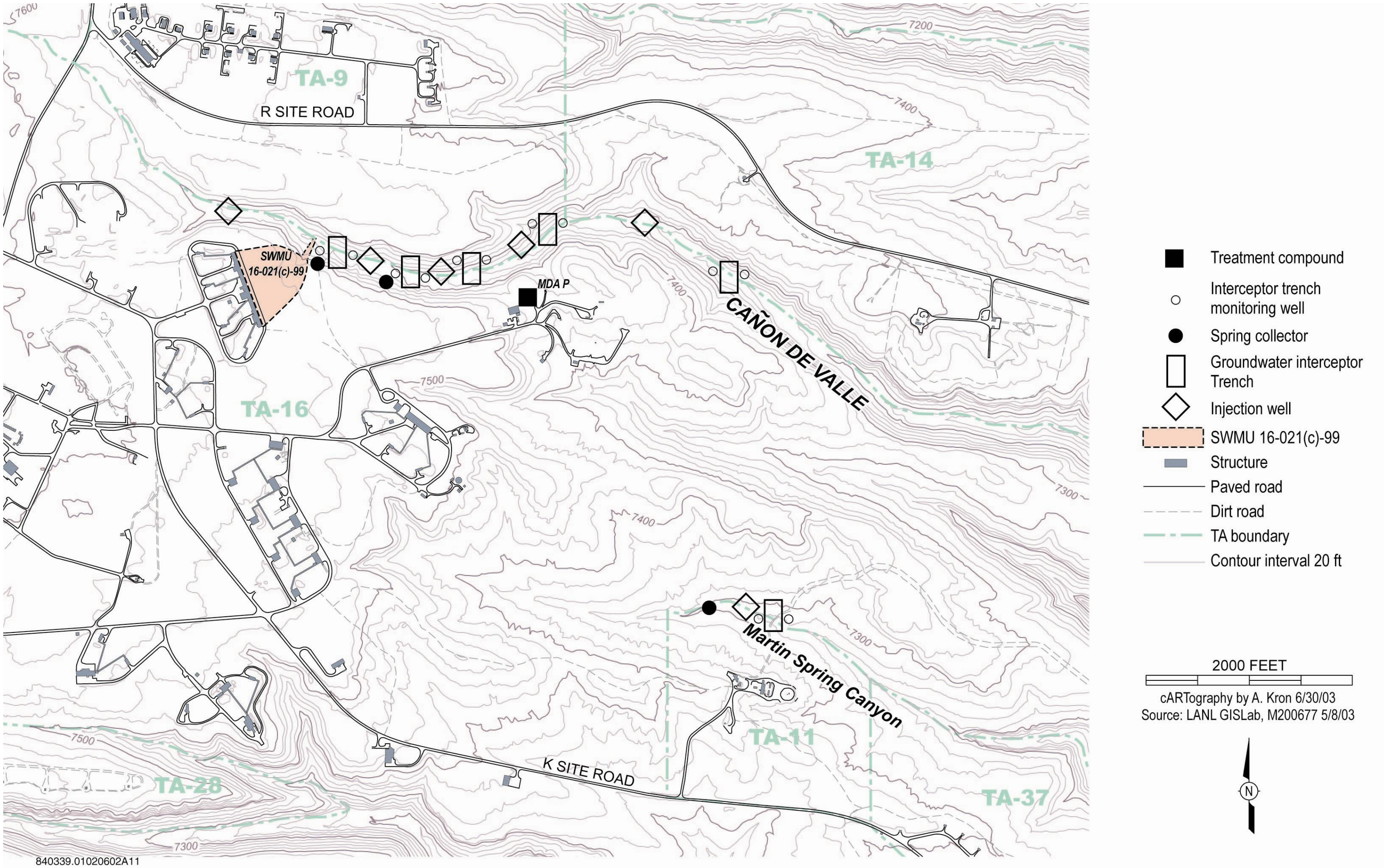

Figure 6.5-2. Conceptual layout of Alternative III.3, groundwater interceptor trenches and injection wells

in Martin Spring Canyon). Monthly sampling will also be required for the treated groundwater discharged to the injection wells.

In a typical GAC treatment system, spent GAC is replaced with fresh GAC by a GAC vendor, who then removes the spent GAC from the site and regenerates it by thermal treatment, which destroys RDX. For barium, the spent ion exchange resin or natural zeolite bed is disposed of by landfilling, rather than regenerated on-site. Because of the strong affinity of barium for ion exchange, regeneration will not be cost effective.

Permit requirements include groundwater discharge permit and NEPA and wetlands assessments. Intrusive activities include interceptor trench installation, injection well installation, utility trench installation to the interceptor trenches and injection wells (for power and piping), and installation of spring collector catchbasins.

The treatment system would consist of two 5000-lb pound carbon adsorbers (for organic HE), followed by two 5000-lb ion exchange or zeolite adsorbers for barium. The treatment compound would consist of a building (approximately 30 ft by 30 ft) to house the treatment system. Before installation of the treatment system, a lift station with a surge tank would be constructed at the bottom of the outfall. This surge tank would be equipped with a level control to maintain a constant level in the surge tank and a pump for pumping of water to the treatment system. After treatment, the water would be discharged to a series of five injection wells along the length of Cañon de Valle and one well in Martin Spring Canyon. Power would be distributed to the interceptor trenches by direct burial-underground power cables. Piping for treated and untreated groundwater would consist of 2-in. HDPE piping laid in a shallow trench below the frost line (approximately 2 ft below grade)

A concern with this approach is that the baseline groundwater flow into Cañon de Valle is uncertain, having been estimated only through the conceptual water balance performed as part of the Phase III RFI (LANL 2003, 77965). In addition, Martin Spring, the primary source of alluvial groundwater in Martin Spring Canyon, is now dry. For Cañon de Valle, the estimated flow rate is approximately 30,000 gal./yr. However, storm surges were not accurately captured by the water balance, which relied on average measurements of saturated thickness. In addition, the springs water component of flow was much higher, which would provide additional water for the system. Under the assumptions of the water balance, all baseline water flows contribute approximately 10 gal. per minute (gpm) of water. Because of recycle, the baseline flow rate of the treatment system would be higher, as high as 20 gpm. Storm surges may increase this flow rate to a range of 100 to 200 gpm for short periods. As part of the design of such an alternative, in situ permeability measurements and a test interceptor trench are recommended to ascertain permeabilities, the flow rate of treated water, and the capacities of interceptor trenches and injection wells. As discussed earlier, current drought conditions may reduce these assumed flow rates.

6.5.4 Evaluation of Alternatives

6.5.4.1 Performance and Reliability

Performance and reliability are assessed relative to the achievement of MCSs for alluvial groundwater and sediment. Excavation of canyon alluvial sediments (Alternative III.1) would remove a substantial mass of HE and barium contamination. Removal of the sediment (the upper 2 ft of which contain an estimated 21,000 kg of barium, 50 kg of HMX and 5 kg of RDX) would remove a contaminant mass similar to the estimated mass of 8,500 kg of HE removed from the outfall source area during the IM. Moreover, the estimates of the mass of HE and barium that would be removed using this alternative are potentially low, given that the sample depth was limited to 2 ft bgs.

An important difference between the outfall source area and alluvial sediment, however, is that while there may be more barium in alluvial sediments, there is also less HE in alluvial sediments. For the IM, excavation was effective (and cost-effective), because of the quantity of HE removed, the fact that the outfall soils acted as an HE source, and, in general, the greater threat posed by HE to regional groundwater quality. In contrast, the excavation of Cañon de Valle for the purpose of removing substantially less HE (a quantity that potentially poses a much smaller risk to the regional aquifer) may not be cost effective.

Removal of an estimated 21,000 kg of barium in Cañon de Valle sediments would seem critical to achieving the MCS for water. However, although barium mass appears high, a substantial fraction of the barium mass is likely adsorbed to sediment clays and minerals, thereby retarding both its dissolution and transport in groundwater. If this adsorption is irreversible, the barium is unavailable for contaminant transport. As pointed out in section 3, the dynamics of barium adsorption and its irreversibility are not currently known, but are deserving of study. The low barium groundwater concentrations in R-25, despite its overall significant mass and extent, indicates that this retardation may be occurring. In summary, the amount of barium that is available in sediment and that is capable of causing alluvial/groundwater contamination in excess of the barium MCS may be less than the amount indicated by the estimate of barium mass.

Other important factors in the evaluation of the criteria for performance and reliability are the presence of historical sources along the canyon drainages as well as the unknown seeps and springs which may be contributing contamination to the alluvium. As hydrologic low points, both Cañon de Valle and Martin Spring Canyon are susceptible to additional contaminant fluxes from unknown seeps, springs and stormwater run-off, all of which may be intermittent. Given this circumstance, removal of the sediments by excavation without groundwater treatment may not be as reliable an alternative as groundwater treatment without excavation (Alternatives III.2 or III.3); long-term groundwater treatment, using either a PRB or interceptor trenches, captures and treats canyon alluvial groundwater, regardless of its point of origin.

The estimated soil volume of 25,000 yd^3, representing an excavation distance of approximately 6600 ft, is not prohibitive. The soil volume removed by the IM from the outfall source area was approximately 1300 yd^3 (LANL 2002, 73706), and the soil volume removed from MDA P was approximately 50,000 yd^3 (LANL 2003, 76876).

Flushing of surface and alluvial soils, the primary sediment remediation mechanism for both Alternatives III.2 and III.3 would be much slower than excavation in attaining the MCSs. The exact amount of time required to attain the MCSs cannot be predicted. Moreover, long-term forecasts indicate a high probability of drought, which reduces the frequency of natural flushing, although drought would also reduce the potential for infiltration and potential contamination of regional groundwater, as discussed previously.

Because of soil and sediment heterogeneities, flushing might not be as effective in attaining the MCSs as excavation. In addition, a portion of the barium sediment inventory may not be removable by flushing because of the high ion exchange affinity of barium for the clay matrix of these soils. Regulatory and public acceptance that this barium is inaccessible for further transport may be required under Alternatives III.2 and III.3.

Comparing Alternatives III.2 and III.3, the performance and reliability of attaining the MCSs for waters relies on the ability of the groundwater and surface water treatment systems, either PRBs or the central treatment plant, to treat contaminated waters, both surface water and groundwater. Storm surges would lead to surges in groundwater, which either a PRB or a treatment system would be required to capture and remediate to below the MCSs. With a PRB, operational reliability depends in part upon breakthrough and ease of bed replacement. In a treatment plant, breakthrough of either a GAC or ion exchange system is handled by simply replenishing the treatment system with fresh GAC or ion exchange media. Moreover, the treatment system offers operational redundancy by using two GAC and ion exchange treatment vessels in series, so that if breakthrough occurs in the lead vessel, the lead vessel can be changed, thus ensuring that the discharge water meets the MCSs and the requirements of the groundwater discharge permit. In contrast, breakthrough of the PRB media, either of the ZVI, GAC, or calcium sulfate bed would require replacement of the respective bed within the PRB, a process which requires excavation.

Another advantage of central treatment over PRBs is its expandability. Although additional PRBs can be added to the canyons in response to further characterization, their relatively higher expense and difficulty of installation compared with interceptor trenches offer less performance flexibility.

Reliability arguments can also be applied to spring treatment by stormwater filter, which Alternatives III.1 and III.2 use, but Alternative III.3 does not. With a central water treatment plant (Alternative III.3), the performance of the treatment system can be easily monitored. Monitoring and replacement of stormwater filters, however, involve inspection and possibly entry into the stormwater filter via a manhole, which is a confined-space entry procedure.

In general, among the last two alternatives, a central, above-groundwater treatment system is more reliable than a PRB. Further, PRBs are an innovative technology without a long track record, whereas a central treatment plant for water treatment uses mature technologies. The attractiveness of PRBs lies in their potential for cost-savings over the project lifetime because of their potentially low O&M costs.

In terms of performance and reliability, interceptor trenches and a central treatment system (Alternative III.3) and PRBs (Alternative III.2) rank highest, primarily because they provide for the long-term treatment of groundwater within Cañon de Valle and Martin Spring Canyon. If historical sources and the potential for contaminated groundwater inflow from unseen springs and seeps within Cañon de Valle were not present, and the depth of contamination in sediment could be shown to be limited, excavation as a one-time action would be ranked highest.

6.5.4.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

In general, preference is given to alternatives that destroy, rather than transfer, contaminants (including all byproducts) because destruction of contaminants destroys toxicity and liability. Use of ZVI in a PRB, for example reductively destroys RDX. Use of GAC in a PRB, by contrast, transfers RDX to the carbon, where it is immobilized and its volume is reduced. With regard to barium, use of calcium sulfate in a PRB immobilizes, but does not necessarily eradicate, barium, making it inaccessible for further environmental transport.

Excavation of the sediments moves the contaminants from one location to another, with the second location presumably posing less of an environmental and human health threat. Under the restriction of LDR disposal for sediments under the excavation alternative, land disposal of excavated sediments is assumed to be safe.

Within a central treatment system (Alternative III.3) using GAC and ion exchange, contaminants are transferred and their volume is reduced in the carbon adsorption process, but they are not destroyed. However, with off-site thermal regeneration of spent carbon, a common allowable process for GAC vendors, RDX is subsequently destroyed. Flushing of the contaminants by stormwater and groundwater surges would not in itself reduce the toxicity of the contaminants, but because the resulting groundwater water and surface water would be contained and treated, a reduction of mobility and contaminant volume would occur. In summary, the extent of reduction of toxicity and mobility depends on the completeness of groundwater and surface water treatment. Actual toxicity reductions are possible in the treatment system. For example, a ZVI PRB reductively degrades and destroys RDX and other HE such as TNT, whereas a GAC PRB adsorbs HE, but eventually the GAC will require replacement, with spent GAC either land-filled or thermally regenerated in a process that destroys HE. Similarly, a groundwater and surface water treatment system transfers RDX to GAC, after which the GAC is disposed of or regenerated by the GAC vendor.

For this criterion, treatment by PRB (Alternative III.2) is rated higher than either excavation (Alternative III.1) or interceptor trenches and central treatment (Alternative III.3) primarily because it potentially destroys RDX and other HE (in a ZVI PRB) and immobilizes barium through the formation of barium sulfate.

6.5.4.3 Effectiveness of Remedy in Achieving Target Concentrations

Related to performance and reliability, this criterion directly addresses the alternative's capability to meet MCSs. As discussed previously, excavation of sediments with springs treatment by stormwater filters (Alternative III.1) might yield an immediate attainment of the MCSs in groundwater in Cañon de Valle. The presence of historical sources within the Cañon de Valle drainage, however, may cause recontamination of sediments. Because these other historical sources are located on the edge of the mesa, outside of the saturated alluvium, transport into Cañon de Valle would occur by stormwater. Given the prediction of a long-term drought in the area, this recontamination of Cañon de Valle sediments would be slow, but the potential remains. Furthermore, the presence of unknown springs and seeps may cause additional recontamination of sediments. For these reasons, both Alternatives III.2 and III.3 offer better long-term potential for attaining the MCSs than does excavation (Alternative III.1).

For the first two alternatives, stormwater filters are used for spring remediation. For the third alternative, spring water is recovered and treated. All three alternatives are capable of attaining the MCSs for spring water, although a central treatment plant is more effective, primarily because the treatment systems are above-ground and more frequently monitored as part of general plant operations.

6.5.4.4 Time Required for Implementation

This criterion involves not only the time required for implementation, but the time required for the alternative to reach full effectiveness.

The advantage of excavation (Alternative III.1) is that it is immediately effective as a source removal action; once implemented, however, the long-term reliability of excavation is questionable given the presence of other historical sources within the Cañon de Valle drainage. Moreover, the excavation alternative would require more time to implement because of extensive permitting requirements, possibly including an EIS.

Permitting lead-time for the other two alternatives (Alternatives III.2 and III.3) would be roughly equivalent, with the exception that a groundwater discharge permit would be required for the central treatment plant alternative. This alternative would also be more intrusive than the PRB alternative, because of its use of a greater number of interceptor trenches and injection wells. As for the time required for effectiveness, the central treatment alternative and its greater number of interceptor trenches, as well as its ability to recycle water (thereby increasing the flux of water through contaminated sediment horizons), offers superior effectiveness in a shorter time than the PRB alternative. However, the time required for installation of the central treatment alternative is potentially greater than for the PRB alternative because of more construction, both subsurface and aboveground.

6.5.4.5 Ease of Installation

This criterion is limited to the difficulty of the actual installation, or in the case of excavation, completion of the excavation, including site restoration. Permitting and other institutional concerns are covered under the institutional criterion.

All of the alternatives have been completed at other sites. While site-specific logistical difficulties may be present, excavation of the canyon sediments is straightforward. Bypassing of the groundwater and springs involves installation of bypass pipes. Preferably, the excavation would be conducted during the dry part of the year to avoid undue soil saturation. Moreover, excavation on this scale has been completed at MDA P, although the area for the excavation was not linear and was not obstructed by trees and other obstacles.

The PRB (Alternative III.2) and central treatment (Alternative III.3) with interceptor trenches would involve subsurface excavation (for PRB and interceptor trench installation) and well installation. In addition, the central treatment alternative would involve installation of subgrade utility lines, including power and piping to both the interceptor trenches and injection wells. A treatment system building and associated equipment would also have to be installed. In general, the central treatment alternative would be more difficult to install than the PRB alternative.

6.5.4.6 Long-Term Reliability

For groundwater contamination sites in general, source excavation of the contaminated soil or sediment offers better long-term reliability than alternatives that involve the control of the resulting groundwater. This principle was applied to the outfall source area IM excavation, where source removal was more expedient and reliable than any attempts to control the resulting contaminated groundwater or stormwater.

Within the Cañon de Valle drainage, however, the presence of multiple historical sources and the possibility of unknown spring or seep discharges of contaminated water to the canyon alluvial system make this generalization less valid. Although known springs are treated by stormwater filters, excavation alone, without long-term groundwater control and treatment, may be less reliable than long-term groundwater control and treatment without excavation.

Of the groundwater control and treatment alternatives, the recovery of canyon waters and treatment in a central plant (Alternative III.3) offers slightly better long-term reliability than a PRB system (Alternative III.2). First, PRBs have not been installed long enough to assess their long-term reliability. Potential problems include fouling of the PRB, with a resulting decrease in treatment effectiveness. Second, an aboveground, central treatment system allows near real-time monitoring of reliability. Moreover, a central treatment system can be easily modified to enhance the performance. With a PRB, this operational flexibility is not present.

6.5.4.7 Institutional Constraints

A number of institutional constraints are associated with the excavation alternative (Alternative III.1), particularly in Cañon de Valle, where NEPA and wetlands issues, the latter potentially including an EIS, predominate. As part of the NEPA-permitting public involvement process, stakeholders must weigh the relative merits of excavation versus the potential adverse impacts excavation would have on the riparian system of Cañon de Valle.

Institutional constraints associated with the other alternatives are fewer than for excavation. Potential NEPA and wetlands issues include installation of trenches for PRBs, groundwater recovery, installation of stormwater filters, and piping and electrical runs for a water treatment system. Rather than an EIS, an EA process is likely for either of these alternatives.

6.5.4.8 Mitigation of Human Health and Environmental Exposures

Based on the results of the Phase III RFI ecological risk assessment, site conditions do not pose a risk to the environment (LANL 2003, 77965).

For canyon springs and alluvial systems, the MCSs (both the proposed MCS for barium and future MCSs to be developed as part of the regional groundwater CMS) have as their goal the protection of regional groundwater as a drinking water resource. As discussed above, Alternatives III.2 and III.3 are superior with respect to Alternative III.1, excavation. Although excavation removes a substantial mass of barium, the estimated RDX inventory in the upper 2 ft of sediment is only 5 kg. Moreover, additional contaminant transport from historical sources or unknown seeps along the Cañon de Valle drainage may re-contaminate clean, back-filled sediment.

If groundwater control is not comprehensive under either Alternatives III.2 or III.3, however, contaminated groundwater may still infiltrate into the deep vadose zone and potentially affect the regional aquifer. In these alternatives, placement of the PRBs or interceptor trenches was optimized with respect to reaches of enhanced infiltration, as inferred from Phase III RFI geophysical results. However, these areas of suspected enhanced infiltration have not been confirmed by borings or wells in the field. Moreover, there may be other areas that have not been identified. If areas of enhanced infiltration are not present, and there is a fairly constant rate of infiltration along the entire reach of the alluvium, PRBs or interceptor trenches may be less protective than excavation.

The comparison of the alternatives for this criterion rests in an evaluation and weighing of the relative uncertainties. With excavation, there is the uncertainty regarding continuing alluvial groundwater contamination from other historical sources following excavation, which, under this alternative, would not be controlled. For either the PRBs or interceptor trench alternative, uncertainties are present with regard to the location and nature of infiltration. If infiltration is widespread and diffuse, neither PRBs nor interceptor trenches offer complete control.

6.5.4.9 Costs

Capital and installation and 30 year O&M costs for the alternatives are shown in Table 6.5-1.

6.5.4.10 Other Considerations

In general, the public prefers contaminant removal to in-situ treatments. Excavation is generally viewed as aggressive action that eliminates contamination from the area. Given the lack of public access to Cañon de Valle, the public appreciation of the aesthetic and ecological value of the canyon, which might otherwise preclude excavation is low, although an extended permitting process involving an EIS would doubtless increase public awareness. Given geological uncertainty and heterogeneity, in-situ treatments often require years to attain standards, and this length of time tends to decrease public acceptance. With regard to pollution prevention and waste minimization, excavation of sediments generates more waste, in the form of excavated sediment, than does natural or induced flushing, which separates contaminants from soil. For Alternatives III.2 and III.3, generated wastes are essentially equivalent, although a ZVI PRB degrades HE in-situ, as opposed to central treatment, which generates spent GAC, which then may be regenerated to destroy HE. With regard to safety, success implementing these alternatives at other sites

Table 6.5-1
Canyon Springs and Alluvial System Alternative Costs

Site Area	Alternative Number	Description	Capital Costs	30 Year O&M Costs (NPV)	Total Cost (NPV)
Canyon springs and alluvial system	III.1	Sediment excavation and offsite disposal, with storm water filters for springs	$ 8,899,000	$ 626,000	$ 9,525,000
	III.2	Natural flushing of sediments coupled with PRB (ZVI and calcium sulfate) alluvial groundwater treatment and storm water filter treatment for springs	$ 2,069,000	$ 1,597,000	$ 3,666,000
	III.3	Natural/induced flushing of sediments and recovery of spring and groundwater (by interceptor trenches) and treatment in a central treatment system	$ 1,115,000	$ 2,640,000	$ 3,755,000

indicates that all alternatives can be performed safely. The disadvantage of central treatment (Alternative III.3) with respect to safety, is that a dedicated staff is required for O&M over 30 yr, which raises the potential for safety problems.

6.6 Uncertainties and Additional Data Requirements

The vertical distribution of contaminants within the sediments and vadose zone has only been characterized to a depth of approximately 2 ft below grade. If contaminants are limited to this depth, a limited rather than a full excavation of canyon sediments could be considered.

The nature of barium adsorption on sediments is not currently known, particularly with regard to the potential irreversibility of the adsorption. If adsorption is irreversible, than total barium loadings in the sediment are not a true indication of the potential for groundwater transport of barium.

Further definition of the nature and areas of possible groundwater infiltration from the alluvial system to the deep vadose zone would improve the placement of PRBs or interceptor trenches.

7.0 DESCRIPTION AND JUSTIFICATION OF THE PREFERRED ALTERNATIVES

7.1 Outfall Source Area Soils

Soil removal with off-site disposal is proposed as the preferred alternative for the outfall source area soils outside the settling pond. Soil removal will achieve the risk-based MCSs for this area. Under this alternative, soils will be removed from this area through a combination of manual and machine excavation.

7.2 Outfall Source Area Settling Pond and Surge Bed

Alternative II.2, grouting of the surge beds and maintenance of the existing cap, is proposed as the preferred alternative for this area. Although grouting does not remove HE and barium, the clay-based grout isolates contamination from contact with groundwater. In combination with maintenance of the cap system in the settling pond, grouting attains isolation of the HE and barium. Grouting offers more flexibility than excavation. This flexibility will be useful if surge bed contamination is found to exceed the immediate area of the settling pond during the investigative phase of this alternative. Finally, grouting is generally safer than excavation in terms of implementation and is the most cost-effective alternative. To demonstrate that this BMP is effective, a monitoring well would be installed on the downgradient edge of the grout mass. This well would be checked for groundwater quarterly and sampled if groundwater was found. Quarterly monitoring would continue for a period of 3 yr. Thereafter, monitoring would be conducted twice per yr.

7.3 Canyon Alluvial Systems

Because of a lack of risk associated with the exposure pathways determined by the Phase III RFI risk assessment (LANL 2003, 77965), no risk-based MCSs for the alluvial systems in Cañon de Valle and Martin Spring canyon are identified at the present time. Calculation of risk-based MCSs for regional groundwater is deferred to the regional groundwater CMS. An MCS was identified for barium and manganese (section 4). As discussed in section 3.0, it is not known whether manganese present in alluvial groundwater is natural or related to the presence of HE.

For the canyon alluvial systems, including springs, surface water, groundwater, and sediment, Alternative III.2, PRBs with spring water collection by stormwater filter, is proposed as the preferred alternative. This alternative is best able to attain the MCSs and cost-effectively protect regional groundwater. PRBs would be placed strategically in areas of suspected infiltration along the Cañon de Valle to treat groundwater before it infiltrates the deep vadose zone.

Excavation of Cañon de Valle and Martin Spring Canyon is not justified by the contaminant sediment loadings and the presence of historical sources within the Cañon de Valle drainage. Substantial inventories of contaminants have been recorded for these historical sources. Although contaminants have not been identified within the saturated alluvium, their identification within the Cañon de Valle drainage indicates that stormwater could potentially carry them into Cañon de Valle, where, without groundwater treatment, infiltration to the deep vadose zone and regional groundwater could occur. Such flows could also recontaminate the clean backfilled sediment that would be placed as a part of an excavation alternative.

Excavation is not economically justified. Because the contaminant mass of RDX is estimated to be approximately 5 kg within Cañon de Valle sediment, excavation would not be cost-effective. Although the barium sediment inventory appears high, barium has not been detected in R-25, despite detections of elevated concentrations along the entire saturated alluvium of Cañon de Valle. Whether or not the substantial quantity of barium in the upper 2 ft of sediment is available for dissolution in groundwater is unclear at present. As discussed earlier, a portion of the COPCs inventoried may be bound in either insoluble sulfate or irreversible adsorption.

Excavation might also entail considerable NEPA permitting difficulties that might preclude implementation even if excavation were proposed. By contrast, construction and operation of the proposed preferred alternative, which minimally impacts sensitive wetlands and the Mexican Spotted Owl, should encounter less permitting complexity.

The groundwater recovery and treatment alternative, although at least as effective as the PRB alternative, incurs high O&M costs and requires a dedicated staff to maintain and operate. In addition, drought conditions may reduce the volume of water available for recovery and treatment.

The proposed alternative relies on natural flushing of alluvial sediments and treatment of the resulting groundwater. Under the drought conditions that are anticipated, this process will be slow, and the possibility exists that the alluvial groundwater will dry up. If the alluvial groundwater dries up, the potential for infiltration of contaminated groundwater from the canyon alluvium will be reduced. When the groundwater returns, the PRBs will function to treat groundwater.

The conceptual design of the proposed alternative consists of three PRBs installed in Cañon de Valle and one installed in Martin Spring Canyon. The design for the, eastern-most PRB in Cañon de Valle includes an infiltration gallery and small retention area on the upgradient side to allow stormwater surges to infiltrate groundwater and be treated by the PRB. In this manner, contaminated stormwater surges will not overrun the treatment system. The PRBs use ZVI or GAC for the treatment of HE, and calcium sulfate for the immobilization of barium. An identical infiltration gallery will be installed on the upgradient side of the Martin Spring Canyon PRB. Because of the stormwater filters on Martin Spring, the PRB in Martin Spring Canyon will serve primarily to treat stormwater surges of surface water and groundwater. Martin Spring is now dry. For the springs, the design installs stormwater filters for the treatment of HE and barium. This conceptual design will be finalized during the CMI phase.

Under the proposed alternative, the perennial reach of surface water in Cañon de Valle is not disturbed. Springs water, which is the principle component of surface water flow, is treated by stormwater filters. In addition, the perennial reach of surface water is encompassed by the system of PRBs, so that groundwater resulting from infiltrated surface water, at the end of the surface water reach, is treated. Surface water quality will improve under the proposed alternative.

Contaminant transport both to and within regional groundwater will be studied as part of the regional groundwater CMS. This study will incorporate the findings for the regional groundwater wells to be installed. The findings for these new wells may require changes to the proposed alternative.

7.4 Monitoring Plan

The monitoring plan for the proposed alternative would consist of new monitoring well installation and of sampling of new and existing wells and surface water. As part of the installation, a pair of monitoring wells will be installed upgradient and downgradient from each PRB. These wells will be used to assess PRB effectiveness. Proposed points of compliance are five existing alluvial groundwater monitoring wells in Cañon de Valle and two existing monitoring wells in Martin Spring Canyon. These wells would be sampled quarterly for the first 3 yr and twice per yr thereafter. As part of the monitoring plan, two surface water samples from Cañon de Valle and Well would also be sampled at the same frequency.

7.5 Schedule

Task VIII of Module VIII of the Hazardous Waste Facility Permit for Los Alamos National Laboratory (NM0890010515) (EPA 1994, 44146) specifies requirements for the completion of CMS activities, including a schedule. Table 7.5-1 presents a schedule of CMS and CMI activities.

Table 7.5-1
Schedule of CMS/CMI Activities[a]

Activity	Schedule
CMS Report	November 2003
Draft Statement of Basis (SOB) Issued by NMED	90 days after submittal of CMS Report
Public Comment Period (SOB)	60 days
Final SOB Issued by NMED	60 days after end of public comment period
Submit CMI Plan to NMED	120 days after NMED issues final SOB
NMED Approves CMI Plan	90 days after submittal of CMI plan to NMED
Submit CMI Engineering Design to NMED	90 days after NMED approves CMI Plan
NMED Approves CMI Engineering Designs	90 days after submittal of CMI Engineering Design
CMI Implementation–begin soil removal	60 days after NMED approves CMI Engineering design
CMI Implementation–begin water treatment systems	60 days after NMED approves CMI Engineering Design
CMI Implementation–soil removal complete	180 days after beginning CMI implementation
CMI Implementation–water treatment systems complete	1 year after beginning CMI implementation
Initial monitoring for CMI Performance	1 year after completion of CMI implementation
Submit CMI Report	90 days after completion of initial monitoring for CMI implementation
Monitoring for CMI Performance	Continuing until CMI cleanup criteria are met

[a] NMED Consent Order schedule will take precedence over the schedule outlined here.

8.0 REFERENCES

The following list includes all documents cited in the main body of this report. The parenthetical information following each reference provides the author, publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the RRES-RS Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the RRES-RS project reference library titled "Reference Set for Operable Unit 1082."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Site Office; the US Environmental Protection Agency, Region 6; and RRES-RS. This library is a living collection of documents that was developed to ensure that the administrative authority has all material needed to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

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Appendix A

Acronyms and Glossary

A-1.0 LIST OF ACRONYMS AND ABBREVIATIONS

AOC	area of concern
A-DNT	amino-dinitrotoluene
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BH	borehole
BMP	best management practice
BV	background value
CA	corrective action
CAMU	corrective action management unit
CdV	Cañon de Valle
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMI	corrective measures implementation
CMS	corrective measures study
COPC	chemical of potential concern
CSAMT	controlled-source audio-frequency magneto-telluric
CWA	Clean Water Act
CWM	Chemical Waste Management
DNT	dinitrotoluene
DHS	Department of Health Services
DNX	hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
DoD	US Department of Defense
DOE	US Department of Energy
EA	environmental assessment
EIS	environmental impact statement
EPA	US Environmental Protection Agency
ER	environmental restoration
ES&H	environmental safety and health
ESH	Environment, Safety, & Health (a former Laboratory Division)
FOC	fraction organic compound
GAC	granular activated charcoal
HE	high explosive(s)
HI	hazard index
HMX	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclo-octane (cyclotetramethylenetetranitramine)
HSWA	Hazardous and Solid Waste Amendments of 1984
ITRD	Innovative Treatment Remediation Demonstration
IM	interim measure
LANL	Los Alamos National Laboratory
LDR	land disposal restriction
LTTD	low temperature thermal destruction
MCL	maximum contaminant level
MCS	media cleanup standards
MDA	material disposal area
MNA	monitored natural attenuation

MSC	Martin Spring Canyon
MNX	hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
NEPA	National Environmental Policy Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NPDES	national pollutant discharge elimination system
NPV	net present value
NWP	nationwide permit
OU	operable unit
PCB	polychlorinated biphenyl
POC	point of compliance
PRB	permeable reactive barrier
RCRA	Resource Conservation and Recovery Act
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA	RCRA facility assessment
RFI	RCRA facility investigation
RRES-RS	Risk Reduction & Environmental Stewardship–Remediation Services
SAL	screening action level
SCM	site conceptual model
SSAL	specific screening action level
SVOC	semivolatile organic compound
SWMU	solid waste management unit
SWQB	state water quality bureau
SWSC	sanitary wastewater system consolidation
TA	technical area
TCLP	toxicity characteristic leaching procedure
TNB	1,3,5-trinitrobenzene
TNT	trinitrotoluene[2,4,6-]
TNX	hexahydro-1,3,5-trinitroso-1,3,5-triazine
TOSS	two-stage solid-phase
TSCA	Toxic Substances Control Act
US	United States
USACE	United States Army Corps of Engineers
VCA	voluntary corrective action
VOC	volatile organic compound
ZVI	zero-valent iron

A-2.0 GLOSSARY

absorption — The penetration of substances into the bulk of a solid or liquid.

adsorption — The surface retention of solid, liquid, or gas molecules, atoms, or ions by a solid or a liquid.

alluvial — Relating to geologic deposits or features formed by running water.

alluvium — Clay, silt, sand, and gravel transported by water and deposited on streambeds, flood plains, and alluvial fans.

analysis — Includes physical analysis, chemical analysis, and knowledge-of-process determinations. (Laboratory Hazardous Waste Facility Permit)

aquifer — Body of permeable geologic material whose saturated portion is capable of readily yielding groundwater to wells.

area of concern (AOC) — Areas at the Laboratory that might warrant further investigation for releases based on past facility waste-management activities.

background level — Naturally occurring concentrations (levels) of an inorganic chemical and naturally occurring radionuclides in soil, sediment, and tuff.

barrier — Any material or structure that prevents or substantially delays movement of solid-, liquid-, or gaseous-phase chemicals in environmental media.

baseline risk assessment (also known as risk assessment) **—** A site-specific analysis of the potential adverse effects of hazardous constituents that are released from a site in the absence of any control or mitigation actions. A baseline risk assessment consists of four steps: data collection and analysis, exposure assessment, toxicity assessment, and risk characterization.

bentonite — A clay composed of the mineral montmorillonite and variable amounts of magnesium and iron, formed over time by the alteration of volcanic ash. As bentonite can *adsorb* large quantities of water and expand to several times its normal volume, it is a common additive to drilling mud.

chemical — Any naturally occurring or man-made substance characterized by a definite molecular composition, including molecules that contain radionuclides.

chemical analysis — Process used to measure one or more attributes of a sample in a clearly defined, controlled, systematic manner. Often requires treating a sample chemically or physically before measurement.

chemical of potential concern (COPC) — A chemical, detected at a site, that has the potential to adversely affect human receptors due to its concentration, distribution, and mechanism of toxicity. A COPC remains a concern until exposure pathways and receptors are evaluated in a site-specific human health risk assessment.

cleanup levels — Media-specific contaminant concentration levels that must be met by a selected corrective action. Cleanup levels are established by using criteria such as protection of human health and the environment; compliance with regulatory requirements; reduction of toxicity, mobility, or volume through treatment; long- and short-term effectiveness; implementability; cost; and public acceptance.

Code of Federal Regulation (CFR) — A codification of all regulations developed by federal government agencies and finalized by publication in the Federal Register.

conceptual hydrogeologic model — Mathematical approximation of the occurrence, movement, and quality of groundwater in a given area and the relationship of that groundwater to the surface water, soil water, and geologic framework in that area.

confluence — Place where two or more streams meet; the point where a tributary meets the main stream.

contaminant — Any chemical (including radionuclides) present in environmental media or on structural debris.

corrective action — Action to rectify conditions adverse to human health or the environment.

corrective measures implementation (CMI) plan — A detailed plan and specifications to implement the approved remedy at the facility. It is the third step of the corrective-action process. It includes design, construction, maintenance, and monitoring of the chosen remedy.

corrective measures study (CMS) — A formal process to identify and evaluate remedy alternatives for releases at the facility (55 Federal Register 30798).

dilution attenuation factor — Ratio of contaminant concentration in soil leachate to the concentration in groundwater at the receptor point and is used to account for dilution of soil leachate in an aquifer.

discharge — Accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water. (RCRA, 40 CFR 260.10)

disposal — The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. (40 CFR Part 260.10)

DOE — See US Department of Energy

ecological screening level (ESL) — An organism's exposure-response threshold for a given chemical constituent. The concentration of a substance in a particular medium corresponds to a hazard quotient (HQ) of 1.0 for a given organism below which no risk is indicated.

effluent — Liquid discharged as a waste, such as contaminated water from a factory or the outflow from a sewage works; water discharged from a storm sewer or from land after irrigation.

environmental assessment (EA) — A report that identifies potentially significant environmental impacts from any federally approved or federally funded project that may change the physical environment. If an EA shows significant impact, an environmental impact statement (EIS) is required.

environmental impact statement (EIS) — Detailed report, required by federal law, on the significant environmental impacts that proposed major federal projects would have on the environment.

EPA — See US Environmental Protection Agency

ephemeral — Said of a stream or spring that flows only during and immediately after periods of rainfall or snowmelt.

evapotranspiration — The combined discharge of water from the earth's surface to the atmosphere by evaporation from lakes, streams, and soil surfaces, and by transpiration from plants.

exposure pathway — Mode by which a receptor may be exposed to contaminants in environmental media (e.g., drinking water, ingesting food, or inhaling dust).

fault — A fracture, or zone of fractures, in rock along which there has been vertical or horizontal movement; adjacent rock layers or bodies are displaced.

Federal Register — The official daily publication for Rules, Proposed Rules, and Notices of federal agencies and organizations, as well as Executive Orders and other Presidential Documents.

flood plain — The portion of a river valley that is built of overbank sediment deposited when the river floods.

geohydrology — The science that applies hydrologic methods to the understanding of geologic phenomena.

groundwater — Water in a subsurface saturated zone; water beneath the regional *water table*.

Hazardous and Solid Waste Amendments (HSWA) — The Hazardous and Solid Waste Amendments of 1984 (Public Law No. 98-616, 98 Stat. 3221), which amended the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 et seq.

hazardous constituent — Those constituents listed in Appendix VIII to 40 CFR Part 261.

hazardous waste — Any solid waste is generally a hazardous waste if it

- is not excluded from regulation as a hazardous waste,
- is listed in the regulations as a hazardous waste,
- exhibits any of the defined characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity), or
- is a mixture of solid waste and hazardous waste.

See 40 CFR 261.3 for a complete definition of hazardous waste.

HSWA module — Module VIII of the Laboratory's Hazardous Waste Facility Permit. This permit allows the Laboratory to operate as a treatment, storage, and disposal facility.

hydraulic conductivity — The rate at which water moves through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow.

hydraulic gradient — The rate of change of hydraulic head per unit of distance in the direction of groundwater flow.

hydraulic head — Elevation of the water table or potentiometric surface as measured in a well.

Hydrogeologic Workplan — The document that describes activities planned by the Laboratory to characterize the hydrologic setting beneath the Laboratory and to enhance the Laboratory's groundwater monitoring program.

hydrogeology — The science that applies geologic methods to the understanding of hydrologic phenomena.

hypothesis — A proposition stated as a basis for further investigation.

industrial-use scenario — Industrial use is the scenario in which current Laboratory operations continue. Any necessary remediation involves cleanup to standards designed to ensure a safe and healthy work environment for Laboratory workers.

infiltration — Entry of water into the ground.

injection well — A well into which fluids are injected (40 CFR 260.10). It should be noted that the ER Project is not using this term in its RCRA context (i.e., the injection of hazardous-waste liquid into the well under specific, approved conditions) but for adding water and/or tracers to the saturated zone during well tests of hydrologic behavior.

interim measure — Short-term actions taken to respond to immediate threats to human health or to prevent damage or contaminant migration to the environment.

interflow — A runoff process that involves lateral subsurface flow in the soil zone.

intermittent stream — A stream that flows only in certain reaches due to losing and gaining characteristics of the channel bed.

land disposal restrictions (LDR) — Requirements in 40 CFR 268 that specify treatment standards that are protective of human health and the environment when hazardous waste is land disposed.

leachate — Any liquid, including any suspended components in the liquid that has percolated through or drained from hazardous waste (40 CFR 260.10).

leaching — The separation or dissolving out of soluble constituents of a solid material by the natural action of percolating water or by chemicals.

medium (environmental) **—** Any media capable of absorbing or transporting constituents. Examples of media include tuffs, soils and sediments derived from these tuffs, surface water, soil water, groundwater, air, structural surfaces, and debris.

medium (geological) **—** The solid part of the hydrogeological system; may be unsaturated or saturated.

migration — The movement of inorganic and organic species through unsaturated or saturated materials.

migration pathway — A route (e.g., a stream or subsurface flow path) that controls the potential movement of contaminants to environmental receptors (plants, animals, humans).

mixed waste — Waste that contains both hazardous waste (as defined by RCRA) and radioactive waste (as defined by the Atomic Energy Act [AEA] and its amendments).

model — A mathematical approximation of a physical, biological, or social system.

monitoring well — A well or borehole drilled for the purpose of yielding groundwater samples for analysis.

National Pollutant Discharge Elimination System (NPDES) — The national program for both issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing requirements under Sections 307, 318, 402, and 405 of the Clean Water Act.

operable unit (OU) — At the Laboratory, one of 24 areas originally established for administering the ER Project. Set up as groups of potential release sites, the OUs were aggregated based on geographic proximity for the purpose of planning and conducting RCRA facility assessments and RCRA facility investigations. As the project matured, it became apparent that 24 were too many to allow efficient communication and to ensure consistency in approach. Therefore, in 1994, the 24 OUs were reduced to six administrative "field units."

outfall — The vent or end of a drain, pipe, sewer, ditch, or other conduit that carries wastewater, sewage, storm runoff or other effluent into a stream.

perched groundwater — Groundwater that lies above the regional water table and is separated from it by one or more unsaturated zones.

percolation — Gravity flow of soil water through the pore spaces in soil or rock below the ground surface.

perennial stream — A stream or reach that flows continuously throughout the year.

piezometer — A tightly cased well drilled for the purpose of measuring hydraulic head or water level at a discrete depth; ideally only open at the bottom but usually constructed with a very short screen interval.

piezometric surface — The surface that represents the static head in an aquifer: applies to both confined and unconfined aquifers (also called potentiometric surface).

polychlorinated biphenyls (PCBs) — Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substances. PCBs are colorless, odorless compounds that are chemically, electrically, and thermally stable and have proven to be toxic to both humans and animals.

porosity — The ratio of the volume of interstices in a soil or rock sample to its total volume expressed as a percentage or as a fraction.

preliminary remediation goal (PRG) — Acceptable exposure levels, protective of human health and the environment, that are used as a risk-based tool for evaluating remedial alternatives.

RCRA facility investigation (RFI) — The investigation that determines if a release has occurred and the nature and extent of the contamination at a hazardous waste facility. The RFI is generally equivalent to the remedial investigation portion of the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) process.

receptor — A person, plant, animal, or geographical location that is exposed to a chemical or physical agent released to the environment by human activities.

recharge — The process by which water is added to the zone of saturation, either directly from the overlying unsaturated zone or indirectly by way of another material in the saturated zone.

regional aquifer — Geologic material(s) or unit(s) of regional extent whose saturated portion yields significant quantities of water to wells, contains the regional zone of saturation, and is characterized by the regional water table or potentiometric surface.

regulatory standard — Media-specific contaminant concentration levels of potential concern that are mandated by federal or state legislation or regulation (e.g., the Safe Drinking Water Act, New Mexico Water Quality Control Commission regulations).

release — Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous waste or hazardous constituents into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles that contain any hazardous wastes or hazardous constituents).

remediation — The process of reducing the concentration of a contaminant (or contaminants) in air, water, or soil media to a level that poses an acceptable risk to human health and the environment; the act of restoring a contaminated area to a usable condition based on specified standards.

residential-use scenario — The standards for residential use are the most stringent of the three current- and future-use scenarios being considered by the ER Project and is the level of cleanup the EPA is currently specifying for SWMUs located off the Laboratory site and for those released for non-Laboratory use.

Resource Conservation and Recovery Act (RCRA) — The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976. (40 CFR 270.2)

retardation — The act or process that reduces the rate of movement of a chemical substance in water relative to the average velocity of the water. The movement of chemical substances in water can be retarded by adsorption and precipitation reactions, and by diffusion into the pore water of the rock matrix.

risk assessment — See *baseline risk assessment.*

risk characterization — The summarization and integration of the results of toxicity and exposure assessments into quantitative and qualitative expressions of risk. The major assumptions, scientific judgments, and sources of uncertainty related to the assessment are also presented.

screening action level (SAL) — Medium-specific concentration level for a chemical derived using conservative criteria below for which it is generally assumed that there is no potential for unacceptable risk to human health. The derivation of a SAL is based on conservative exposure and land-use assumptions. However, if an applicable regulatory standard exists that is less than the value derived by risk-based computations, it will be used for the SAL.

screening assessment — A process designed to determine whether contamination detected in a particular medium at a site may present a potentially unacceptable human-health and /or ecological risk. The assessment utilizes screening levels that are either human-health or ecologically based concentrations derived by using chemical-specific toxicity information and standardized exposure assumptions below which no additional actions are generally warranted.

sediment — (1) A mass of fragmented inorganic solid that comes from the weathering of rock and is carried or dropped by air, water, gravity, or ice; or a mass that is accumulated by any other natural agent and that forms in layers on the earth's surface such as sand, gravel, silt, mud, fill, or loess. (2) A solid material that is not in solution and either is distributed through the liquid or has settled out of the liquid.

site characterization — Defining the pathways and methods of migration of the hazardous waste or constituents, including the media affected, the extent, direction and speed of the contaminants, complicating factors influencing movement, concentration profiles, etc. (US Environmental Protection Agency, May 1994. "RCRA Corrective Action Plan, Final," Publication EPA-520/R-94/004, Office of Solid Waste and Emergency Response, Washington, DC)

site conceptual model — A qualitative or quantitative description of sources of contamination, environmental transport pathways for contamination, and biota that may be impacted by contamination (called receptors) and whose relationships describe qualitatively or quantitatively the release of contamination from the sources, the movement of contamination along the pathways to the exposure points, and the uptake of contaminant by the receptors.

soil gas — Those gaseous elements and compounds that occur in the void spaces in unsaturated rock or soil. Such gases can move through or leave the rock or soil, depending on changes in pressure.

soil water — Water in the unsaturated zone, regardless of whether it occurs in soil or rock.

solid waste — Any garbage; refuse; sludge from a waste treatment plant, water-supply treatment plant, or air-pollution-control facility; and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities.

solid waste management unit (SWMU) — Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. This definition includes regulated units (i.e., landfills, surface impoundments, waste piles, and land treatment units) but does not include passive leakage or one-time spills from production areas and units in which wastes have not been managed (e.g., product-storage areas).

spring — The site where groundwater discharges to the ground surface.

stakeholder — As used in this document, stakeholder refers to any party or agency, whether inside or outside the Laboratory, interested in or affected by Environmental Restoration Project issues and activities.

technical area (TA) — The Laboratory established technical areas as administrative units for all its operations. There are currently 49 active TAs spread over approximately 40 square miles.

tracer — A substance, usually a radioactive isotope, added to a sample to determine the efficiency (chemical or physical losses) of the chemical extraction, reaction, or analysis. The tracer is assumed to behave in the same manner as that of the target radionuclides. Recovery guidelines for tracer results are 30% to 110% under the current contract laboratory statement of work and will be 40% to 105% under the new statement of work. Correction of the analytical results for the tracer recovery is performed for each sample. The concentration of the tracer added needs to be sufficient to result in a maximum of 10% uncertainty at the 95% confidence level in the measured recovery.

transmission loss — Reduction in surface water flow by seepage into the channel bed.

transmissivity — A measure of the rate at which water is transmitted through a cross section of aquifer having the dimensions unit width and total saturated thickness as height, under a unit hydraulic gradient; also hydraulic conductivity times aquifer thickness.

transport or transportation — The movement of a hazardous waste by air, rail, highway, or water. (40 CFR 260.10)

treatment — Any method, technique, or process, including elementary neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste; recover energy or material resources from the waste; or so as to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery or storage; or reduced in volume.

treatment, storage, and disposal (TSD) facility — An interim status or permitted facility in which hazardous waste is treated, stored, or disposed.

tuff — A compacted deposit of volcanic ash and dust that contains rock and mineral fragments accumulated during an eruption.

underflow — Groundwater flow beneath the bed of a non-flowing stream; such water is often perched in the channel alluvium atop the bedrock surface.

unsaturated zone — The zone between the land surface and the regional water table and between perched zones of saturation. Generally, fluid pressure in this zone is less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure.

US Department of Energy (DOE) — Federal agency that sponsors energy research and regulates nuclear materials for weapons production.

US Environmental Protection Agency (EPA) — Federal agency responsible for enforcing environmental laws. While state regulatory agencies may be authorized to administer some of this responsibility, the EPA retains oversight authority to ensure protection of human health and the environment.

vadose zone — The unsaturated zone. Portion of the subsurface above the regional water table in which pores are not fully saturated.

water balance — The relationship between water input (precipitation) and output (runoff, evapotranspiration, and recharge) in a hydrological system; the partitioning of precipitation among these components of the hydrological cycle.

water content — (Also gravimetric moisture content) The amount of water in an unsaturated medium, expressed as the ratio of the weight of water in a sample to the weight of the oven-dried sample; often expressed as a percent.

water table — The top of the regional saturated zone; the piezometric surface associated with an unconfined aquifer.

A-3.0 METRIC TO US CUSTOMARY UNIT CONVERSION TABLE

Multiply SI (Metric) Unit	by	To Obtain US Customary Unit
kilometers (km)	0.622	miles (mi)
kilometers (km)	3281	feet (ft)
meters (m)	3.281	feet (ft)
meters (m)	39.37	inches (in.)
centimeters (cm)	0.03281	feet (ft)
centimeters (cm)	0.394	inches (in.)
millimeters (mm)	0.0394	inches (in.)
micrometers or microns (µm)	0.0000394	inches (in.)
square kilometers (km^2)	0.3861	square miles (mi^2)
hectares (ha)	2.5	acres
square meters (m^2)	10.764	square feet (ft^2)
cubic meters (m^3)	35.31	cubic feet (ft^3)
kilograms (kg)	2.2046	pounds (lb)
grams (g)	0.0353	ounces (oz)
grams per cubic centimeter (g/cm^3)	62.422	pounds per cubic foot (lb/ft^3)
milligrams per kilogram (mg/kg)	1	parts per million (ppm)
micrograms per gram (µg/g)	1	parts per million (ppm)
liters (L)	0.26	gallons (gal.)
milligrams per liter (mg/L)	1	parts per million (ppm)
degrees Celsius (°C)	9/5 + 32	degrees Fahrenheit (°F)

Appendix B

Supporting Information for CMS COPC Identification

Appendix B
List of Tables

B1 Cañon de Valle CMS COPCs

Cañon de Valle surface water CMS COPCs are barium, RDX, DNX, MNX and TNT. For alluvial groundwater the CMS COPCs are barium, manganese, RDX, MNX and TNT. For alluvial sediment, the CMS COPCs are barium, RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in this section, and is developed using the CMS COPC screening criteria presented in section 3.2. Supporting data are available in the accompanying tables and supporting text and supporting text and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

B1.1 Cañon de Valle Surface Water

Cañon de Valle surface water inorganic RFI COPCs that exceed their CMS COPC screening limits include antimony, barium, nitrate-nitrite as N, perchlorate, silver, thallium, and uranium. Organic RFI COPCs that exceeded their CMS COPC screening limits are RDX, DNX, MNX, TNT, tetrachloroethene, and trichloroethene. Supporting data are available in Tables B-1 and B-2 and from Appendix G of the Phase III RFI report (LANL 2003, 77965).

On the basis of frequency of detection and distribution, antimony is not a CMS COPC. The percentage of total samples containing detectable antimony was 13 percent; of 20 samples with detectable antimony, only one antimony sample exceeded the screening limit in surface water. Moreover, based on regional groundwater sampling results from R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), antimony did not exceed a screening limit.

Barium is a CMS COPC. It was detected in 100 percent of samples; of 151 detections, 81 exceeded the CMS screening limit.

Nitrate-nitrite as N was detected in 61 percent of samples, but exceeded the screening limit in only 1 of 39 samples showing detectable nitrate-nitrite as N. The remaining sample results were at least a factor of 10 below the screening limit. Nitrate-nitrite as N did not exceed a screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons nitrate-nitrite as N is excluded as a CMS COPC.

Silver was detected in 15 percent of surface water samples, but only two surface water samples of 23 samples showing detectable silver exceeded the screening limit standard. In addition, silver present in sediment and surface water did not cause unacceptable risks in the Phase III RFI risk assessment. Finally, elevated silver concentrations have not been detected in R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, silver is not included as a Cañon de Valle surface water CMS COPC.

Perchlorate was detected in 8% of Cañon de Valle surface water samples. All samples showing detectable perchlorate are from 2000; recent sample results (through March 2002) have not detected perchlorate. Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle surface water.

Thallium was detected in 18 percent of total samples, but exceeded a CMS screening limit in only 3 unfiltered samples. No filtered samples exceeded the screening limit. One sample result from R-25 regional groundwater sampling exceeded the screening limit; all other results fell below the screening limit. Based on these considerations, thallium is not a CMS COPC.

Uranium was included as an RFI COPC because its maximum detection limit exceeded the screening limit. For samples with detectable uranium, the maximum concentration fell below the screening limit.

Table B-1
Phase III RFI Cañon de Valle Surface Water Inorganic COPCs

Chemical	Sample Concentration (μg/L)		NMWQCC Standard (μg/L)	EPA MCL (μg/L)	EPA Region 6 Tap Water PRG (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	6.4 (J)b	na[c]	6	na	Yes	13
	Max. Undetected Value	33 (U)[d]	na	6	na	Yes	
Barium	Max. Detected Value	16300	1000[e]	2000	na	Yes	100
Cesium	Max. Detected Value	800	nav[f]	nav	nav	nav	na
Mercury	Max. Detected Value	0.97	0.77[g]	2	na	Yes	3
	Max. Undetected Value	1 (U)	0.77[g]	2	na	Yes	
Nitrate-Nitrite as N	Max. Detected Value	49200	10000[e]	nav	na	Yes	61
	Max. Undetected Value	1110 (U)	10000[e]	nav	na	No	
Perchlorate	Max. Detected Value	17.1	4[h]	nav	na	Yes	8
	Max. Undetected Value	20 (U)	4[h]	nav	na	Yes	
Selenium	Max. Detected Value	5.33	5[g]	50	na	Yes	22
	Max. Undetected Value	5 (U)	5[g]	50	na	No	
Silver	Max. Detected Value	1380	50[e]	100	na	Yes	15
	Max. Undetected Value	10 (U)	50[e]	100	na	No	
Thallium	Max. Detected Value	5.9 (J)	na	2	na	Yes	18
	Max. Undetected Value	5.6 (U)	na	2	na	Yes	
Uranium	Max. Detected Value	1.91	5000[e]	30	na	No	59
	Max. Undetected Value	126 (U)	5000[e]	30	na	Yes	

Table B-1 (continued)
Phase III RFI Cañon de Valle Surface Water Inorganic COPCs

Sources: 20 NMAC 6.2.3103, “Standards for groundwater of 10,000 mg/l TDS concentration or less,” Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; EPA 1989, 08021; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = not applicable.

[d] (U) = The chemical is classified "undetected."

[e] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[f] nav = not available.

[g] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

[h] 2003 California DHS Action Level.

Table B-2
Phase III RFI Cañon de Valle Surface Water Organic COPCs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Bis(2-ethylhexyl)phthalate	Max. Detected Value	1.6 (J)[b]	na[c]	6	na	No	na
	Max. Undetected Value	12 (U)[d]	na	6	na	Yes	
DNX	Max. Detected Value	1.3 (J-)[e]	nav[f]	nav	0.61	Yes	na
	Max. Undetected Value	0.5 (U)	nav	nav	0.61	No	
Methylene Chloride	Max. Detected Value	1.1 (J)	100[g]	5	na	No	3
	Max. Undetected Value	38 (U)	100[g]	5	na	Yes	
MNX	Max. Detected Value	0.97 (J-)	nav	nav	0.61	Yes	na
	Max. Undetected Value	0.5 (U)	nav	nav	0.61	No	
Nitroglycerin	Max. Detected Value	1.1 (J)	nav	nav	4.8	No	4
	Max. Undetected Value	5 (U)	nav	nav	4.8	Yes	
RDX	Max. Detected Value	290	nav	nav	0.61	Yes	74
	Max. Undetected Value	0.87 (U)	nav	nav	0.61	Yes	
Tetrachloroethene	Max. Detected Value	42	20[g]	5	na	Yes	12
	Max. Undetected Value	5 (U)	20[g]	5	na	No	
Trichloroethene	Max. Detected Value	10	100[g]	5	na	Yes	9
	Max. Undetected Value	5 (U)	100[g]	5	na	No	
TNT	Max. Detected Value	6.2	nav	nav	2.2	Yes	15
	Max. Undetected Value	5 (U)	nav	nav	2.2	Yes	

Table B-2 (continued)
Phase III RFI Cañon de Valle Surface Water Organic COPCs

Sources : 20 NMAC 6.2.3103, “Standards for groundwater of 10,000 mg/l TDS concentration or less,” Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = not applicable; total sample count less than 20.

[d] (U) = The chemical is classified as "not detected."

[e] (J-) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential low bias.

[f] nav = not available.

[g] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

Moreover, uranium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, uranium is not included as a CMS COPC.

RDX was detected in 74 percent of surface water samples. Of 67 samples showing detectable RDX, 65 exceeded the screening limit. TNT was detected in 15 percent of samples. Of 14 samples showing detectable TNT, 5 exceeded the screening limit. RDX breakdown products DNX and MNX have been detected in surface water. Finally, MNX, RDX, and TNT have been detected in deep groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons these compounds are included as CMS COPCs.

Tetrachloroethene and trichloroethene were detected in 12 percent and 9 percent of surface water samples, respectively. Of 4 samples showing detectable tetrachloroethene, 3 results exceeded the screening limit. Of 3 samples showing detectable trichloroethene, 1 result exceeded the screening limit. All samples exceeding the screening limits were from Fishladder Canyon. With the exception of a sample taken from Peter Seep, these compounds were not detected in other surface water samples. Occasionally, these compounds have been detected in deep groundwater in R-25, though not at levels above screening limits (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). These compounds are not retained as CMS COPCs for this CMS. Fishladder Canyon will be investigated in 2004 and 2005 as part of a separate investigation (LANL 1993, 20948).

B1.2 Cañon de Valle Alluvial Groundwater

The Cañon de Valle alluvial groundwater inorganic RFI COPCs that exceed their CMS COPC screening limits are antimony, barium, cadmium, manganese, perchlorate, and thallium. The organic RFI COPCs are chloromethane, dinitrobenzene, MNX, RDX, and TNT. Supporting data are available in Tables B-3 and B-4 and from Appendix G of the Phase III RFI report (LANL 2003, 77965).

Antimony was detected in 32 percent of samples, but of 29 samples showing detectable antimony, no filtered samples and only one unfiltered sample had results that exceeded the screening limit. Moreover, as discussed in section 3.2.1.1, antimony is not a CMS COPC in regional groundwater at R-25. For these reasons, antimony is not a CMS COPC for Cañon de Valle alluvial groundwater.

Barium is a CMS COPC. Barium was detected in 100 percent of samples, with 140 of 154 sample results exceeding the screening limit. Barium has been detected in R-25, though concentrations are at least a factor of 10 lower than the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).

Cadmium was detected in 54 percent of samples, but only 9 samples of 88 samples showed results that exceeded the screening limit; all but one were unfiltered samples. Moreover, cadmium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as CMS COPC.

Manganese was detected in 98 percent of Cañon de Valle groundwater samples, of which 115 of 158 sample results exceeded the screening limit. Manganese was not listed as an RFI COPC for Cañon de Valle surface water. Manganese in sediment from Cañon de Valle was not listed as RFI COPCs because manganese was not present above background concentrations. Alluvial groundwater data sorted by distance from the outfall indicate that manganese concentrations uniformly increase with distance. Its presence within alluvial groundwater, which is in intimate contact with sediment containing manganese within background, strongly indicates that manganese is most likely naturally occurring. However, the

Table B-3
Phase III RFI Cañon de Valle Alluvial Groundwater Inorganic COPCs

Chemical	Sample Concentration (μg/L)		NMWQCC Standard (μg/L)	EPA MCL (μg/L)	EPA Region 6 Tap Water PRG (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	10.9 (J)[b]	na[c]	6	na	Yes	32
	Max. Undetected Value	20 (U)[d]	na	6	na	Yes	
Barium	Max. Detected Value	18000	1000[e]	2000	na	Yes	100
Cadmium	Max. Detected Value	11.3	10[e]	5	na	Yes	54
	Max. Undetected Value	5.9 (U)	10[e]	5	na	Yes	
Cesium	Max. Detected Value	1300	nav[f]	nav	nav	nav	na
Cyanide (Total)	Max. Detected Value	10	5.2[g]	200	na	Yes	na
	Max. Undetected Value	10 (U)	5.2[g]	200	na	Yes	
Manganese	Max. Detected Value	4340	200[h]	50	na	Yes	98
	Max. Undetected Value	10 (U)	200[h]	50	na	No	
Mercury	Max. Detected Value	4.4	0.77[h]	2	na	Yes	15
	Max. Undetected Value	0.44 (U)	0.77[h]	2	na	No	
Perchlorate	Max. Detected Value	19.1	4[i]	nav	na	Yes	10
	Max. Undetected Value	4.79 (U)	4[i]	nav	na	Yes	
Rubidium	Max. Detected Value	900	nav	nav	nav	nav	na
	Max. Undetected Value	50 (U)	nav	nav	nav	nav	
Thallium	Max. Detected Value	7.6 (J)	na	2	na	Yes	29
	Max. Undetected Value	9.1 (U)	na	2	na	Yes	

Table B-3 (continued)
Phase III RFI Cañon de Valle Alluvial Groundwater Inorganic COPCs

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; EPA 1989, 08021; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain that usual.

[c] na = not applicable.

[d] (U) = The chemical is classified "undetected."

[e] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[f] nav = not available.

[g] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

[n] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[i] 2003 California DHS Action Level.

Table B-4
Phase III RFI Cañon de Valle Alluvial Groundwater Organic COPCs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Chloromethane	Max. Detected Value	44 (J)[b]	na[c]	nav[d]	1.5	Yes	5
	Max. Undetected Value	10 (U)[e]	na	nav	1.5	Yes	
Dinitrobenzene[1,3-]	Max. Detected Value	12	nav	nav	3.7	Yes	1
	Max. Undetected Value	13 (U)	nav	nav	3.7	Yes	
MNX	Max. Detected Value	0.65	nav	nav	0.61	Yes	na
	Max. Undetected Value	0.5 (U)	nav	nav	0.61	No	
Nitrobenzene	Max. Detected Value	0.36 (J-)[f]	na	nav	3.4	No	1
	Max. Undetected Value	50 (U)	na	nav	3.4	Yes	
RDX	Max. Detected Value	759	nav	nav	0.61	Yes	73
	Max. Undetected Value	1 (UJ)[g]	nav	nav	0.61	Yes	
TNT	Max. Detected Value	46.6	nav	nav	2.2	Yes	3
	Max. Undetected Value	13 (U)	nav	nav	2.2	Yes	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = not applicable.

[d] nav = not available.

[e] (U) = The chemical is classified "not detected."

[f] (J-) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential low bias.

[g] (UJ) = The chemical is classified "not detected" with an expectation that the reported result is more uncertain than usual.

increasing trend with distance from the outfall indicates that manganese has been leached from naturally occurring manganese in sediment by reducing conditions caused by the presence of organic material. It is not known whether this organic material is naturally occurring (organic humus) or HE.

Manganese is occasionally detected above the screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against background have not been completed. For these reasons, manganese is included as a CMS COPC for Cañon de Valle alluvial groundwater.

Perchlorate was detected above its screening limit in Cañon de Valle alluvial groundwater during 2000, but it has not been detected above the screening limit in later results (through March 2002). Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). Due to the low concentration and infrequent detection in alluvial groundwater, it does not likely pose a contaminant risk to regional groundwater. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle alluvial groundwater.

Thallium was detected in 29 percent of samples, but of 158 samples showing detectable thallium only 2 sample results exceeded the screening limit. One sample result from R-25 regional groundwater sampling results exceeded the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5); all other results fell below the screening limit. Based on these considerations, thallium is not a CMS COPC.

Chloromethane was detected in only 5 percent of groundwater samples in Cañon de Valle. A single sample exceeded the CMS COPC screening level. All other sample results fell below the screening limit. Chloromethane has not been detected in deep groundwater in R-25. For these reasons, it is not included as a CMS COPC.

RDX was detected in 73 percent of samples, with 66 of 69 of samples exceeding the screening limit. TNT was detected in 3 percent of samples. Of 14 samples with detectable TNT, 5 exceeded the screening limit. MNX, though detected in only 4 samples, has been detected in deep groundwater in R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), along with RDX and TNT. For these reasons, RDX, MNX and TNT are CMS COPCs.

B1.3 Cañon de Valle Alluvial Sediment

In accordance with the CMS COPCs screening criteria set forth in section 3.2, sediment RFI COPCs are CMS COPCs if the sediment RFI COPCs are either groundwater or surface water CMS COPCs. On this basis, the alluvial sediment CMS COPC are barium, RDX and TNT. Supporting data are available in Tables B-5 and B-6 and from Appendix G of the Phase III RFI report (LANL 2003, 77965).

B2 Martin Spring Canyon CMS COPCs

Martin Spring alluvial groundwater and alluvial sediment CMS COPCs are barium and RDX. RDX is a CMS COPC for Martin Spring Canyon surface water. In addition, manganese is a CMS COPC for Martin Spring Canyon alluvial groundwater. The selection of CMS COPCs from Phase III RFI COPCs is described in this section. Supporting data are available in the accompanying tables and supporting text and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

Table B-5
Phase III RFI Inorganic COPCs in the Cañon de Valle Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	Background Value (BV)* (mg/kg)	Number of Detects Above BV	Number of Non-Detects Above BV	Percent Detected for 20 Samples or Greater(**)[a]
Antimony	46	12	[0.032][b] to 2.6	0.83	7	16	26
Barium	46	46	34.9 to 37300	127	43	0	100
Boron	46	18	0.799 to 10.6	nav[c]	nav	nav	39
Cadmium	46	19	[0.04] to 1.98	0.4	4	4	41
Chromium	46	46	3.5 to 33.1	10.5	7	0	100
Cobalt	46	46	1.5 to 17.5	4.73	26	0	100
Copper	46	46	2.84 to 232	11.2	32	0	100
Lead	46	46	5.08 to 163	19.7	32	0	100
Mercury	46	42	[0.0038] to [0.2]	0.1	0	1	91
Nickel	46	46	2.34 to 40.3	9.38	22	0	100
Selenium	46	12	0.289 to 2.02	0.3	11	34	26
Silver	46	44	0.125 to 167	1	40	0	96
Thallium	46	16	0.0392 to [1.4]	0.73	0	30	35
Vanadium	46	46	8.9 to 33.7	19.7	7	0	100
Zinc	46	46	20 to 259	60.2	8	0	100

* *Source* : (Ryti et al, 1998, 59730)

***Source:* (EPA 1989, 08021).

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] [ ] = The value in brackets is below detection limits, although some chemicals may be detected at values within this range.

[c] nav = not available.

Table B-6
Phase III RFI Organic COPCs in Cañon de Valle Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	Percent Detected for 20 Samples or Greater(*)[a]
A-2,6-DNT[4-]	46	22	[0.08][b] to [5]	48
A-4,6-DNT[2-]	46	22	0.0393 to [5]	48
Benzo(a)pyrene	16	1	[0.0339] to [0.93]	na[c]
Benzoic Acid	16	3	0.23 to [2.3]	na
Di-n-butylphthalate	16	1	[0.058] to [0.93]	na
Fluoranthene	16	2	0.0177 to [0.91]	na
Hexachlorobenzene	16	1	0.0756 to [0.93]	na
HMX	46	33	[0.08] to 290	72
Indeno(1,2,3-cd)pyrene	16	1	[0.0339] to [0.93]	na
Methylphenol[4-]	16	2	0.141 to [0.93]	na
Naphthalene	16	1	[0.0339] to [0.93]	na
Pyrene	16	3	0.0187 to [0.91]	na
Pyridine	16	1	0.16 to [0.93]	na
RDX	46	27	0.0615 to [20]	59
TNT	46	20	[0.08] to [5]	43

**Source:* (EPA 1989, 08021).

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] [ ] = The value in brackets is below detection limits, although some chemicals may be detected at values within this range.

[c] na = not applicable.

B2.1 Martin Spring Canyon Surface Water

Martin Spring Canyon surface water RFI COPCs that exceed their CMS COPC screening limits are aluminum, arsenic, barium, lead, manganese, and RDX. Supporting data are available in Tables B-7 and B-8 and from Appendix G of the Phase III RFI report (LANL 2003, 77965).Supporting data are available from Appendix B and Appendix G of the Phase III RFI report (LANL 2003, 77965).

Aluminum was detected in 81 percent of samples, of which all 21 samples exceeded the screening limit. Aluminum was eliminated as an RFI COPC in Cañon de Valle surface water because it is likely to be naturally occurring (LANL 2003, 77965). A similar analysis for Martin Spring surface water could not be completed because of a lack of data (number of analyses). Aluminum is listed as an RFI COPC for Martin Spring sediment; however, only one sample at a concentration of 17,000 mg/kg exceeded the background concentration of aluminum (15,400 mg/kg). Given that surface water is derived primarily from Martin Spring spring water, and that aluminum is not a RFI COPC in spring water indicate surface water is picking up aluminum from sediment, where it only slightly exceeds background.

Aluminum has occasionally been detected above a CMS COPC standard in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but a comparison against background values has not been completed. Aluminum is a constituent of clays and tuff, which likely serves as a natural source. For these reasons aluminum is eliminated as a CMS COPC for Martin Spring Canyon surface water and groundwater.

Arsenic was detected in 27 percent of samples, of which 1 unfiltered of 7 samples showed results above the screening limit. In addition, arsenic in Martin Spring Canyon surface water did not exceed a screening limit for filtered samples. A lack of data quantity (number of analyses) precluded a geochemical analysis against background for arsenic in Martin Spring Canyon surface water. A geochemical analysis against background eliminated arsenic from Cañon de Valle surface water, groundwater and all springs, including Martin Spring, which is a primary source of Martin Spring Canyon surface water. Arsenic is listed as a Martin Spring Canyon sediment RFI COPC, where 7 samples exceeded the background concentration of 4 mg/kg and the maximum detected arsenic concentration was 10 mg/kg. There are no known anthropogenic sources for arsenic. Finally, arsenic on occasion exceeds the CMS COPC groundwater standard in regional groundwater, but not consistently (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon surface water.

Barium was detected in 100 percent of surface water samples, but only 1 sample exceeded the screening limit. Other results, which are below the barium screening limit, are consistent with Martin Spring barium concentrations, from which Martin Spring Canyon surface water is primarily derived. For these reasons, barium is not included as a CMS COPC for surface water in Martin Spring Canyon.

Lead was detected in 54 percent of samples. Of samples with detectable lead, three of 14 samples exceeded the screening limit. Only one filtered sample for lead exceeded a screening limit for surface water. A lack of data quantity (number of analyses) precluded a geochemical analysis against background for lead in Martin Spring Canyon surface water. A geochemical analysis against background eliminated lead from Cañon de Valle surface water. Lead did not exceed a screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, lead is excluded as a CMS COPC.

Table B-7
Phase III RFI Martin Spring Canyon Surface Water Inorganic COPCs

Chemical	Sample Concentration (μg/L)		NMWQCC Standard (μg/L)	EPA MCL (μg/L)	EPA Region 6 Tap Water PRG (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Aluminum	Max. Detected Value	21600 (J+)[b]	5000[c,d]	50	na[e]	Yes	81
	Max. Undetected Value	216 (U)[f]	5000[c,d]	50	na	Yes	
Antimony	Max. Detected Value	5.3 (J)[g]	na	6	na	No	12
	Max. Undetected Value	33 (U)	na	6	na	Yes	
Arsenic	Max. Detected Value	75.1	100[h]	10	na	Yes	27
	Max. Undetected Value	4.5 (U)	100[h]	10	na	No	
Barium	Max. Detected Value	8560	1000[h]	2000	na	Yes	100
Boron	Max. Detected Value	2530	750[c]	nav[m]	na	Yes	100
Cobalt	Max. Detected Value	136	50[c]	nav	na	Yes	46
	Max. Undetected Value	2.4 (U)	50[c]	nav	na	No	
Lead	Max. Detected Value	46.1	50[h]	15	na	Yes	54
	Max. Undetected Value	2.3 (U)	50[h]	15	na	No	
Manganese	Max. Detected Value	66800	200[j]	50	na	Yes	92
	Max. Undetected Value	3.7 (U)	200[j]	50	na	No	
Mercury	Max. Detected Value	1.1	0.77[k]	2	na	Yes	12
	Max. Undetected Value	0.1 (U)	0.77[k]	2	na	No	
Selenium	Max. Detected Value	38.3	5[k]	50	na	Yes	31
	Max. Undetected Value	4.5 (U)	5[k]	50	na	No	

Table B-7 (continued)
Phase III RFI Martin Spring Canyon Surface Water Inorganic COPCs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Thallium	Max. Detected Value	0.0819 (J)	na	2	na	No	8
	Max. Undetected Value	45 (U)	na	2	na	Yes	
Vanadium	Max. Detected Value	111	100[d]	nav	na	Yes	85
	Max. Undetected Value	3.91 (U)	100[d]	nav	na	No	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of

[b] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential high bias.

[c] NMWQCC Groundwater Standard for Irrigation Use (20 NMAC 6.2.3103).

[d] NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900).

[e] na = not applicable.

[f] (U) = The chemical is classified "undetected."

[g] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[h] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[i] nav = not available.

[j] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[k] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

Table B-8
Phase III RFI Martin Spring Canyon Surface Water Organic COPCs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL(µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
RDX	Max. Detected Value	200	nav[b]	nav	0.61	Yes	na[d]
	Max. Undetected Value	1 (U)[c]	nav	nav	0.61	Yes	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] nav = not available.

[c] (U) = The chemical is classified "not detected."

[d] na = not applicable, sample count less than 20

Manganese was detected in all samples and exceeded its screening limit in 13 of 24 samples from Martin Spring Canyon surface water. The presence of manganese in surface water above the screening limit is likely related to the dissolution of manganese as a result of the reducing conditions caused by organic material, either naturally occurring or HE. The situation is similar to that found for Cañon de Valle alluvial groundwater, but the percentage of samples showing detectable manganese that exceed the screening limit was much higher for Cañon de Valle alluvial groundwater. Occasionally, manganese is detected above the CMS COPC screening limit in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against BVs have not been completed. For these reasons, manganese is not included as a CMS COPC for Martin Spring Canyon surface water.

RDX was detected in 12 of 15 samples. Of the 12 samples showing detectable RDX, all samples exceeded the screening limit. For this reason, RDX is a CMS COPC.

B2.2 Martin Spring Alluvial Groundwater

The Martin Spring Canyon groundwater RFI COPCs that exceed their CMS COPC screening limits are aluminum, arsenic, barium, beryllium, cadmium, chromium, lead, manganese, mercury, perchlorate, thallium, zinc, and RDX. Supporting data are available in Tables B-9 and B-10 and in Appendix G of the Phase III RFI (LANL 2003, 77965).

Aluminum and lead have previously been eliminated as CMS COPCs in Martin Spring surface water in the previous section; these elements are also likely to be naturally occurring in Martin Spring alluvial groundwater, given that groundwater and surface water are primarily derived from Martin Spring water. As discussed in the previous section, these elements are not CMS COPCs with respect to R-25 regional groundwater. For these reasons, they are eliminated as alluvial groundwater CMS COPCs in Martin Spring Canyon.

Arsenic was detected in 32 percent of samples. Of 22 samples showing detectable arsenic, 5 sample results exceeded the screening limit. Arsenic on occasion exceeds the CMS COPC groundwater standard in regional groundwater, but not consistently (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon alluvial groundwater.

Barium was detected in 100 percent of samples, of which 5 of 30 samples exceeded the screening limit. Barium is included as a CMS COPC on this basis.

Beryllium was detected in 63 percent of samples, of which 3 of 19 samples results exceeded the screening limit. Beryllium has been detected only once above the screening limit in R-25 regional groundwater ((LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons beryllium is not a CMS COPC.

Cadmium was detected in 37 percent of samples, of which 4 of 11 sample results exceeded the screening limit. All filtered sample results were below the CMS COPC screening limit. Cadmium is not a CMS COPCs with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons cadmium is not included as a CMS COPC.

Chromium was detected in 83 percent of samples, of which 2 of 25 exceeded the screening limit.

Table B-9
Phase III RFI Martin Spring Canyon Alluvial Groundwater Inorganic COPCs

Chemical	Sample Concentration (μg/L)		NMWQCC Standard (μg/L)	EPA MCL (μg/L)	EPA Region 6 Tap Water PRG (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Aluminum	Max. Detected Value	530000 (J)[b]	5000[c,d]	50	na[e]	Yes	100
Arsenic	Max. Detected Value	132	100[f]	10	na	Yes	32
	Max. Undetected Value	4 (U)[g]	100[f]	10	na	No	
Barium	Max. Detected Value	38000 (J)	1000[f]	2000	na	Yes	100
Beryllium	Max. Detected Value	78	na	4	na	Yes	63
	Max. Undetected Value	0.22 (U)	na	4	na	No	
Boron	Max. Detected Value	2250	750[c]	nav[h]	na	Yes	93
	Max. Undetected Value	500 (U)	750[c]	nav	na	No	
Cadmium	Max. Detected Value	70 (J+)[i]	10[f]	5	na	Yes	37
	Max. Undetected Value	0.92 (U)	10[f]	5	na	No	
Chromium	Max. Detected Value	1200	50[f]	100	na	Yes	83
	Max. Undetected Value	4 (U)	50[f]	100	na	No	
Cobalt	Max. Detected Value	125	50[c]	nav	na	Yes	60
	Max. Undetected Value	380 (U)	50[c]	nav	na	Yes	
Copper	Max. Detected Value	860	500[d]	1000	na	Yes	80
	Max. Undetected Value	56.9 (U)	500[d]	1000	na	No	
Lead	Max. Detected Value	995	50[f]	15	na	Yes	83
	Max. Undetected Value	3.53 (U)	50[f]	15	na	No	
Manganese	Max. Detected Value	37000 (J)	200[j]	50	na	Yes	100
Mercury	Max. Detected Value	4.1	0.77[k]	2	na	Yes	40
	Max. Undetected Value	0.34 (U)	0.77[k]	2	na	No	
Nickel	Max. Detected Value	450	200[c]	nav	na	Yes	77
	Max. Undetected Value	40 (U)	200[c]	nav	na	No	

Table B-9 (continued)
Phase III RFI Martin Spring Canyon Alluvial Groundwater Inorganic COPCs

Chemical	Sample Concentration (μg/L)		NMWQCC Standard (μg/L)	EPA MCL (μg/L)	EPA Region 6 Tap Water PRG (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Perchlorate	Max. Detected Value	17	4[l]	nav	na	Yes	na
	Max. Undetected Value	4.16 (U)	4[l]	nav	na	Yes	
Selenium	Max. Detected Value	29.6 (J+)	5[k]	50	na	Yes	17
	Max. Undetected Value	8 (UJ)[m]	5[k]	50	na	Yes	
Silver	Max. Detected Value	28	50[f]	100	na	No	23
	Max. Undetected Value	160 (U)	50[f]	100	na	Yes	
Thallium	Max. Detected Value	6.16	na	2	na	Yes	23
	Max. Undetected Value	3.8 (U)	na	2	na	Yes	
Vanadium	Max. Detected Value	1100	100[d]	nav	na	Yes	93
	Max. Undetected Value	8.4 (U)	100[d]	nav	na	No	
Zinc	Max. Detected Value	6600	10000[j]	5000	na	Yes	80
	Max. Undetected Value	43.9 (U)	10000[j]	5000	na	No	

Sources: New Mexico Administrative Code [NMAC] (20 NMAC 6.2.3103). "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; (20 NMAC 6.4.900). "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC,"; EPA 2002, 76871; EPA 2003, 76867; EPA 1989, 08021; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] NMWQCC Groundwater Standard for Irrigation Use (20 NMAC 6.2.3103).

[d] NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900).

[e] na = not applicable.

[f] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[g] (U) = The chemical is classified "undetected."

[h] nav = not available.

[i] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential high bias.

[j] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[k] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

[l] 2003 California DHS Action Level.

[m] (UJ) = The chemical is classified "undetected" with an expectation that the reported result is more uncertain than usual.

Table B-10
Phase III RFI Martin Spring Canyon Alluvial Groundwater Organic COPCs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
RDX	Max. Detected Value	23	nav[b]	nav	0.61	Yes	na[c]
	Max. Undetected Value	1 (U)[d]	nav	nav	0.61	Yes	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] nav = not available.

[c] na = not applicable because number of samples is less than 20

[d] (U) = The chemical is classified "not detected."

Moreover, all filtered chromium groundwater sample results were below the CMS COPC screening limit. Finally, chromium did not exceed the screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as a CMS COPC.

Manganese was detected in 100 percent of samples. Of 30 samples with detectable manganese, 24 sample results exceeded the screening limit. Its presence within alluvial groundwater, which is in intimate contact with sediment containing manganese within background, strongly indicates that manganese is most likely naturally occurring; however, the high fraction of sample results that exceed the screening limit suggest that manganese has dissolved from sediments as a results of reducing conditions caused by organic material, either naturally occurring or HE. Occasionally, manganese is detected above the CMS COPC screening limit in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against background has not been completed. For these reasons, manganese is included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

Mercury was detected in 40 percent of samples, of which 2 samples of 12 exceeded the screening limit. All filtered sample results were below the screening limit. Mercury is not a CMS COPC with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons mercury is excluded as a CMS COPC.

In 2000, perchlorate was detected once above the screening limit. All other sample results were below the detection limit. Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as a CMS COPC.

Thallium was detected in 23% of alluvial groundwater samples, of which 3 of 7 sample results exceeded the screening limit; no filtered sample results exceeded the screening limit. One sample result from R-25 regional groundwater sampling results exceeded the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5); all other results fell below the screening limit. For these reasons, thallium is not included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

Zinc was detected in 80 percent of samples, of which 1 of 24 sample results exceeded its screening limit in one sample. All filtered sample results fell below the screening limit. Moreover, zinc is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, zinc is excluded as a CMS COPC for Martin Spring Canyon alluvial groundwater.

RDX was detected in 4 of 14 samples, of which two exceeded the screening limit. RDX is a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), and is included as a CMS COPC.

B2.3 Martin Spring Canyon Alluvial Sediment

Martin Spring Canyon sediment RFI COPCs that are included as Martin Spring groundwater and surface water CMS COPCs are barium and RDX. These are also Martin Spring Canyon alluvial sediment CMS COPCs Supporting data are available in Tables B-11 and B-12 and in Appendix G of the Phase III RFI (LANL 2003, 77965).

B.3 Springs

CMS COPCs for springs in Cañon de Valle and Martin Spring Canyon are RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in this section. Supporting data are available in the accompanying tables and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

Table B-11
Phase III RFI Inorganic COPCs in Martin Spring Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)[a]	Background Value (BV)* (mg/kg)	Number of Detects Above BV	Number of Non-Detects Above BV	Percent Detected for 20 Samples or Greater(**)[b]
Aluminum	20	20	8500 to 17000	15400	1	0	100
Arsenic	20	20	2.6 to 10	3.98	7	0	100
Barium	20	20	86 to 1700	127	10	0	100
Boron	20	18	[0.0726][c] to 43	nav[d]	nav	nav	90
Cadmium	20	20	0.048 to 1	0.4	5	0	100
Chromium	20	20	5.2 to 30	10.5	7	0	100
Cobalt	20	20	2.9 to 5.8	4.73	2	0	100
Copper	20	20	4.9 to 100	11.2	7	0	100
Lead	20	20	11 to 120	19.7	9	0	100
Mercury	20	20	0.042 to 2.3	0.1	18	0	100
Selenium	20	20	0.258 to 1.58	0.3	19	0	100
Silver	20	20	1.3 to 2.2	1	20	0	100
Vanadium	20	20	9.1 to 36	19.7	3	0	100

* *Source:* Ryti, R., Longmire P., Broxton D., Reneau S., McDonald E. 1998. "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory". Los Alamos National Laboratory report LA-UR-98-4847. Los Alamos, New Mexico.

(**)*Source:* EPA (US Environmental Protection Agency). 1989. "Risk Assessment Guidance for Superfund Human Health Evaluation Manual, Part A" Section 5.9.3, Evaluate Frequency of Detection. July 1989. (EPA 1989, 08021).

[a] mg/kg = milligrams per kilogram.

[b] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[c] [ ] = The value in brackets is below detection limits, although some chemicals may be detected at values within this range.

[d] nav = not available

Table B-12
Phase III RFI Organic COPCs in Martin Spring Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)[a]	Percent Detected for 20 Samples or Greater(*)[b]
Amino-2,6-dinitrotoluene[4-]	20	6	0.12 to 0.36	30
Amino-4,6-dinitrotoluene[2-]	20	10	0.039 to 0.37	50
Benzo(a)anthracene	5	3	[0.0373][c] to 0.31	na[d]
Benzo(a)pyrene	5	3	[0.0336] to 0.39	na
Benzo(b)fluoranthene	5	3	[0.0362] to 0.43	na
Benzo(g,h,i)perylene	5	2	[0.0476] to 0.15	na
Benzo(k)fluoranthene	5	2	[0.0439] to 0.37	na
Benzoic Acid	5	1	[0.0253] to [0.0438]	na
Bis(2-ethylhexyl)phthalate	3	2	0.025 to [0.37]	na
	5	1	0.041 to [0.0886]	na
Chrysene	5	2	[0.0526] to 0.37	na
Fluoranthene	5	2	[0.0367] to 0.69	na
Indeno(1,2,3-cd)pyrene	5	2	[0.0466] to 0.16	na
Phenanthrene	5	2	[0.0564] to 0.4	na
Pyrene	5	3	[0.0395] to 0.89	na
RDX[e]	20	4	0.13 to 0.92	20
Trinitrotoluene[2,4,6-]	20	8	0.14 to 1	40

(*)*Source:* EPA (US Environmental Protection Agency). 1989. "Risk Assessment Guidance for Superfund Human Health Evaluation Manual, Part A" Section 5.9.3, Evaluate Frequency of Detection. July 1989. (EPA 1989, 08021).

[a] mg/kg = milligrams per kilogram.

[b] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[c] [ ] = The value in brackets is below detection limits, although some chemicals may be detected at values within this range.

[d] na = not applicable.

[e] RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

The RFI COPCs that exceed their CMS COPC screening limit are barium, mercury, nitrate-nitrite as N, perchlorate, thallium, uranium, RDX, and TNT. Supporting data are available in Tables B-13 and B-14 and in Appendix G of the Phase III RFI (LANL 2003, 77965).

The springs Phase III data set covers all springs in Cañon de Valle and Martin Spring Canyon, including SWSC Spring, Burning Ground Spring, and Martin Spring. Currently, only Burning Ground Spring is flowing.

Barium exceeded the CMS COPC screening limit (1000 µg/L) only once in 193 sample results. Concentrations of barium in springs have been relatively consistent, in the 100 to 300 µg/L range. Barium has been detected in R-25, though concentrations are at least a factor of 10 lower than the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons it is not included in the list of CMS COPCs for springs.

Mercury was detected in 6 percent of samples, of which 1 of 12 exceeded the screening limit. Mercury is not a CMS COPC with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons mercury is excluded as a CMS COPC for springs.

All analytical results for nitrate-nitrite as N fell below the screening limit at Burning Ground Spring. At Martin Spring, 2 of 31 sample results exceeded the screening limit. At SWSC Spring, 2 of 23 samples exceeded the screening limit. In addition, nitrate-nitrite as N is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is therefore eliminated as a CMS COPC.

According to the Phase III RFI data for the springs, perchlorate was detected above its screening limit in 14 of 70 samples from SWSC Spring, Burning Ground Spring, and Martin Spring during 2000–2001. Sample results from 2002 did not exceed the screening limit. Moreover, perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, perchlorate is not included as a CMS COPC for springs.

Thallium was detected in 28 percent of samples, of which 5 of 56 sample results exceeded the screening limit. One sample result from R-25 regional groundwater sampling results exceeded the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5); all other results fell below the screening limit. For these reason, thallium is eliminated as a CMS COPC for springs.

Uranium was detected in 69 percent of samples. One sample (of 43) was equal to the screening limit, with all others below the screening limit. Uranium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, uranium is excluded as a CMS COPC.

Both RDX and TNT are present in springs water, although TNT exceeded its screening limit only once in springs water. RDX exceeded its screening limit in all sample results. Both compounds are present in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, RDX and TNT are included as CMS COPCs.

Table B-13
Phase III RFI Inorganic COPCs in Springs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	4.7 (J)[b]	na[c]	6	na	No	16
	Max. Undetected Value	20 (U)[d]	na	6	na	Yes	
Barium	Max. Detected Value	1310	1000[e]	2000	na	Yes	100
Boron	Max. Detected Value	2840	750[f]	nav[g]	na	Yes	76
	Max. Undetected Value	500 (U)	750[f]	nav	na	No	
Cesium	Max. Detected Value	500	nav	nav	nav	nav	na
	Max. Undetected Value	500 (U)	nav	nav	nav	nav	
Cyanide (Total)	Max. Detected Value	3.2 (J)	5.2[h]	200	na	No	na
	Max. Undetected Value	13 (U)	5.2[h]	200	na	Yes	
Mercury	Max. Detected Value	1	0.77[i]	2	na	Yes	6
	Max. Undetected Value	0.2 (U)	0.77[i]	2	na	No	
Nitrate-Nitrite as N	Max. Detected Value	3800000	10000[e]	nav	na	Yes	97
	Max. Undetected Value	1000 (U)	10000[e]	nav	na	No	
Perchlorate	Max. Detected Value	17.5	4[j]	nav	na	Yes	11
	Max. Undetected Value	958 (U)	4[j]	nav	na	Yes	
Rubidium	Max. Detected Value	7000	nav	nav	nav	nav	na
	Max. Undetected Value	500 (U)	nav	nav	nav	nav	
Thallium	Max. Detected Value	7.1 (J)	na	2	na	Yes	28
	Max. Undetected Value	7.6 (U)	na	2	na	Yes	

Table B-13 (continued)
Phase III RFI Inorganic COPCs in Springs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Uranium	Max. Detected Value	60	5000[e]	30	na	Yes	69
	Max. Undetected Value	126 (U)	5000[e]	30	na	Yes	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; EPA 1989, 08021; and California DHS 2003, 76862.

[a]The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b](J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = not applicable.

[d] (U) = The chemical is classified "undetected."

[e] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[f] NMWQCC Groundwater Standard for Irrigation Use (20 NMAC 6.2.3103).

[g] nav = not available.

[h] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

[i] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[j] 2003 California DHS Action Level.

Table B-14
Phase III RFI Organic COPCs in Springs

Chemical	Sample Concentration (µg/L)		NMWQCC Standard (µg/L)	EPA MCL (µg/L)	EPA Region 6 Tap Water PRG (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Dinitrobenzene[1,3-]	Max. Detected Value	1.1	nav[b]	nav	3.7	No	5
	Max. Undetected Value	20 (U)[c]	nav	nav	3.7	Yes	
Nitrobenzene	Max. Detected Value	2.4 (J)[d]	na[e]	nav	3.4	No	3
	Max. Undetected Value	200 (U)	na	nav	3.4	Yes	
RDX	Max. Detected Value	330 (J+)[f]	nav	nav	0.61	Yes	98
	Max. Undetected Value	91.3 (UJ)[g]	nav	nav	0.61	Yes	
TNT	Max. Detected Value	3	nav	nav	2.2	Yes	5
	Max. Undetected Value	20 (U)	nav	nav	2.2	Yes	

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B and C; EPA 2002, 76871; EPA 2003, 76867; and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of

[b] nav = not available.

[c] (U) = The chemical is classified "not detected."

[d] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[e] na = not applicable.

[f] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential high bias.

[g] (UJ) = The chemical is classified "not detected" with an expectation that the reported result is more uncertain than usual.

Appendix C

Corrective Measure Alternative Cost Estimates

Appendix C
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Table C-1
Summary of Alternative Costs

Site Area	Alternative Number	Description	Capital Costs	30 Year O&M Costs (NPV)	Total Cost (NPV)
Outfall source area, excluding settling pond	I.1	Soil removal and off-site disposal	$ 162,000	N/A	$ 162,000
Outfall source area settling pond 17-foot surge bed	II.1	Excavation and offsite disposal of the 17-ft surge bed and replacement/maintenance of the existing cap	$ 293,000	$ 105,000	$ 398,000
	II.2	In situ grouting of the surge beds and maintenance of the existing cap	$ 211,000	$ 105,000	$ 316,000
	II.3	Maintenance of existing cap and no action for the surge beds	N/A	$ 105,000	$ 105,000
Canyon springs and alluvial system	III.1	Sediment excavation and offsite disposal, with storm water filters for springs	$ 8,899,000	$ 626,000	$ 9,525,000
	III.2	Natural flushing of sediments coupled with PRB (ZVI and calcium sulfate) alluvial groundwater treatment and storm water filter treatment for springs	$ 2,069,000	$ 1,597,000	$ 3,666,000
	III.3	Natural/induced flushing of sediments and recovery of spring and groundwater (by interceptor trenches) and treatment in a central treatment system	$ 1,115,000	$ 2,640,000	$ 3,755,000

N/A = not applicable

Table C-2
Labor Rates for Corrective Measure Alternative Cost Estimates

Labor Category	Loaded Rate, $/hour
LANL Project Manager	175
LANL H&S	100
Program Manager	120
Project Manager	110
Senior Engineer	100
Project Engineer	75
Senior Scientist	100
Junior Engineer	60
Junior Scientist	55
Permitting Specialist	70
Draftsman	55
Word Processor	45
Quality Assurance	55
Administrative Assistant	40
Cost/Schedule Engineer	65
Field Supervisor	70
Field Engineer	75
Field Equipment Operator	50
Field Driver	45
Field Technician	45
Field Laborer	35
Field Craft Labor	50
Field Electrician	65
Field Equipment Operator - PT	25
Field Driver - PT	22.5
Field Technician - PT	22.5
Field Laborer - PT	17.5
Field Craft Labor - PT	25
Field Electrician - PT	32.5

Table C-3
Unit Costs for Corrective Measure Alternative Cost Estimates

Equipment

Item	Description	Rate, $/Month	Source
Excavator	42,000 lb	3044	Hertz
Backhoe	JD710	4152	Hertz
Dumptruck	30 ton, offroad	7040	Hertz
Pickup	utility	400	Hertz
Generator	5kw	350	Hertz
Portolet		71	NM Chemical
HDPE fushion machine		1200	Crowe

Materials

Description	Unit of Measure (UOM)	Unit Cost, $/UOM	Source
Peastone	ton	24	LaFarge
Backfill, engineered	ton	10	LaFarge
GAC	lb	2	estimated
GAC disposal	drum	500	Rinchem
2-inch HDPE, SDR 11	foot	0.5	CSR
Bulk IX change/disposal	lb	1.5	estimated
Bulk GAC change/disposal	lb	2	estimated

Analytical

Method	Description	Cost, $	Source
	8330 HE soil/water	210	Pinnacle Laboratories
	8260 VOC soil/water	160	Pinnacle Laboratories
	8270 SVOC soil/water	180	Pinnacle Laboratories
RCRA 8 metals		105	Pinnacle Laboratories
metal prep		16	Pinnacle Laboratories
barium		16	Pinnacle Laboratories
manganese		16	Pinnacle Laboratories
iron		16	Pinnacle Laboratories

Soil Disposal

Item	Unit of Measure (UOM)	Unit Cost, $/UOM	Source
Nonhazardous	ton	52	MDA P
Barium hazardous	ton	265	MDA P

Energy

Item	Unit of Measure	Unit Cost	Source
Electric power	kwh	0.1	estimated

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Assumptions

1. A residual soil volume of 100 cy is assumed, with a density of 1.5 tons per cy.
2. All soil is nonhazardous, and will be trucked to Albuquerque for landfilling.
3. Costs to WM Rio Rancho were $52/ton turnkey (trucking, tipping fees etc.), does not include preparatory work, sampling etc, and are based on the completed MDA P project.
4. Heavy equipment for 1 backhoe/loader and 1 dump truck.
5. A sample frequency of 1 sample per 100 cy is used for landfill WAC sampling.
6. Project duration for soil removal is 2 weeks
7. 150 tons of nonhazardous waste for disposal is generated.
8. The discount rate for the NPV calculation is 5%.
9. New Mexico Gross Receipts Tax is 5.8125%.
10. All costs for this alternative are capital installation costs; there are no O&M costs.

Phase I & II Preliminary and Final Plans, Cost Estimates (Year 1) — $ 41,380

Task 1 Project Plans — $ 8,750

Office Labor	Rate	Hours	Subtotal	$ 8,750
LANL Project Manager	175	4	$ 700	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan — $ 5,370

Office Labor	Rate	Hours	Subtotal	$ 5,370
LANL Project Manager	175	2	$ 350	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Preliminary Excavation Plan — $ 8,080

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	8	$ 1,400
LANL H&S	100		$ -

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Program Manager	120	1	$ 120	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	40	$ 2,200	
Word Processor	45	24	$ 1,080	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 4 Preliminary Cost Estimate — **$ 6,060**

Labor	**Rate**	**Hours**	**Subtotal**
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120		$ -
Project Manager	110	4	$ 440
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	24	$ 960
Cost/Schedule Engineer	65	24	$ 1,560

Task 5 Final Excavation Plan — **$ 7,200**

Labor	**Rate**	**Hours**	**Subtotal**
LANL Project Manager	175	8	$ 1,400
LANL H&S	100		$ -
Program Manager	120	1	$ 120
Project Manager	110	8	$ 880
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55	24	$ 1,320
Word Processor	45	24	$ 1,080
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65		$ -

Task 6 Final Cost Estimate — **$ 4,260**

Labor	**Rate**	**Hours**	**Subtotal**
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120		$ -
Project Manager	110	4	$ 440
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -

Junior Engineer	60	24	$ 1,440	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	16	$ 640	
Cost/Schedule Engineer	65	16	$ 1,040	

Task 7 Project Administration $ 1,660

Labor	**Rate**	**Hours**	**Subtotal**
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120		$ -
Project Manager	110	4	$ 440
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65	8	$ 520

Phase III Soil Removal (Year 1) $ 84,950

Task 1 Training $ 5,530

Office Labor	**Rate**	**Hours**	**Subtotal**	**$ 3,250**
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	2	$ 220	
Senior Engineer	100	8	$ 800	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60	8	$ 480	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Field Labor	**Rate**	**Hours**	**Subtotal**	**$ 2,280**
Field Supervisor	70	8	$ 560	
Field Engineer	75	8	$ 600	
Field Equipment Operator	50	8	$ 400	
Field Driver	45	8	$ 360	
Field Technician	45	8	$ 360	
Field Laborer	35		$ -	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Task 2 Readiness Review $ 4,280

Office Labor	Rate	Hours	Subtotal	$ 4,280
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Mobilization $ 5,200

Labor	Rate	Hours	Subtotal	$ 2,640
LANL Project Manager	175		$ -	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110		$ -	
Senior Engineer	100	8	$ 800	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	16	$ 640	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 1,960
Field Supervisor	70	8	$ 560	
Field Engineer	75		$ -	
Field Equipment Operator	50	8	$ 400	
Field Driver	45	8	$ 360	
Field Technician	45	8	$ 360	
Field Laborer	35	8	$ 280	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25		$ -	
Field Driver - PT	22.5		$ -	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5		$ -	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Equipment	Rate	Weeks	Subtotal	$ 600
Backhoe/loader			$ 50	
Dump truck			$ 50	
Misc			$ 500	

Task 4 Soil Removal $ 36,370

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Office Labor	Rate	Hours	Subtotal	$ 11,120
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	4	$ 400	
Program Manager	120	1	$ 120	
Project Manager	110	40	$ 4,400	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60	80	$ 4,800	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 21,300
Field Supervisor	70	100	$ 7,000	
Field Engineer	75		$ -	
Field Equipment Operator	50	100	$ 5,000	
Field Driver	45	100	$ 4,500	
Field Technician	45		$ -	
Field Laborer	35	100	$ 3,500	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25	20	$ 500	
Field Driver - PT	22.5	20	$ 450	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5	20	$ 350	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Equipment	Rate	Month	Subtotal	$ 3,950
Dump Truck	2000	0.5	$ 1,000	
Backhoe/Loader	4000	0.5	$ 2,000	
Truck	500	0.5	$ 250	
FOM Backhoe/loader	1000	0.5	$ 500	
FOM Dumptruck	400	0.5	$ 200	

Task 5 Waste Management and Post-Confirmation Sampling $ 23,770

Office Labor	Rate	Hours	Subtotal	$ 3,800
LANL Project Manager	175		$ -	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	24	$ 960	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 4,950
Field Supervisor	70		$ -	

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Field Engineer		75		$ -		
Field Equipment Operator		50		$ -		
Field Driver		45		$ -		
Field Technician		45	100	$ 4,500		
Field Laborer		35		$ -		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5	20	$ 450		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Soil Disposal	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 7,800**	
Contaminated soil disposal	ton	52	150	$ 7,800		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 7,220**	
Soil analytical, field	each	20	20	$ 400		
HE soil analytical, lab	each	210	20	$ 4,200		
Metals soil analytical, lab	each	131	20	$ 2,620		
Task 6 Demobilization						**$ 5,360**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,200**	
LANL Project Manager		175		$ -		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110		$ -		
Senior Engineer		100		$ -		
Project Engineer		75	8	$ 600		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	40	$ 1,600		
Cost/Schedule Engineer		65		$ -		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,560**	
Field Supervisor		70	8	$ 560		
Field Engineer		75	8	$ 600		
Field Equipment Operator		50	8	$ 400		
Field Driver		45	8	$ 360		
Field Technician		45	8	$ 360		
Field Laborer		35	8	$ 280		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Weeks**	**Subtotal**	**$ 600**	
Excavator				$ 50		
Dump truck				$ 50		
Misc				$ 500		

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Task 7 Project Administration $ 4,440

Labor	Rate	Hours	Subtotal	$ 4,440
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100		$ -	
Program Manager	120	1	$ 120	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	16	$ 640	
Cost/Schedule Engineer	65	8	$ 520	

Phase IV Closure Report (Year 2) $ 27,220

Task 1 Closure Report $ 21,680

Labor	Rate	Hours	Subtotal	$ 21,680
LANL Project Manager	175	16	$ 2,800	
LANL H&S	100		$ -	
Program Manager	120	2	$ 240	
Project Manager	110	24	$ 2,640	
Senior Engineer	100		$ -	
Project Engineer	75	80	$ 6,000	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55	80	$ 4,400	
Permitting Specialist	70		$ -	
Draftsman	55	40	$ 2,200	
Word Processor	45	40	$ 1,800	
Quality Assurance	55		$ -	
Administrative Assistant	40	40	$ 1,600	
Cost/Schedule Engineer	65		$ -	

Task 2 Project Administration $ 5,540

Labor	Rate	Hours	Subtotal	$ 5,540
LANL Project Manager	175	4	$ 700	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	24	$ 2,640	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	16	$ 640	
Cost/Schedule Engineer	65	24	$ 1,560	

Summary

Phase	Subtotal	NMGRT	Total

Table C-4
Outfall Source Area Soil Removal (Alternative I.1) Cost Estimate

Phase I, II & III Plans and Excavation (Year 1)	$ 126,330	$ 7,343	$ 133,673
Phase IV Closure Report (Year 2)	$ 27,220	$ 1,582	$ 28,802

Capital Installation Cost	**$ 162,475**
30 Year O&M Costs (NPV)	**$ -**
Total Cost (NPV)	**$ 162,475**

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Assumptions

1. An excavated surge bed volume of 40 cy is assumed, with a density of 1.5 tons per cy.
2. All excavated sediment is nonhazardous, and will be trucked to Albuquerque for landfilling.
3. Costs to WM Rio Rancho were $52/ton turnkey (trucking, tipping fees etc.), does not include preparatory work, sampling and LANL overhead. Costs are based on the completed MDA P project.
4. Heavy equipment for excavation and loading consists of 1 excavator, 1 loaders, and 1 dump trucks.
5. A sample frequency of 1 sample per 100 cy is used for landfill WAC sampling.
6. 200 tons of engineered backfill will be required to amend backfill rubble for site restoration.
7. Bentonite and fill mixture form the cap to be installed following excavation of the surge bed.
8. Blasting will be required to attain the excavation depths.
9. Project duration for excavation and site restoration is 4 weeks
10. 60 tons of nonhazardous waste for disposal is generated.
11. The discount rate for the NPV calculation is 5%.
12. New Mexico Gross Receipts Tax is 5.8125%.
13. Costs include capital installation costs and 30 year O&M costs (including cap maintenance)

Phase I & II Preliminary and Final Plans, Cost Estimates (Year 1) $ 80,080

Task 1 Project Plans $ 8,750

Office Labor	Rate	Hours	Subtotal	$ 8,750
LANL Project Manager	175	4	$ 700	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan $ 5,370

Office Labor	Rate	Hours	Subtotal	$ 5,370
LANL Project Manager	175	2	$ 350	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Preliminary Excavation Plan $ 14,120

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	8	$ 1,400
LANL H&S	100	8	$ 800
Program Manager	120	4	$ 480
Project Manager	110	16	$ 1,760
Senior Engineer	100	40	$ 4,000
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55	40	$ 2,200
Word Processor	45	24	$ 1,080
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65		$ -

Task 4 Preliminary Cost Estimate $ 9,220

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120	2	$ 240
Project Manager	110	8	$ 880
Senior Engineer	100	8	$ 800
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	40	$ 1,600
Cost/Schedule Engineer	65	40	$ 2,600

Task 5 Boring Installation $ 24,200

Labor	Rate	Hours	Subtotal	$ 9,900
LANL Project Manager	175	4	$ 700	
LANL H&S	100		$ -	
Program Manager	120	4	$ 480	
Project Manager	110		$ -	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100	40	$ 4,000	
Junior Engineer	60		$ -	
Junior Scientist	55	80	$ 4,400	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	8	$ 320	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 5,000
Field Supervisor	70		$ -	
Field Engineer	75		$ -	
Field Equipment Operator	50		$ -	
Field Driver	45		$ -	
Field Technician	45	80	$ 3,600	

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Field Laborer			35	40	$ 1,400		
Field Craft Labor			50		$ -		
Field Electrician			65		$ -		
Field Equipment Operator - PT			25		$ -		
Field Driver - PT			22.5		$ -		
Field Technician - PT			22.5		$ -		
Field Laborer - PT			17.5		$ -		
Field Craft Labor - PT			25		$ -		
Field Electrician - PT			32.5		$ -		
Other	**UOM**	**Rate**		**Qty**	**Subtotal**	**$ 9,300**	
Soil analytical	each		160	5	$ 800		
Drill rig mob/demob	lump		2500	1	$ 2,500		
Boring installation	LF		100	60	$ 6,000		
Task 6 Final Excavation Plan							**$ 8,100**
Labor		**Rate**		**Hours**	**Subtotal**		
LANL Project Manager			175	4	$ 700		
LANL H&S			100	4	$ 400		
Program Manager			120	2	$ 240		
Project Manager			110	8	$ 880		
Senior Engineer			100	24	$ 2,400		
Project Engineer			75		$ -		
Senior Scientist			100		$ -		
Junior Engineer			60	40	$ 2,400		
Junior Scientist			55		$ -		
Permitting Specialist			70		$ -		
Draftsman			55		$ -		
Word Processor			45	24	$ 1,080		
Quality Assurance			55		$ -		
Administrative Assistant			40		$ -		
Cost/Schedule Engineer			65		$ -		
Task 7 Final Cost Estimate							**$ 7,700**
Labor		**Rate**		**Hours**	**Subtotal**		
LANL Project Manager			175	4	$ 700		
LANL H&S			100		$ -		
Program Manager			120	2	$ 240		
Project Manager			110	8	$ 880		
Senior Engineer			100	18	$ 1,800		
Project Engineer			75		$ -		
Senior Scientist			100		$ -		
Junior Engineer			60	40	$ 2,400		
Junior Scientist			55		$ -		
Permitting Specialist			70		$ -		
Draftsman			55		$ -		
Word Processor			45		$ -		
Quality Assurance			55		$ -		
Administrative Assistant			40	16	$ 640		
Cost/Schedule Engineer			65	16	$ 1,040		
Task 8 Project Administration							**$ 2,620**
Labor		**Rate**		**Hours**	**Subtotal**		
LANL Project Manager			175	4	$ 700		
LANL H&S			100		$ -		
Program Manager			120		$ -		
Project Manager			110	8	$ 880		
Senior Engineer			100		$ -		

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60		$	-
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40		$	-
Cost/Schedule Engineer	65	16	$	1,040

Phase III Excavation and Site Restoration (Year 1) $ 145,144

Task 1 Training $ 5,530

Office Labor	Rate	Hours	Subtotal	$ 3,250
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	2	$ 220	
Senior Engineer	100	8	$ 800	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60	8	$ 480	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 2,280
Field Supervisor	70	8	$ 560	
Field Engineer	75	8	$ 600	
Field Equipment Operator	50	8	$ 400	
Field Driver	45	8	$ 360	
Field Technician	45	8	$ 360	
Field Laborer	35		$ -	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	

Task 2 Readiness Review $ 4,280

Office Labor	Rate	Hours	Subtotal	$ 4,280
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	

Administrative Assistant		40		$ -	
Cost/Schedule Engineer		65		$ -	

Task 3 Mobilization $ 6,970

Labor	Rate	Hours		Subtotal	$ 3,760
LANL Project Manager	175			$ -	
LANL H&S	100			$ -	
Program Manager	120			$ -	
Project Manager	110			$ -	
Senior Engineer	100		16	$ 1,600	
Project Engineer	75		16	$ 1,200	
Senior Scientist	100			$ -	
Junior Engineer	60			$ -	
Junior Scientist	55			$ -	
Permitting Specialist	70			$ -	
Draftsman	55			$ -	
Word Processor	45			$ -	
Quality Assurance	55			$ -	
Administrative Assistant	40		24	$ 960	
Cost/Schedule Engineer	65			$ -	

Field Labor	Rate	Hours		Subtotal	$ 2,560
Field Supervisor	70		8	$ 560	
Field Engineer	75		8	$ 600	
Field Equipment Operator	50		8	$ 400	
Field Driver	45		8	$ 360	
Field Technician	45		8	$ 360	
Field Laborer	35		8	$ 280	
Field Craft Labor	50			$ -	
Field Electrician	65			$ -	
Field Equipment Operator - PT	25			$ -	
Field Driver - PT	22.5			$ -	
Field Technician - PT	22.5			$ -	
Field Laborer - PT	17.5			$ -	
Field Craft Labor - PT	25			$ -	
Field Electrician - PT	32.5			$ -	

Equipment	Rate	Weeks	Subtotal	$ 650
Excavator			$ 50	
Dump truck			$ 50	
Loader			$ 50	
Misc			$ 500	

Task 4 Excavation and Site Restoration $ 95,364

Office Labor	Rate	Hours		Subtotal	$ 26,680
LANL Project Manager	175		40	$ 7,000	
LANL H&S	100		8	$ 800	
Program Manager	120		4	$ 480	
Project Manager	110		80	$ 8,800	
Senior Engineer	100			$ -	
Project Engineer	75			$ -	
Senior Scientist	100			$ -	
Junior Engineer	60		160	$ 9,600	
Junior Scientist	55			$ -	
Permitting Specialist	70			$ -	
Draftsman	55			$ -	
Word Processor	45			$ -	
Quality Assurance	55			$ -	
Administrative Assistant	40			$ -	
Cost/Schedule Engineer	65			$ -	

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

	UOM	Rate	Hours	Subtotal		
Field Labor		**Rate**	**Hours**	**Subtotal**	$ 42,600	
Field Supervisor		70	200	$ 14,000		
Field Engineer		75		$ -		
Field Equipment Operator		50	200	$ 10,000		
Field Driver		45	200	$ 9,000		
Field Technician		45		$ -		
Field Laborer		35	200	$ 7,000		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25	40	$ 1,000		
Field Driver - PT		22.5	40	$ 900		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5	40	$ 700		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Month**	**Subtotal**	$ 16,484	
Excavator		3044	1	$ 3,044		
Dump Truck		7040	1	$ 7,040		
Loader		4000	1	$ 4,000		
Truck		400	1	$ 400		
Pug mill		400	1	$ 400		
FOM Excavator		1000	1	$ 1,000		
FOM Dumptruck		400	1	$ 400		
FOM Generator		200	1	$ 200		
Materials	**UOM**	**Rate**	**Qty**	**Subtotal**	$ 4,600	
Site Restoration						
Fill, engineered	ton	12	300	$ 3,600		
Bentonite	ton	25	40	$ 1,000		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	$ 5,000	
Blasting subcontractor	Lump	5000	1	$ 5,000		
Task 5 Waste Management						$ 18,100
Office Labor		**Rate**	**Hours**	**Subtotal**	$ 4,880	
LANL Project Manager		175		$ -		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110	8	$ 880		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60	40	$ 2,400		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	40	$ 1,600		
Cost/Schedule Engineer		65		$ -		
Field Labor		**Rate**	**Hours**	**Subtotal**	$ 9,900	
Field Supervisor		70		$ -		
Field Engineer		75		$ -		
Field Equipment Operator		50		$ -		
Field Driver		45		$ -		
Field Technician		45	200	$ 9,000		
Field Laborer		35		$ -		

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Item	UOM	Rate	Qty / Hours / Weeks	Subtotal	Category Total	Task Total
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5	40	$ 900		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Soil Disposal	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 3,120**	
Contaminated soil disposal	ton	52	60	$ 3,120		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 200**	
Soil analytical, field	each	10	4	$ 40		
Soil analytical,10% lab confirm	each	160	1	$ 160		
Task 6 Demobilization						**$ 5,360**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,200**	
LANL Project Manager		175		$ -		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110		$ -		
Senior Engineer		100		$ -		
Project Engineer		75	8	$ 600		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	40	$ 1,600		
Cost/Schedule Engineer		65		$ -		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,560**	
Field Supervisor		70	8	$ 560		
Field Engineer		75	8	$ 600		
Field Equipment Operator		50	8	$ 400		
Field Driver		45	8	$ 360		
Field Technician		45	8	$ 360		
Field Laborer		35	8	$ 280		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Weeks**	**Subtotal**	**$ 600**	
Excavator				$ 50		
Dump truck				$ 50		
Misc				$ 500		
Task 7 Project Administration						**$ 9,540**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 9,540**	
LANL Project Manager		175	16	$ 2,800		
LANL H&S		100		$ -		
Program Manager		120	2	$ 240		

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Project Manager	110	40	$	4,400
Senior Engineer	100		$	-
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60		$	-
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	20	$	800
Cost/Schedule Engineer	65	20	$	1,300

Phase IV Closure Report (Year 2) $ 51,220

Task 1 Closure Report $ 45,680

Labor	Rate	Hours	Subtotal		$ 45,680
LANL Project Manager	175	24	$	4,200	
LANL H&S	100		$	-	
Program Manager	120	4	$	480	
Project Manager	110	40	$	4,400	
Senior Engineer	100		$	-	
Project Engineer	75	160	$	12,000	
Senior Scientist	100		$	-	
Junior Engineer	60	160	$	9,600	
Junior Scientist	55	160	$	8,800	
Permitting Specialist	70		$	-	
Draftsman	55	80	$	4,400	
Word Processor	45	40	$	1,800	
Quality Assurance	55		$	-	
Administrative Assistant	40		$	-	
Cost/Schedule Engineer	65		$	-	

Task 2 Project Administration $ 5,540

Labor	Rate	Hours	Subtotal		$ 5,540
LANL Project Manager	175	4	$	700	
LANL H&S	100		$	-	
Program Manager	120		$	-	
Project Manager	110	24	$	2,640	
Senior Engineer	100		$	-	
Project Engineer	75		$	-	
Senior Scientist	100		$	-	
Junior Engineer	60		$	-	
Junior Scientist	55		$	-	
Permitting Specialist	70		$	-	
Draftsman	55		$	-	
Word Processor	45		$	-	
Quality Assurance	55		$	-	
Administrative Assistant	40	16	$	640	
Cost/Schedule Engineer	65	24	$	1,560	

Summary

Phase	Subtotal	NMGRT	Total
Phase I, II & III Plans and Excavation (Year 1)	$ 225,224	$ 13,091	$ 238,315
Phase IV Closure Report (Year 2)	$ 51,220	$ 2,977	$ 54,197

Capital Installation Cost	**$ 292,512**
30 Year O&M Costs (NPV) (From Cap Maintenance, Table C-6)	**$ 104,990**

Table C-5
Outfall Source Area 17-foot Surge Bed Excavation and Cap Maintenance (Alternative II.1) Cost Estimate

Total Cost (NPV)	**$ 397,502**

Table C-6

Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Assumptions

1. The outfall source area settling pond 17-ft surge bed is sufficiently permeable to allow grouting.
2. Minor repairs to the existing settling pond cap are required, rather than replacement.
3. Project duration for grouting is 2 weeks.
4. The discount rate for the NPV calculation is 5%.
5. New Mexico Gross Receipts Tax is 5.8125%.
6. Costs include capital installation costs and 30 year O&M costs (including cap maintenance)

Phase I & II Preliminary and Final Plans, Cost Estimates (Year 1) $ 80,080

Task 1 Project Plans $ 8,750

Office Labor	Rate	Hours	Subtotal	$ 8,750
LANL Project Manager	175	4	$ 700	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan $ 5,370

Office Labor	Rate	Hours	Subtotal	$ 5,370
LANL Project Manager	175	2	$ 350	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Preliminary Grouting Plan $ 14,120

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	8	$ 1,400
LANL H&S	100	8	$ 800
Program Manager	120	4	$ 480
Project Manager	110	16	$ 1,760
Senior Engineer	100	40	$ 4,000
Project Engineer	75		$ -
Senior Scientist	100		$ -

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Junior Engineer	60	40	$	2,400
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55	40	$	2,200
Word Processor	45	24	$	1,080
Quality Assurance	55		$	-
Administrative Assistant	40		$	-
Cost/Schedule Engineer	65		$	-

Task 4 Preliminary Cost Estimate $ 9,220

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	4	$	700
LANL H&S	100		$	-
Program Manager	120	2	$	240
Project Manager	110	8	$	880
Senior Engineer	100	8	$	800
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60	40	$	2,400
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	40	$	1,600
Cost/Schedule Engineer	65	40	$	2,600

Task 5 Boring Installation $ 24,200

Labor	Rate	Hours	Subtotal		$ 9,900
LANL Project Manager	175	4	$	700	
LANL H&S	100		$	-	
Program Manager	120	4	$	480	
Project Manager	110		$	-	
Senior Engineer	100		$	-	
Project Engineer	75		$	-	
Senior Scientist	100	40	$	4,000	
Junior Engineer	60		$	-	
Junior Scientist	55	80	$	4,400	
Permitting Specialist	70		$	-	
Draftsman	55		$	-	
Word Processor	45		$	-	
Quality Assurance	55		$	-	
Administrative Assistant	40	8	$	320	
Cost/Schedule Engineer	65		$	-	

Field Labor	Rate	Hours	Subtotal		$ 5,000
Field Supervisor	70		$	-	
Field Engineer	75		$	-	
Field Equipment Operator	50		$	-	
Field Driver	45		$	-	
Field Technician	45	80	$	3,600	
Field Laborer	35	40	$	1,400	
Field Craft Labor	50		$	-	
Field Electrician	65		$	-	
Field Equipment Operator - PT	25		$	-	
Field Driver - PT	22.5		$	-	
Field Technician - PT	22.5		$	-	
Field Laborer - PT	17.5		$	-	
Field Craft Labor - PT	25		$	-	

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Field Electrician - PT		32.5		$ -

Other	UOM	Rate	Qty	Subtotal	
					$ 9,300
Soil analytical	each	160	5	$ 800	
Drill rig mob/demob	lump	2500	1	$ 2,500	
Boring installation	LF	100	60	$ 6,000	

Task 6 Final Grouting Plan $ 8,100

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	4	$ 700
LANL H&S	100	4	$ 400
Program Manager	120	2	$ 240
Project Manager	110	8	$ 880
Senior Engineer	100	24	$ 2,400
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45	24	$ 1,080
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65		$ -

Task 7 Final Cost Estimate $ 7,700

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120	2	$ 240
Project Manager	110	8	$ 880
Senior Engineer	100	18	$ 1,800
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	16	$ 640
Cost/Schedule Engineer	65	16	$ 1,040

Task 8 Project Administration $ 2,620

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120		$ -
Project Manager	110	8	$ 880
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Administrative Assistant	40		$	-
Cost/Schedule Engineer	65	16	$	1,040

Phase III Grouting and Site Restoration (Year 1) $ 76,727

Task 1 Training $ 5,530

Office Labor	Rate	Hours	Subtotal		$ 3,250
LANL Project Manager	175	2	$	350	
LANL H&S	100	8	$	800	
Program Manager	120		$	-	
Project Manager	110	2	$	220	
Senior Engineer	100	8	$	800	
Project Engineer	75	8	$	600	
Senior Scientist	100		$	-	
Junior Engineer	60	8	$	480	
Junior Scientist	55		$	-	
Permitting Specialist	70		$	-	
Draftsman	55		$	-	
Word Processor	45		$	-	
Quality Assurance	55		$	-	
Administrative Assistant	40		$	-	
Cost/Schedule Engineer	65		$	-	

Field Labor	Rate	Hours	Subtotal		$ 2,280
Field Supervisor	70	8	$	560	
Field Engineer	75	8	$	600	
Field Equipment Operator	50	8	$	400	
Field Driver	45	8	$	360	
Field Technician	45	8	$	360	
Field Laborer	35		$	-	
Field Craft Labor	50		$	-	
Field Electrician	65		$	-	

Task 2 Readiness Review $ 4,280

Office Labor	Rate	Hours	Subtotal		$ 4,280
LANL Project Manager	175	8	$	1,400	
LANL H&S	100	8	$	800	
Program Manager	120		$	-	
Project Manager	110	8	$	880	
Senior Engineer	100		$	-	
Project Engineer	75	16	$	1,200	
Senior Scientist	100		$	-	
Junior Engineer	60		$	-	
Junior Scientist	55		$	-	
Permitting Specialist	70		$	-	
Draftsman	55		$	-	
Word Processor	45		$	-	
Quality Assurance	55		$	-	
Administrative Assistant	40		$	-	
Cost/Schedule Engineer	65		$	-	

Task 3 Mobilization $ 11,820

Labor	Rate	Hours	Subtotal		$ 3,760
LANL Project Manager	175		$	-	

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

	Rate	Hours	Subtotal	Section Total	Task Total
LANL H&S	100		$ -		
Program Manager	120		$ -		
Project Manager	110		$ -		
Senior Engineer	100	16	$ 1,600		
Project Engineer	75	16	$ 1,200		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40	24	$ 960		
Cost/Schedule Engineer	65		$ -		
Field Labor	**Rate**	**Hours**	**Subtotal**	**$ 2,560**	
Field Supervisor	70	8	$ 560		
Field Engineer	75	8	$ 600		
Field Equipment Operator	50	8	$ 400		
Field Driver	45	8	$ 360		
Field Technician	45	8	$ 360		
Field Laborer	35	8	$ 280		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		
Field Equipment Operator - PT	25		$ -		
Field Driver - PT	22.5		$ -		
Field Technician - PT	22.5		$ -		
Field Laborer - PT	17.5		$ -		
Field Craft Labor - PT	25		$ -		
Field Electrician - PT	32.5		$ -		
Equipment	**Rate**	**Weeks**	**Subtotal**	**$ 5,500**	
Drill rig and grouting equipment			$ 5,000		
Misc			$ 500		
Task 4 Grouting and Site Restoration					**$ 40,917**
Office Labor	**Rate**	**Hours**	**Subtotal**	**$ 22,980**	
LANL Project Manager	175	20	$ 3,500		
LANL H&S	100	8	$ 800		
Program Manager	120	4	$ 480		
Project Manager	110	20	$ 2,200		
Senior Engineer	100		$ -		
Project Engineer	75		$ -		
Senior Scientist	100	100	$ 10,000		
Junior Engineer	60	100	$ 6,000		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40		$ -		
Cost/Schedule Engineer	65		$ -		
Field Labor	**Rate**	**Hours**	**Subtotal**	**$ 5,400**	
Field Supervisor	70		$ -		
Field Engineer	75		$ -		
Field Equipment Operator	50		$ -		
Field Driver	45		$ -		
Field Technician	45	120	$ 5,400		
Field Laborer	35		$ -		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		Rate	Month	Subtotal	$ 10,000	
Drill rig and grouting equipment		20000	0.5	$ 10,000		
Materials	**UOM**	Rate	Qty	Subtotal	$ 2,537	
Grouting						
Materials	lump	2500	1	$ 2,500		
Site Restoration						
Fill, engineered	ton	12	1	$ 12		
Bentonite	ton	25	1	$ 25		
Task 5 Demobilization						$ 4,640
Labor		Rate	Hours	Subtotal	$ 920	
LANL Project Manager		175		$ -		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110		$ -		
Senior Engineer		100		$ -		
Project Engineer		75	8	$ 600		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	8	$ 320		
Cost/Schedule Engineer		65		$ -		
Field Labor		Rate	Hours	Subtotal	$ 720	
Field Supervisor		70		$ -		
Field Engineer		75		$ -		
Field Equipment Operator		50		$ -		
Field Driver		45		$ -		
Field Technician		45	16	$ 720		
Field Laborer		35		$ -		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		Rate	Weeks	Subtotal	$ 3,000	
Drill rig and grouting equipment				$ 2,500		
Misc				$ 500		
Task 6 Project Administration						$ 9,540
Labor		Rate	Hours	Subtotal	$ 9,540	
LANL Project Manager		175	16	$ 2,800		
LANL H&S		100		$ -		

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

Program Manager	120	2	$ 240
Project Manager	110	40	$ 4,400
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	20	$ 800
Cost/Schedule Engineer	65	20	$ 1,300

Phase IV Closure Report (Year 2) **$ 42,520**

Task 1 Closure Report **$ 36,980**

Labor	Rate	Hours	Subtotal	$ 36,980
LANL Project Manager	175	24	$ 4,200	
LANL H&S	100		$ -	
Program Manager	120	4	$ 480	
Project Manager	110	40	$ 4,400	
Senior Engineer	100		$ -	
Project Engineer	75	120	$ 9,000	
Senior Scientist	100		$ -	
Junior Engineer	60	120	$ 7,200	
Junior Scientist	55	120	$ 6,600	
Permitting Specialist	70		$ -	
Draftsman	55	60	$ 3,300	
Word Processor	45	40	$ 1,800	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 2 Project Administration **$ 5,540**

Labor	Rate	Hours	Subtotal	$ 5,540
LANL Project Manager	175	4	$ 700	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	24	$ 2,640	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	16	$ 640	
Cost/Schedule Engineer	65	24	$ 1,560	

Summary

Phase	Subtotal	NMGRT	Total
Phase I, II & III Plans and Excavation (Year 1)	$ 156,807	$ 9,114	$ 165,921
Phase IV Closure Report (Year 2)	$ 42,520	$ 2,471	$ 44,991

Capital Installation Cost	**$ 210,913**
30 Year O&M Costs (NPV)	**$ 104,990**

Table C-6
Outfall Source Area 17-foot Surge Bed Grouting and Cap Maintenance (Alternative II.2) Cost Estimate

(From Cap Maintenance, Table C-6)	
Total Cost (NPV)	**$ 315,903**

Table C-7
Outfall Source Area Settling Pond Cap Maintenance (Alternative II.3)

Assumptions
1. Maintenance is require once every 5 years of the settling pond cap.
2. 1 week is required for maintenance, consisting of soil patching of the cap.
3. The discount rate for the NPV calculation is 5%.
4. New Mexico Gross Receipts Tax is 5.8125%.

Phase I & II Preliminary and Final Plans, Cost Estimates (Year 1) $ 24,760

Task 1 Project Maintenance Plan $ 9,550

Office Labor	Rate	Hours	Subtotal	$ 9,550
LANL Project Manager	175	4	$ 700	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan $ 5,370

Office Labor	Rate	Hours	Subtotal	$ 5,370
LANL Project Manager	175	2	$ 350	
LANL H&S	100	4	$ 400	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Maintenance Plan Cost Estimate $ 7,740

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	4	$ 700
LANL H&S	100		$ -
Program Manager	120		$ -
Project Manager	110	8	$ 880
Senior Engineer	100	24	$ 2,400
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60	40	$ 2,400
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -

Table C-7
Outfall Source Area Settling Pond Cap Maintenance (Alternative II.3)

Quality Assurance	55		$	-
Administrative Assistant	40	8	$	320
Cost/Schedule Engineer	65	16	$	1,040

Task 4 Project Administration $ 2,100

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	4	$	700
LANL H&S	100		$	-
Program Manager	120		$	-
Project Manager	110	8	$	880
Senior Engineer	100		$	-
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60		$	-
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40		$	-
Cost/Schedule Engineer	65	8	$	520

Phase III (Not Applicable)

Phase IV Long-Term Maintenance (Year 5-30) $ 31,295

Task 1 Readiness Review $ 3,680

Office Labor	Rate	Hours	Subtotal		$ 3,680
LANL Project Manager	175	8	$	1,400	
LANL H&S	100	8	$	800	
Program Manager	120		$	-	
Project Manager	110	8	$	880	
Senior Engineer	100		$	-	
Project Engineer	75	8	$	600	
Senior Scientist	100		$	-	
Junior Engineer	60		$	-	
Junior Scientist	55		$	-	
Permitting Specialist	70		$	-	
Draftsman	55		$	-	
Word Processor	45		$	-	
Quality Assurance	55		$	-	
Administrative Assistant	40		$	-	
Cost/Schedule Engineer	65		$	-	

Task 2 Mobilization $ 3,980

Labor	Rate	Hours	Subtotal		$ 2,140
LANL Project Manager	175		$	-	
LANL H&S	100		$	-	
Program Manager	120		$	-	
Project Manager	110	2	$	220	
Senior Engineer	100	4	$	400	
Project Engineer	75		$	-	
Senior Scientist	100		$	-	
Junior Engineer	60		$	-	
Junior Scientist	55	16	$	880	

Table C-7
Outfall Source Area Settling Pond Cap Maintenance (Alternative II.3)

Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40	16	$ 640		
Cost/Schedule Engineer	65		$ -		
Field Labor	**Rate**	**Hours**	**Subtotal**	**$ 1,240**	
Field Supervisor	70	8	$ 560		
Field Engineer	75		$ -		
Field Equipment Operator	50	8	$ 400		
Field Driver	45		$ -		
Field Technician	45		$ -		
Field Laborer	35	8	$ 280		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		
Field Equipment Operator - PT	25		$ -		
Field Driver - PT	22.5		$ -		
Field Technician - PT	22.5		$ -		
Field Laborer - PT	17.5		$ -		
Field Craft Labor - PT	25		$ -		
Field Electrician - PT	32.5		$ -		
Equipment	**Rate**	**Weeks**	**Subtotal**	**$ 600**	
Backhoe/loader			$ 50		
Pugmill			$ 50		
Misc			$ 500		
Task 4 Cap Maintenance					**$ 16,665**
Office Labor	**Rate**	**Hours**	**Subtotal**	**$ 5,900**	
LANL Project Manager	175	4	$ 700		
LANL H&S	100		$ -		
Program Manager	120	1	$ 120		
Project Manager	110	8	$ 880		
Senior Engineer	100		$ -		
Project Engineer	75	16	$ 1,200		
Senior Scientist	100		$ -		
Junior Engineer	60	50	$ 3,000		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40		$ -		
Cost/Schedule Engineer	65		$ -		
Field Labor	**Rate**	**Hours**	**Subtotal**	**$ 8,400**	
Field Supervisor	70	50	$ 3,500		
Field Engineer	75		$ -		
Field Equipment Operator	50	50	$ 2,500		
Field Driver	45		$ -		
Field Technician	45		$ -		
Field Laborer	35	50	$ 1,750		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		
Field Equipment Operator - PT	25	10	$ 250		
Field Driver - PT	22.5	10	$ 225		
Field Technician - PT	22.5		$ -		
Field Laborer - PT	17.5	10	$ 175		
Field Craft Labor - PT	25		$ -		
Field Electrician - PT	32.5		$ -		

Table C-7
Outfall Source Area Settling Pond Cap Maintenance (Alternative II.3)

Equipment	Rate	Month	Subtotal	$ 2,075
Dump Truck	2000	0.25	$ 500	
Backhoe/Loader	4000	0.25	$ 1,000	
Truck	500	0.25	$ 125	
Pugmill	400	0.25	$ 100	
FOM Backhoe/loader	1000	0.25	$ 250	
FOM Dumptruck	400	0.25	$ 100	

Materials	UOM	Rate	Qty	Subtotal	$ 290
Fill, engineered	ton	12	20	$ 240	
Bentonite	ton	25	2	$ 50	

Task 6 Demobilization $ 3,290

Labor	Rate	Hours	Subtotal	$ 1,400
LANL Project Manager	175		$ -	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110		$ -	
Senior Engineer	100		$ -	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	20	$ 800	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 1,240
Field Supervisor	70	8	$ 560	
Field Engineer	75		$ -	
Field Equipment Operator	50	8	$ 400	
Field Driver	45		$ -	
Field Technician	45		$ -	
Field Laborer	35	8	$ 280	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25		$ -	
Field Driver - PT	22.5		$ -	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5		$ -	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Equipment	Rate	Weeks	Subtotal	$ 650
Excavator			$ 50	
Pug mill			$ 50	
Dump truck			$ 50	
Misc			$ 500	

Task 7 Project Administration $ 3,680

Labor	Rate	Hours	Subtotal	$ 3,680
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	

Table C-7
Outfall Source Area Settling Pond Cap Maintenance (Alternative II.3)

Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65	8	$ 520

Summary

Phase	**Subtotal**	**NMGRT**	**Total**
Phase I, II & III Plans (Year 5)	$ 24,760	$ 1,439	$ 26,199
Phase IV Cap Maintenance (Year 5-30) (every 5 years)	$ 156,475	$ 9,095	$ 165,570

Capital Installation Cost	**$ -**
30 Year O&M Costs (NPV)	**$ 104,990**
Total Cost (NPV)	**$ 104,990**

30 Year NPV Calculation

Discount Rate = 5.00%

Year	Incurred Cost	Divisor	Subtotal
1		1.05	$ -
2		1.1025	$ -
3	$ -	1.157625	$ -
4	$ -	1.21550625	$ -
5	$ 59,313	1.27628156	$ 46,473
6	$ -	1.34009564	$ -
7	$ -	1.40710042	$ -
8	$ -	1.47745544	$ -
9	$ -	1.55132822	$ -
10	$ 33,114	1.62889463	$ 20,329
11	$ -	1.71033936	$ -
12	$ -	1.79585633	$ -
13	$ -	1.88564914	$ -
14	$ -	1.9799316	$ -
15	$ 33,114	2.07892818	$ 15,928
16	$ -	2.18287459	$ -
17	$ -	2.29201832	$ -
18	$ -	2.40661923	$ -
19	$ -	2.5269502	$ -
20	$ 33,114	2.65329771	$ 12,480
21	$ -	2.78596259	$ -
22	$ -	2.92526072	$ -
23	$ -	3.07152376	$ -
24	$ -	3.22509994	$ -
25	$ 33,114	3.38635494	$ 9,779
26	$ -	3.55567269	$ -
27	$ -	3.73345632	$ -
28	$ -	3.92012914	$ -
29	$ -	4.1161356	$ -
30	$ -	4.32194238	$ -
			$ 104,990

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Assumptions

1. An excavated soil volume of 20,000 m3 (26,000 cy) is assumed, with a density of 1.5 tons per cy.
2. Design activities include 1 week of geoprobing to better define extent of sediment contamination.
3. Permitting includes an EIS, which will cost $500,000
3. Half of excavated sediment is nonhazardous, and will be trucked to Albuquerque for landfilling.
4. Alluvial aquifer in Cañon de Valle to be diverted using upgradient interceptor trench and bypass pipe.
5. Storm water filters will be installed on springs separately prior to start, with diversion piping installed as part of this project.
6. Non-hazardous disposal costs to for 13,000 cy to WM Rio Rancho were $52/ton turnkey (trucking, tipping fees etc.), does not include preparatory work, sampling etc, or LANL overhead charges. Costs are based on the completed MDA P
7. Hazardous disposal for barium is assumed for half the excavated volume (13,000 cy), @ $265/ton (based on MDA P, as above).
8. A haul road will be constructed along the 2 kilometer length of the excavation.
9. Heavy equipment for excavation and loading consists of 2 backhoes, 3 loaders, and 3 dump trucks.
10. A sample frequency of 1 sample per 100 cy is used for landfill WAC sampling.
11. The excavation rate is 400 cy per day.
12. Verification sampling of excavation is required every 50 yards for HE and barium using field kits, with 10% lab confirmation.
13. Site restoration for alluvium consists of sand alluvial backfill and soil surficial backfill.
14. Two wetlands are constructed using subgrade dams and drain pipes from saturated alluvium.
15 The duration for excavation and site restoration is 20 weeks.
16. Costs for this alternative must be combined with storm water filter costs (Table C-10), for complete alternative costs.
17. Installation costs are included for seven new alluvial wells to be installed following excavation.
18. Quarterly sampling costs for the new wells are not included, because they are replacement POC wells and these costs are assumed common to all alternatives.
19. The discount rate for the NPV calculation is 5%.
20. New Mexico Gross Receipts Tax is 5.8125%.

Phase I Preliminary Design and Permitting (Year 1) $ 651,380

Task 1 Project Plans $ 10,490

Office Labor	Rate	Hours	Subtotal	$ 10,490
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	4	$ 400	
Program Manager	120	4	$ 480	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70	8	$ 560	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan $ 7,090

Office Labor	Rate	Hours	Subtotal	$ 7,090
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Readiness Review $ 4,280

Office Labor	Rate	Hours	Subtotal	$ 4,280
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 4 Geoprobe Sampling $ 14,770

Office Labor	Rate	Hours	Subtotal	$ 6,040
LANL Project Manager	175	2	$ 350	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60	80	$ 4,800	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	8	$ 320	
Cost/Schedule Engineer	65	2	$ 130	

Other	UOM	Rate	Qty	Subtotal	$ 8,730
Direct push sample rig	day	1500	5	$ 7,500	
Soil analytical, Field kit	each	25	30	$ 750	
Soil analytical, 10% lab confirm	each	160	3	$ 480	

Task 5 Field Summary Report $ 9,230

Labor	Rate	Hours	Subtotal	$ 9,230
LANL Project Manager	175	4	$ 700	
LANL H&S	100		$ -	
Program Manager	120	2	$ 240	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100	40	$ 4,000	

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Junior Engineer	60	40	$	2,400
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55	8	$	440
Word Processor	45	8	$	360
Quality Assurance	55		$	-
Administrative Assistant	40	2	$	80
Cost/Schedule Engineer	65	2	$	130

Task 6 Preliminary Excavation Plan $ 73,000

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	40	$	7,000
LANL H&S	100	8	$	800
Program Manager	120	40	$	4,800
Project Manager	110	80	$	8,800
Senior Engineer	100	160	$	16,000
Project Engineer	75	160	$	12,000
Senior Scientist	100		$	-
Junior Engineer	60	320	$	19,200
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55	80	$	4,400
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40		$	-
Cost/Schedule Engineer	65		$	-

Task 7 Permitting $ 500,000

Task 8 Preliminary Excavation Plan Cost Estimate $ 23,280

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	16	$	2,800
LANL H&S	100		$	-
Program Manager	120	4	$	480
Project Manager	110	40	$	4,400
Senior Engineer	100	40	$	4,000
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60	80	$	4,800
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	40	$	1,600
Cost/Schedule Engineer	65	80	$	5,200

Task 9 Project Administration $ 9,240

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	16	$	2,800
LANL H&S	100		$	-
Program Manager	120	4	$	480
Project Manager	110	16	$	1,760
Senior Engineer	100		$	-
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60		$	-
Junior Scientist	55		$	-

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	40	$	1,600
Cost/Schedule Engineer	65	40	$	2,600

Phase II Final Design (Year 2) $ 44,060

Task 1 Final Excavation Plan $ 25,660

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	24	$	4,200
LANL H&S	100	8	$	800
Program Manager	120	8	$	960
Project Manager	110	40	$	4,400
Senior Engineer	100	40	$	4,000
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60	80	$	4,800
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55	80	$	4,400
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	20	$	800
Cost/Schedule Engineer	65	20	$	1,300

Task 2 Final Excavation Plan Cost Estimate $ 11,840

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	8	$	1,400
LANL H&S	100		$	-
Program Manager	120	4	$	480
Project Manager	110	24	$	2,640
Senior Engineer	100	24	$	2,400
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60	40	$	2,400
Junior Scientist	55		$	-
Permitting Specialist	70		$	-
Draftsman	55		$	-
Word Processor	45		$	-
Quality Assurance	55		$	-
Administrative Assistant	40	24	$	960
Cost/Schedule Engineer	65	24	$	1,560

Task 3 Project Administration $ 6,560

Labor	Rate	Hours	Subtotal	
LANL Project Manager	175	8	$	1,400
LANL H&S	100		$	-
Program Manager	120		$	-
Project Manager	110	24	$	2,640
Senior Engineer	100		$	-
Project Engineer	75		$	-
Senior Scientist	100		$	-
Junior Engineer	60		$	-
Junior Scientist	55		$	-

Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	24	$ 960	
Cost/Schedule Engineer	65	24	$ 1,560	

Phase III Excavation and Site Restoration (Year 3) — $7,504,935

Task 1 Installation Plan — $ 13,960

Office Labor	Rate	Hours	Subtotal	$ 13,960
LANL Project Manager	175	4	$ 700	
LANL H&S	100	4	$ 400	
Program Manager	120	4	$ 480	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75	80	$ 6,000	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	16	$ 880	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan — $ 7,090

Office Labor	Rate	Hours	Subtotal	$ 7,090
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Training — $ 5,530

Office Labor	Rate	Hours	Subtotal	$ 3,250
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	2	$ 220	
Senior Engineer	100	8	$ 800	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60	8	$ 480	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

	Rate	Hours	Subtotal		
Quality Assurance	55		$ -		
Administrative Assistant	40		$ -		
Cost/Schedule Engineer	65		$ -		
Field Labor	Rate	Hours	Subtotal	$ 2,280	
Field Supervisor	70	8	$ 560		
Field Engineer	75	8	$ 600		
Field Equipment Operator	50	8	$ 400		
Field Driver	45	8	$ 360		
Field Technician	45	8	$ 360		
Field Laborer	35		$ -		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		
Task 4 Readiness Review					$ 4,280
Office Labor	Rate	Hours	Subtotal	$ 4,280	
LANL Project Manager	175	8	$ 1,400		
LANL H&S	100	8	$ 800		
Program Manager	120		$ -		
Project Manager	110	8	$ 880		
Senior Engineer	100		$ -		
Project Engineer	75	16	$ 1,200		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40		$ -		
Cost/Schedule Engineer	65		$ -		
Task 5 Mobilization					$ 10,265
Labor	Rate	Hours	Subtotal	$ 6,780	
LANL Project Manager	175	4	$ 700		
LANL H&S	100	2	$ 200		
Program Manager	120	8	$ 960		
Project Manager	110		$ -		
Senior Engineer	100	16	$ 1,600		
Project Engineer	75	16	$ 1,200		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40	40	$ 1,600		
Cost/Schedule Engineer	65	8	$ 520		
Field Labor	Rate	Hours	Subtotal	$ 2,560	
Field Supervisor	70	8	$ 560		
Field Engineer	75	8	$ 600		
Field Equipment Operator	50	8	$ 400		
Field Driver	45	8	$ 360		
Field Technician	45	8	$ 360		
Field Laborer	35	8	$ 280		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Weeks**	**Subtotal**	**$ 925**	
Backhoe				$ 50		
Backhoe				$ 50		
Dump truck				$ 50		
Dump truck				$ 50		
Dump truck				$ 50		
Loader				$ 50		
Loader				$ 50		
Articulated loader				$ 50		
Trash pump				$ 25		
Misc				$ 500		
Task 6 Installation Materials						**$ 483,118**
Materials	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 483,118**	
Interceptor Trench for Dewatering, Upgradient						
Peastone	ton	25	100	$ 2,500		
Filter fabric	roll	150	3	$ 450		
Well Casing	foot	6	8	$ 48		
2-inch SDR 11 HDPE pipe	LF	6000	0.75	$ 4,500		
Fittings	each	5	20	$ 100		
500 gallon head tank	each	1000	1	$ 1,000		
Site Restoration	each	2500	1	$ 2,500		
Fill, engineered	ton	12	39000	$ 468,000		
Drainage culvert	LF	8	40	$ 320		
Grass seed	lump	1200	1	$ 1,200		
Native plants	lump	2500	1	$ 2,500		
Task 7 Excavation and Site Restoration Labor and Equipment						**$ 683,800**
Office Labor		**Rate**	**Hours**	**Subtotal**	**$ 102,300**	
LANL Project Manager		175	100	$ 17,500		
LANL H&S		100	40	$ 4,000		
Program Manager		120	20	$ 2,400		
Project Manager		110	200	$ 22,000		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60	800	$ 48,000		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	80	$ 3,200		
Cost/Schedule Engineer		65	80	$ 5,200		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 317,500**	
Field Supervisor		70	1000	$ 70,000		
Field Engineer		75		$ -		
Field Equipment Operator		50	2000	$ 100,000		
Field Driver		45	2000	$ 90,000		
Field Technician		45		$ -		

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Field Laborer			35	1000	$ 35,000	
Field Craft Labor			50		$ -	
Field Electrician			65		$ -	
Field Equipment Operator - PT			25	400	$ 10,000	
Field Driver - PT			22.5	400	$ 9,000	
Field Technician - PT			22.5		$ -	
Field Laborer - PT			17.5	200	$ 3,500	
Field Craft Labor - PT			25		$ -	
Field Electrician - PT			32.5		$ -	
Equipment		**Rate**		**Month**	**Subtotal**	**$ 240,820**
Backhoe			4152	10	$ 41,520	
Dump Truck			7040	15	$ 105,600	
Loader			4000	15	$ 60,000	
Truck			500	5	$ 2,500	
HDPE fushion machine			1200	1	$ 1,200	
5kw generator			400	5	$ 2,000	
FOM Backhoe			1000	15	$ 15,000	
FOM Loader			400	15	$ 6,000	
FOM Dumptruck			400	15	$ 6,000	
FOM Generator			200	5	$ 1,000	
Other	**UOM**	**Rate**		**Qty**	**Subtotal**	**$ 23,180**
4-inch wells	LF		60	50	$ 3,000	
Monitoring well mob/demob	lump		2500	1	$ 2,500	
Soil analytical, field	each		20	400	$ 8,000	
HE Soil analytical,10% lab confirm	each		210	40	$ 8,400	
Barium Soil analytical,10% lab confirm	each		32	40	$ 1,280	

Task 8 Waste Management $ 6,251,692

Office Labor	**Rate**		**Hours**	**Subtotal**	**$ 9,200**
LANL Project Manager		175		$ -	
LANL H&S		100		$ -	
Program Manager		120		$ -	
Project Manager		110	16	$ 1,760	
Senior Engineer		100		$ -	
Project Engineer		75		$ -	
Senior Scientist		100		$ -	
Junior Engineer		60	80	$ 4,800	
Junior Scientist		55		$ -	
Permitting Specialist		70		$ -	
Draftsman		55		$ -	
Word Processor		45		$ -	
Quality Assurance		55		$ -	
Administrative Assistant		40	40	$ 1,600	
Cost/Schedule Engineer		65	16	$ 1,040	
Field Labor	**Rate**		**Hours**	**Subtotal**	**$ 49,500**
Field Supervisor		70		$ -	
Field Engineer		75		$ -	
Field Equipment Operator		50		$ -	
Field Driver		45		$ -	
Field Technician		45	1000	$ 45,000	
Field Laborer		35		$ -	
Field Craft Labor		50		$ -	
Field Electrician		65		$ -	
Field Equipment Operator - PT		25		$ -	
Field Driver - PT		22.5		$ -	
Field Technician - PT		22.5	200	$ 4,500	
Field Laborer - PT		17.5		$ -	
Field Craft Labor - PT		25		$ -	

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Field Electrician - PT		32.5		$ -		
Soil Disposal	**UOM**	**Rate**	**Qty**	**Subtotal**	**$6,181,500**	
Contaminated soil disposal, non haz.	ton	52	19500	$1,014,000		
Contaminated soil disposal, Ba haz.	ton	265	19500	$5,167,500		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 11,492**	
Soil analytical, field	each	20	260	$ 5,200		
HE Soil analytical,10% lab confirm	each	210	26	$ 5,460		
Barium Soil analytical,10% lab confirm	each	32	26	$ 832		
Task 9 Demobilization						**$ 10,040**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 6,780**	
LANL Project Manager		175	4	$ 700		
LANL H&S		100	2	$ 200		
Program Manager		120	8	$ 960		
Project Manager		110		$ -		
Senior Engineer		100	16	$ 1,600		
Project Engineer		75	16	$ 1,200		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	40	$ 1,600		
Cost/Schedule Engineer		65	8	$ 520		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,560**	
Field Supervisor		70	8	$ 560		
Field Engineer		75	8	$ 600		
Field Equipment Operator		50	8	$ 400		
Field Driver		45	8	$ 360		
Field Technician		45	8	$ 360		
Field Laborer		35	8	$ 280		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5		$ -		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Weeks**	**Subtotal**	**$ 700**	
Backhoe				$ 50		
Backhoe				$ 50		
Dump truck				$ 50		
HDPE fusion machine				$ 50		
Misc				$ 500		
Task 10 Project Administration						**$ 35,160**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 35,160**	
LANL Project Manager		175	80	$ 14,000		
LANL H&S		100	8	$ 800		
Program Manager		120	8	$ 960		
Project Manager		110	100	$ 11,000		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		

Table C-8
Sediment Excavation with Storm Water Filters for Springs (Alternative III.1) Cost Estimate

Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	80	$ 3,200
Cost/Schedule Engineer	65	80	$ 5,200

Phase IV Closure Report (Year 4) $ 120,920

Task 1 Closure Report $ 94,960

Labor	Rate	Hours	Subtotal	$ 94,960
LANL Project Manager	175	40	$ 7,000	
LANL H&S	100		$ -	
Program Manager	120	16	$ 1,920	
Project Manager	110	80	$ 8,800	
Senior Engineer	100		$ -	
Project Engineer	75	320	$ 24,000	
Senior Scientist	100		$ -	
Junior Engineer	60	320	$ 19,200	
Junior Scientist	55	320	$ 17,600	
Permitting Specialist	70		$ -	
Draftsman	55	160	$ 8,800	
Word Processor	45	160	$ 7,200	
Quality Assurance	55	8	$ 440	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 2 Project Administration $ 25,960

Labor	Rate	Hours	Subtotal	$ 25,960
LANL Project Manager	175	40	$ 7,000	
LANL H&S	100	8	$ 800	
Program Manager	120	8	$ 960	
Project Manager	110	80	$ 8,800	
Senior Engineer	100		$ -	
Project Engineer	75		$ -	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	80	$ 3,200	
Cost/Schedule Engineer	65	80	$ 5,200	

Summary

Phase	Subtotal	NMGRT	Total
Phase I Preliminary Design and Permitting (Year 1)	$ 651,380	$ 37,861	$ 689,241
Phase II Final Design (Year 1)	$ 44,060	$ 2,561	$ 46,621
Phase III Excavation and Site Restoration (Year 2)	$ 7,504,935	$ 436,224	$ 7,941,159
Phase IV Closure Report (Year 2)	$ 120,920	$ 7,028	$ 127,948

Capital Installation Cost	**$ 8,898,547**
30 Year O&M Costs (NPV) (from Table C-10)	**$ 626,240**
Total Cost (NPV)	**$ 9,524,787**

Table C-9
PRB Installation and Storm Water Filters for Springs (Alternative III.2) Cost Estimate

Assumptions

1. Cost estimate for design and installation derived from Mortandad Canyon PRB actual installation costs, with adjustment for number and scale.
2. Costs are for 4 PRBs, 3 in Cañon de Valle and 1 in Martin Spring Canyon.
3. PRBs consist of ZVI and calcium sulfate.
4. A license fee of 12% on labor, equipment and materials for the ZVI portion is included.
5. For permitting, a bioassessment and an environmental assessment (EA) are required, at a total cost of $150,000.
6. Two monitoring wells (upgradient and downgradient) of each PRB are required.
7. Monitoring wells to be sampled quarterly for the first 3 years and twice a year thereafter, for HE and barium (8 wells).
8. All beds of the PRBs are changed out at 15 years.
9. The discount rate for the NPV calculation is 5%.
10. LANL UTR oversite costs for each phase not available from actuals, so each phase is estimated ($175/hour).
11. Under Phase IV O&M, quarterly sampling of POC wells not included; rather, it is assumed to be part of normal sampling common to all alternatives.
12. New Mexico Gross Receipts Tax is 5.8125%.

Phase I Preliminary Design and Permitting (Year 1)			$ 438,000
Task 1 Project Plans	$	10,000	
Task 2 Safety Plan	$	8,000	
Task 3 Readiness Review	$	4,000	
Task 4 Geotechnical Investigation	$	59,000	
Task 5 Hydrogeological Investigation (includes wells)	$	52,000	
Task 6 Field Summary Reports	$	16,000	
Task 7 Preliminary Design	$	57,000	
Task 8 Permitting	$	150,000	
Task 9 Preliminary Design Cost Estimate	$	10,000	
Task 10 Project Administration	$	16,000	
LANL UTR (320 hours)	$	56,000	
Phase II Final Design (Year 2)			$ 110,000
Task 1 Final Design	$	69,000	
Task 2 Cost Estimate	$	21,000	
Task 3 Project Administration	$	6,000	
LANL UTR (80 hours)	$	14,000	
Phase III Installation (Year 2)			$1,319,060
Task 1 Installation Plan	$	18,000	
Task 2 Safety Plan	$	5,000	
Task 3 Training	$	4,000	
Task 4 Readiness Review	$	17,000	
Task 5 Mobilization	$	15,000	
Task 6 Installation Materials	$	218,000	
Task 7a Installation Labor and Equipment	$	833,000	
Task 7b ZVI License Fee (12%) on ZVI LEM	$	63,060	
Task 8 Site Restoration	$	34,000	
Task 9 Waste Management	$	29,000	
Task 10 Demobilization and Site Inspection	$	14,000	
Task 11 As-Builts	$	7,000	
Task 12 Project Administration	$	34,000	
LANL UTR (160 hours)	$	28,000	

Phase IV Monitoring, Sampling and Reporting (Per Event, Years 2-31)						$ 19,994
Task 1 Safety Plan (existing)						
Task 2 Field Sampling						$ 19,994
Office Labor	Rate	Hours	Subtotal	$	13,390	
LANL Project Manager	175	4	$ 700			
LANL H&S	100		$ -			
Program Manager	120		$ -			
Project Manager	110	16	$ 1,760			
Senior Engineer	100	40	$ 4,000			
Project Engineer	75		$ -			
Senior Scientist	100	16	$ 1,600			
Junior Engineer	60		$ -			
Junior Scientist	55	80	$ 4,400			
Permitting Specialist	70		$ -			
Draftsman	55	8	$ 440			
Word Processor	45	8	$ 360			
Quality Assurance	55		$ -			
Administrative Assistant	40		$ -			
Cost/Schedule Engineer	65	2	$ 130			

Table C-9
PRB Installation and Storm Water Filters for Springs (Alternative III.2) Cost Estimate

Field Labor		Rate	Hours	Subtotal	$ 3,600
Field Supervisor		70		$ -	
Field Engineer		75		$ -	
Field Equipment Operator		50		$ -	
Field Driver		45		$ -	
Field Technician		45	80	$ 3,600	
Field Laborer		35		$ -	
Field Craft Labor		50		$ -	
Field Electrician		65		$ -	
Field Equipment Operator - PT		25		$ -	
Field Driver - PT		22.5		$ -	
Field Technician - PT		22.5		$ -	
Field Laborer - PT		17.5		$ -	
Field Craft Labor - PT		25		$ -	
Field Electrician - PT		32.5		$ -	
Equipment		**Rate**	**Month**	**Subtotal**	**$ 100**
Truck		400	0.25	$ 100	
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 2,904**
metal prep	each	$ 16	12	$ 192	
barium	each	$ 16	12	$ 192	
8330	each	$ 210	12	$ 2,520	

Phase IV PRB Bed Replacement (Year 15)		$ 403,500
Task 1 Installation Plan	$ 36,000	
Task 2 Safety Plan	$ 5,000	
Task 3 Training	$ 4,000	
Task 4 Readiness Review	$ 8,500	
Task 5 Mobilization	$ 10,000	
Task 6 Installation Materials	$ 150,000	
Task 7a Installation Labor and Equipment	$ 100,000	
Task 7b ZVI License Fee (12%) on ZVI LEM	$ 15,000	
Task 8 Site Restoration	$ 34,000	
Task 9 Waste Management	$ 10,000	
Task 10 Demobilization and Site Inspection	$ 14,000	
Task 11 Project Administration	$ 10,000	
LANL UTR (40 hours)	$ 7,000	

Summary

Phase	Subtotal	NMGRT	Total
Phase I Preliminary Design and Permitting (Year 1)	$ 438,000	$ 25,459	$ 463,459
Phase II Final Design (Year 2)	$ 110,000	$ 6,394	$ 116,394
Phase III Installation (Year 2)	$1,319,060	$ 76,670	$ 1,395,730
Phase IV Monitoring, Sampling and Reporting, Per Event	$ 19,994	$ 1,162	$ 21,156
Phase IV PRB Bed Replacement (Year 15)	$ 403,500	$ 23,453	$ 426,953
Capital Installation Cost			**$ 2,069,159**
30 Year O&M Costs (NPV) (including Table C-10)			**$ 1,597,283**
Total Cost (NPV)			**$ 3,666,442**

Table C-9
PRB Installation and Storm Water Filters for Springs (Alternative III.2) Cost Estimate

30 Year NPV Calculation
Discount Rate = 5.00%

Year	Incurred Cost	Divisor	Subtotal
1	$ 125,362	1.05	$ 119,393
2	$ 125,362	1.1025	$ 113,707
3	$ 125,362	1.157625	$ 108,293
4	$ 83,050	1.21550625	$ 68,326
5	$ 83,050	1.27628156	$ 65,072
6	$ 83,050	1.34009564	$ 61,973
7	$ 83,050	1.40710042	$ 59,022
8	$ 83,050	1.47745544	$ 56,212
9	$ 83,050	1.55132822	$ 53,535
10	$ 83,050	1.62889463	$ 50,986
11	$ 83,050	1.71033936	$ 48,558
12	$ 83,050	1.79585633	$ 46,245
13	$ 83,050	1.88564914	$ 44,043
14	$ 83,050	1.9799316	$ 41,946
15	$ 510,004	2.07892818	$ 245,320
16	$ 83,050	2.18287459	$ 38,046
17	$ 83,050	2.29201832	$ 36,234
18	$ 83,050	2.40661923	$ 34,509
19	$ 83,050	2.5269502	$ 32,866
20	$ 83,050	2.65329771	$ 31,301
21	$ 83,050	2.78596259	$ 29,810
22	$ 83,050	2.92526072	$ 28,391
23	$ 83,050	3.07152376	$ 27,039
24	$ 83,050	3.22509994	$ 25,751
25	$ 83,050	3.38635494	$ 24,525
26	$ 83,050	3.55567269	$ 23,357
27	$ 83,050	3.73345632	$ 22,245
28	$ 83,050	3.92012914	$ 21,186
29	$ 83,050	4.1161356	$ 20,177
30	$ 83,050	4.32194238	$ 19,216
			$ 1,597,283

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Assumptions

1. Number of interceptor trenches/injection wells is 5 in Cañon de Valle and 1 in Martin Spring Canyon
2. Design include test trench installation and pump test.
3. For permitting, a bioassessment and an environmental assessment (EA) are required, at a total cost of $150,000.
4. Lift station with head tank and pump will be located in Cañon de Valle
5. Treatment system building is 32x32' and will be constructed near MDA P.
6. Catchbasins are used to intercept springs and surface water.
7. Treatment by GAC and ion exchange is assumed.
8. Baseline flow rate is 20 gpm and peak flowrate is 100 gpm.
9. All piping is subgrade HDPE installed in utility trench.
10. Other utilities include power to well heads.
11. All trenches and injection wells will be installed with a backhoe.
12. Monitoring wells (2 per trench) will be required to be installed.
13. GAC changeouts per year is 2 and ion exchange changeouts per year is 4.
14. GAC and ion exchange resin provided by vendor, who also handles disposal/regeneration.
15. A groundwater discharge permit will be required.
16. Monthly sampling consists of influent/effluent samples and between GAC/ion exchange beds.
17. Operations and maintenance includes sampling of 12 wells quarterly for the first 3 years and twice per year thereafter.
18. Treatment plant operation requires 20 hours per week of a technician.
19. Under Phase IV O&M, quarterly sampling of POC wells not included; rather, it is assumed to be part of normal sampling common to all alternatives.
20. The discount rate for the NPV calculation is 5%.
21. New Mexico Gross Receipts Tax is 5.8125%.

Phase I Preliminary Design and Permitting (Year 1) — $404,839

Task 1 Project Plans — $ 10,490

Office Labor	Rate	Hours	Subtotal	$ 10,490
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	4	$ 400	
Program Manager	120	4	$ 480	
Project Manager	110	8	$ 880	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70	8	$ 560	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55	2	$ 110	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	4	$ 260	

Task 2 Safety Plan — $ 7,090

Office Labor	Rate	Hours	Subtotal	$ 7,090
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Readiness Review — $ 4,280

Office Labor	Rate	Hours	Subtotal	$ 4,280
LANL Project Manager	175	8	$ 1,400	

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

LANL H&S		100	8	$ 800		
Program Manager		120		$ -		
Project Manager		110	8	$ 880		
Senior Engineer		100		$ -		
Project Engineer		75	16	$ 1,200		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40		$ -		
Cost/Schedule Engineer		65		$ -		

Task 4 Test Trench Installation $ 42,509

Office Labor		Rate	Hours	Subtotal	$ 13,490
LANL Project Manager		175	16	$ 2,800	
LANL H&S		100		$ -	
Program Manager		120		$ -	
Project Manager		110	16	$ 1,760	
Senior Engineer		100	40	$ 4,000	
Project Engineer		75		$ -	
Senior Scientist		100		$ -	
Junior Engineer		60	80	$ 4,800	
Junior Scientist		55		$ -	
Permitting Specialist		70		$ -	
Draftsman		55		$ -	
Word Processor		45		$ -	
Quality Assurance		55		$ -	
Administrative Assistant		40		$ -	
Cost/Schedule Engineer		65	2	$ 130	

Field Labor		Rate	Hours	Subtotal	$ 17,300
Field Supervisor		70	80	$ 5,600	
Field Engineer		75		$ -	
Field Equipment Operator		50	80	$ 4,000	
Field Driver		45	80	$ 3,600	
Field Technician		45		$ -	
Field Laborer		35	80	$ 2,800	
Field Craft Labor		50		$ -	
Field Electrician		65		$ -	
Field Equipment Operator - PT		25	20	$ 500	
Field Driver - PT		22.5	20	$ 450	
Field Technician - PT		22.5		$ -	
Field Laborer - PT		17.5	20	$ 350	
Field Craft Labor - PT		25		$ -	
Field Electrician - PT		32.5		$ -	

Equipment		Rate	Weeks	Subtotal	$ 9,296
Backhoe		1557	2	$ 3,114	
Dump Truck		2641	2	$ 5,282	
Truck		100	2	$ 200	
FOM		250	2	$ 500	
Mob/Demob				$ 200	

Materials	UOM	Rate	Qty	Subtotal	$ 1,623
Peastone	ton	25	25	$ 625	
Filter fabric	roll	150	1	$ 150	
Well Casing	foot	6	8	$ 48	
Disposal	ton	20	15	$ 300	
Misc				$ 500	

Other	UOM	Rate	Qty	Subtotal	$ 800
Soil analytical	each	160	5	$ 800	

Task 5 Pump Test $ 18,000

Labor		Rate	Hours	Subtotal	$ 11,470
LANL Project Manager		175	4	$ 700	

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

LANL H&S		100	2	$ 200		
Program Manager		120	8	$ 960		
Project Manager		110		$ -		
Senior Engineer		100		$ -		
Project Engineer		75	40	$ 3,000		
Senior Scientist		100	40	$ 4,000		
Junior Engineer		60		$ -		
Junior Scientist		55	40	$ 2,200		
Permitting Specialist		70	4	$ 280		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40		$ -		
Cost/Schedule Engineer		65	2	$ 130		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 2,025**	
Field Supervisor		70		$ -		
Field Engineer		75		$ -		
Field Equipment Operator		50		$ -		
Field Driver		45		$ -		
Field Technician		45	40	$ 1,800		
Field Laborer		35		$ -		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5	10	$ 225		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Weeks**	**Subtotal**	**$ 1,400**	
Pump		100	1	$ 100		
Truck		250	2	$ 500		
500 gallon tank		100	2	$ 200		
Mob/Demob				$ 100		
Misc				$ 500		
Materials	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 2,305**	
GAC	lb	2	400	$ 800		
Sand	bag	5	1	$ 5		
GAC Disposal	drum	500	2	$ 1,000		
Misc				$ 500		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 800**	
Water analytical	each	160	5	$ 800		
Task 6 Field Summary Report						**$ 9,230**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 9,230**	
LANL Project Manager		175	4	$ 700		
LANL H&S		100		$ -		
Program Manager		120	2	$ 240		
Project Manager		110	8	$ 880		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		
Senior Scientist		100	40	$ 4,000		
Junior Engineer		60	40	$ 2,400		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55	8	$ 440		
Word Processor		45	8	$ 360		
Quality Assurance		55		$ -		
Administrative Assistant		40	2	$ 80		
Cost/Schedule Engineer		65	2	$ 130		
Task 7 Preliminary Design						**$ 109,400**
Labor		**Rate**	**Hours**	**Subtotal**		
LANL Project Manager		175	80	$ 14,000		
LANL H&S		100	8	$ 800		

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Program Manager	120	40	$ 4,800
Project Manager	110	160	$ 17,600
Senior Engineer	100	160	$ 16,000
Project Engineer	75	320	$ 24,000
Senior Scientist	100		$ -
Junior Engineer	60	320	$ 19,200
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55	160	$ 8,800
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	40	$ 1,600
Cost/Schedule Engineer	65	40	$ 2,600

Task 8 Permitting $ 147,920

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	120	$ 21,000
LANL H&S	100		$ -
Program Manager	120	8	$ 960
Project Manager	110	120	$ 13,200
Senior Engineer	100	16	$ 1,600
Project Engineer	75	8	$ 600
Senior Scientist	100	480	$ 48,000
Junior Engineer	60	480	$ 28,800
Junior Scientist	55	160	$ 8,800
Permitting Specialist	70	160	$ 11,200
Draftsman	55	16	$ 880
Word Processor	45	80	$ 3,600
Quality Assurance	55	16	$ 880
Administrative Assistant	40	80	$ 3,200
Cost/Schedule Engineer	65	80	$ 5,200

Task 9 Preliminary Design Cost Estimate $ 39,360

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	40	$ 7,000
LANL H&S	100		$ -
Program Manager	120	8	$ 960
Project Manager	110	40	$ 4,400
Senior Engineer	100	40	$ 4,000
Project Engineer	75	80	$ 6,000
Senior Scientist	100		$ -
Junior Engineer	60	160	$ 9,600
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55	40	$ 2,200
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65	80	$ 5,200

Task 10 Project Administration $ 16,560

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	40	$ 7,000
LANL H&S	100		$ -
Program Manager	120	8	$ 960
Project Manager	110	40	$ 4,400
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	40	$ 1,600
Cost/Schedule Engineer	65	40	$ 2,600

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Phase II Final Design (Year 1) **$116,520**

Task 1 Final Design **$ 75,900**

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	40	$ 7,000
LANL H&S	100	8	$ 800
Program Manager	120	40	$ 4,800
Project Manager	110	160	$ 17,600
Senior Engineer	100	80	$ 8,000
Project Engineer	75	160	$ 12,000
Senior Scientist	100		$ -
Junior Engineer	60	320	$ 19,200
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55	80	$ 4,400
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	20	$ 800
Cost/Schedule Engineer	65	20	$ 1,300

Task 2 Final Design Cost Estimate **$ 24,060**

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	20	$ 3,500
LANL H&S	100	8	$ 800
Program Manager	120	8	$ 960
Project Manager	110	40	$ 4,400
Senior Engineer	100	40	$ 4,000
Project Engineer	75	40	$ 3,000
Senior Scientist	100		$ -
Junior Engineer	60	80	$ 4,800
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65	40	$ 2,600

Task 3 Project Administration **$ 16,560**

Labor	Rate	Hours	Subtotal
LANL Project Manager	175	40	$ 7,000
LANL H&S	100		$ -
Program Manager	120	8	$ 960
Project Manager	110	40	$ 4,400
Senior Engineer	100		$ -
Project Engineer	75		$ -
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40	40	$ 1,600
Cost/Schedule Engineer	65	40	$ 2,600

Phase III Installation (Year 2) **$532,604**

Task 1 Installation Plan **$ 13,824**

Office Labor	Rate	Hours	Subtotal	$ 13,824
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100		$ 4	

Program Manager		120	4	$	480
Project Manager		110	8	$	880
Senior Engineer		100	40	$	4,000
Project Engineer		75	80	$	6,000
Senior Scientist		100		$	-
Junior Engineer		60		$	-
Junior Scientist		55		$	-
Permitting Specialist		70		$	-
Draftsman		55	8	$	440
Word Processor		45	8	$	360
Quality Assurance		55		$	-
Administrative Assistant		40		$	-
Cost/Schedule Engineer		65	4	$	260

Task 2 Safety Plan $ 7,090

Office Labor	Rate	Hours	Subtotal	$ 7,090
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100		$ -	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60	40	$ 2,400	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Training $ 5,530

Office Labor	Rate	Hours	Subtotal	$ 3,250
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	2	$ 220	
Senior Engineer	100	8	$ 800	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60	8	$ 480	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Field Labor	Rate	Hours	Subtotal	$ 2,280
Field Supervisor	70	8	$ 560	
Field Engineer	75	8	$ 600	
Field Equipment Operator	50	8	$ 400	
Field Driver	45	8	$ 360	
Field Technician	45	8	$ 360	
Field Laborer	35		$ -	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	

Task 4 Readiness Review $ 4,280

Office Labor	Rate	Hours	Subtotal	$ 4,280
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

	Rate	Hours	Subtotal
Project Engineer	75	16	$ 1,200
Senior Scientist	100		$ -
Junior Engineer	60		$ -
Junior Scientist	55		$ -
Permitting Specialist	70		$ -
Draftsman	55		$ -
Word Processor	45		$ -
Quality Assurance	55		$ -
Administrative Assistant	40		$ -
Cost/Schedule Engineer	65		$ -

Task 5 Mobilization $ 10,040

Labor	Rate	Hours	Subtotal	$ 6,780
LANL Project Manager	175	4	$ 700	
LANL H&S	100	2	$ 200	
Program Manager	120	8	$ 960	
Project Manager	110		$ -	
Senior Engineer	100	16	$ 1,600	
Project Engineer	75	16	$ 1,200	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55		$ -	
Word Processor	45		$ -	
Quality Assurance	55		$ -	
Administrative Assistant	40	40	$ 1,600	
Cost/Schedule Engineer	65	8	$ 520	

Field Labor	Rate	Hours	Subtotal	$ 2,560
Field Supervisor	70	8	$ 560	
Field Engineer	75	8	$ 600	
Field Equipment Operator	50	8	$ 400	
Field Driver	45	8	$ 360	
Field Technician	45	8	$ 360	
Field Laborer	35	8	$ 280	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25		$ -	
Field Driver - PT	22.5		$ -	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5		$ -	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Equipment	Rate	Weeks	Subtotal	$ 700
Backhoe			$ 50	
Backhoe			$ 50	
Dump truck			$ 50	
HDPE fusion machine			$ 50	
Misc			$ 500	

Task 6 Installation Materials and Process Equipment

Materials and Process Equipment	UOM	Rate	Qty	Subtotal	$ 179,560
Interceptor Trenches (6)					
Peastone	ton	25	144	$ 3,600	
Filter fabric	roll	150	5	$ 750	
Well Casing	foot	6	40	$ 240	
Precast wellhead vaults	each	2500	6	$ 15,000	
Misc				$ 500	
Pumps with controls	each	2500	6	$ 15,000	
Springs and Surface Water Catchbasins					
Precast catchbasins	each	500	4	$ 2,000	
Pumps with controls	each	1500	4	$ 6,000	
Injection Wells (6)					
Peastone	ton	8	20	$ 160	
Filter fabric	roll	150	1	$ 150	
Well Casing	foot	6	40	$ 240	

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Misc				$ 500		
Canyon head tank, canyon piping						
2-inch SDR 11 HDPE pipe	LF	10000	0.75	$ 7,500		
Fittings	each	5	200	$ 1,000		
Sand, pipe bed	ton	15	40	$ 600		
2500 gallon head tank	each	3000	1	$ 3,000		
Transfer pump	each	2500	1	$ 2,500		
Heat trace and insulation	LF	5	500	$ 2,500		
10x10 concrete pad w/berm, sump	each	3500	1	$ 3,500		
Fencing, w gate	LF	50	50	$ 2,500		
Transfer pump panel with logic	each	2500	1	$ 2,500		
Monitoring Wells						
4-inch wells	LF	60	72	$ 4,320		
Monitoring well mob/demob	lump	2500	1	$ 2,500		
Treatment System						
32x32 concrete pad w/berm, sump	each	12000	1	$ 12,000		
Steel building, prefab, 2 bays, insulated	each	30000	1	$ 30,000		
Heater	each	1000	1	$ 1,000		
Lights	lump	2500	1	$ 2,500		
Chem. Sequestering system	each	2500	1	$ 2,500		
Influent manifold	lump	2500	1	$ 2,500		
2500 gallon head tank	each	3000	1	$ 3,000		
transfer pump w/ level control	each	2500	1	$ 2,500		
3000 lb GAC vessel	each	5000	2	$ 10,000		
2000 lb IX vessel	each	3500	2	$ 7,000		
Bag filter unit	each	3500	1	$ 3,500		
PLC with operator interface	each	15000	1	$ 15,000		
Electrical panels	each	5000	1	$ 5,000		
Effluent manifold with valves, flow meters	lump	3000	1	$ 3,000		
Other treatment system piping	lump	2500	1	$ 2,500		
Other safety equipment	lump	1000	1	$ 1,000		
Task 7 Installation Labor and Equipment						$ 379,988
Office Labor		**Rate**	**Hours**	**Subtotal**	$ 54,520	
LANL Project Manager		175	40	$ 7,000		
LANL H&S		100	8	$ 800		
Program Manager		120	16	$ 1,920		
Project Manager		110	120	$ 13,200		
Senior Engineer		100	40	$ 4,000		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60	320	$ 19,200		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	80	$ 3,200		
Cost/Schedule Engineer		65	80	$ 5,200		
Field Labor		**Rate**	**Hours**	**Subtotal**	$ 268,300	
Field Supervisor		70	800	$ 56,000		
Field Engineer		75		$ -		
Field Equipment Operator		50	800	$ 40,000		
Field Driver		45	800	$ 36,000		
Field Technician		45	800	$ 36,000		
Field Laborer		35	800	$ 28,000		
Field Craft Labor		50	800	$ 40,000		
Field Electrician		65	200	$ 13,000		
Field Equipment Operator - PT		25	160	$ 4,000		
Field Driver - PT		22.5	160	$ 3,600		
Field Technician - PT		22.5	160	$ 3,600		
Field Laborer - PT		17.5	160	$ 2,800		
Field Craft Labor - PT		25	160	$ 4,000		
Field Electrician - PT		32.5	40	$ 1,300		
Equipment		**Rate**	**Month**	**Subtotal**	$ 57,168	
Backhoe		4152	4	$ 16,608		
Dump Truck		7040	4	$ 28,160		
Truck		500	4	$ 2,000		
HDPE fushion machine		1200	4	$ 4,800		
FOM Backhoe		1000	4	$ 4,000		

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

FOM Dumptruck		400	4	$ 1,600		
Task 8 Site Restoration						$ 29,680
Office Labor		**Rate**	**Hours**	**Subtotal**	$ 5,500	
LANL Project Manager		175	8	$ 1,400		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110	10	$ 1,100		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60	50	$ 3,000		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40		$ -		
Cost/Schedule Engineer		65		$ -		
Field Labor		**Rate**	**Hours**	**Subtotal**	$ 17,975	
Field Supervisor		70	80	$ 5,600		
Field Engineer		75		$ -		
Field Equipment Operator		50	50	$ 2,500		
Field Driver		45	50	$ 2,250		
Field Technician		45	50	$ 2,250		
Field Laborer		35	50	$ 1,750		
Field Craft Labor		50	50	$ 2,500		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25	10	$ 250		
Field Driver - PT		22.5	10	$ 225		
Field Technician - PT		22.5	10	$ 225		
Field Laborer - PT		17.5	10	$ 175		
Field Craft Labor - PT		25	10	$ 250		
Field Electrician - PT		32.5		$ -		
Equipment		**Rate**	**Week**	**Subtotal**	$ 6,205	
Backhoe		1557	2	$ 3,114		
Dump Truck		2641	1	$ 2,641		
Truck		100	1	$ 100		
FOM Backhoe		250	1	$ 250		
FOM Dump Truck		100	1	$ 100		
Task 9 Waste Management						$ 6,910
Office Labor		**Rate**	**Hours**	**Subtotal**	$ 910	
LANL Project Manager		175		$ -		
LANL H&S		100		$ -		
Program Manager		120		$ -		
Project Manager		110	1	$ 110		
Senior Engineer		100		$ -		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60	8	$ 480		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	8	$ 320		
Cost/Schedule Engineer		65		$ -		
Soil Disposal	**UOM**	**Rate**	**Qty**	**Subtotal**	$ 5,200	
Contaminated soil disposal	ton	52	100	$ 5,200		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	$ 800	
Soil analytical	each	160	5	$ 800		
Task 10 Demobilization						$ 10,040

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Labor	**Rate**	**Hours**	**Subtotal**	$ 6,780	
LANL Project Manager	175	4	$ 700		
LANL H&S	100	2	$ 200		
Program Manager	120	8	$ 960		
Project Manager	110		$ -		
Senior Engineer	100	16	$ 1,600		
Project Engineer	75	16	$ 1,200		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40	40	$ 1,600		
Cost/Schedule Engineer	65	8	$ 520		
Field Labor	**Rate**	**Hours**	**Subtotal**	$ 2,560	
Field Supervisor	70	8	$ 560		
Field Engineer	75	8	$ 600		
Field Equipment Operator	50	8	$ 400		
Field Driver	45	8	$ 360		
Field Technician	45	8	$ 360		
Field Laborer	35	8	$ 280		
Field Craft Labor	50		$ -		
Field Electrician	65		$ -		
Field Equipment Operator - PT	25		$ -		
Field Driver - PT	22.5		$ -		
Field Technician - PT	22.5		$ -		
Field Laborer - PT	17.5		$ -		
Field Craft Labor - PT	25		$ -		
Field Electrician - PT	32.5		$ -		
Equipment	**Rate**	**Weeks**	**Subtotal**	$ 700	
Backhoe			$ 50		
Backhoe			$ 50		
Dump truck			$ 50		
HDPE fusion machine			$ 50		
Misc			$ 500		
Task 11 Asbuilts					$ 9,380
Labor	**Rate**	**Hours**	**Subtotal**	$ 9,380	
LANL Project Manager	175	4	$ 700		
LANL H&S	100		$ -		
Program Manager	120		$ -		
Project Manager	110	8	$ 880		
Senior Engineer	100	4	$ 400		
Project Engineer	75	40	$ 3,000		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55	80	$ 4,400		
Word Processor	45		$ -		
Quality Assurance	55		$ -		
Administrative Assistant	40		$ -		
Cost/Schedule Engineer	65		$ -		
Task 12 First Month Operation					$ 33,082
Office Labor	**Rate**	**Hours**	**Subtotal**	$ 13,340	
LANL Project Manager	175	4	$ 700		
LANL H&S	100	2	$ 200		
Program Manager	120	8	$ 960		
Project Manager	110	8	$ 880		
Senior Engineer	100	16	$ 1,600		
Project Engineer	75	120	$ 9,000		
Senior Scientist	100		$ -		
Junior Engineer	60		$ -		
Junior Scientist	55		$ -		
Permitting Specialist	70		$ -		
Draftsman	55		$ -		

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40		$ -		
Cost/Schedule Engineer		65		$ -		
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 9,900**	
Field Supervisor		70		$ -		
Field Engineer		75		$ -		
Field Equipment Operator		50		$ -		
Field Driver		45		$ -		
Field Technician		45	200	$ 9,000		
Field Laborer		35		$ -		
Field Craft Labor		50		$ -		
Field Electrician		65		$ -		
Field Equipment Operator - PT		25		$ -		
Field Driver - PT		22.5		$ -		
Field Technician - PT		22.5	40	$ 900		
Field Laborer - PT		17.5		$ -		
Field Craft Labor - PT		25		$ -		
Field Electrician - PT		32.5		$ -		
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 9,842**	
8330	each	210	14	$ 2,940		
8260	each	160	14	$ 2,240		
8270	each	180	14	$ 2,520		
RCRA 8 metals	each	105	14	$ 1,470		
barium	each	16	14	$ 224		
manganese	each	16	14	$ 224		
iron	each	16	14	$ 224		
Task 13 Project Administration						**$ 22,760**
Labor		**Rate**	**Hours**	**Subtotal**	**$ 22,760**	
LANL Project Manager		175	40	$ 7,000		
LANL H&S		100		$ -		
Program Manager		120	8	$ 960		
Project Manager		110	40	$ 4,400		
Senior Engineer		100	20	$ 2,000		
Project Engineer		75		$ -		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40	80	$ 3,200		
Cost/Schedule Engineer		65	80	$ 5,200		
Phase IV Operations and Maintenance Year 2-31, Per Year						**$114,112**
Task 1 Yearly Operations and Maintenance and Reporting						**$ 114,112**
Office Labor		**Rate**	**Hours**	**Subtotal**	**$ 19,560**	
LANL Project Manager		175	4	$ 700		
LANL H&S		100	2	$ 200		
Program Manager		120	8	$ 960		
Project Manager		110	48	$ 5,280		
Senior Engineer		100		$ -		
Project Engineer		75	96	$ 7,200		
Senior Scientist		100		$ -		
Junior Engineer		60		$ -		
Junior Scientist		55		$ -		
Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45	4	$ 180		
Quality Assurance		55		$ -		
Administrative Assistant		40	48	$ 1,920		
Cost/Schedule Engineer		65	48	$ 3,120		

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Field Labor	Rate	Hours	Subtotal	$ 45,000
Field Supervisor	70		$ -	
Field Engineer	75		$ -	
Field Equipment Operator	50		$ -	
Field Driver	45		$ -	
Field Technician	45	1000	$ 45,000	
Field Laborer	35		$ -	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25		$ -	
Field Driver - PT	22.5		$ -	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5		$ -	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Other	UOM	Rate	Qty	Subtotal	$ 49,552
8330	each	210	24	$ 5,040	
8260	each	160	24	$ 3,840	
RCRA 8 metals	each	105	24	$ 2,520	
barium	each	16	24	$ 384	
manganese	each	16	24	$ 384	
iron	each	16	24	$ 384	
Carbon change, with disposal	lb	1.5	6000	$ 9,000	
IX change, with disposal	lb	2	8000	$ 16,000	
Electrical	kwh	0.1	120000	$ 12,000	

Phase IV Monitoring, Sampling and Reporting (Per Event, Years 2-31) **$ 20,478**

Task 1 Safety Plan (existing)
Task 2 Field Sampling $ 20,478

Office Labor	Rate	Hours	Subtotal	$ 13,390
LANL Project Manager	175	4	$ 700	
LANL H&S	100		$ -	
Program Manager	120		$ -	
Project Manager	110	16	$ 1,760	
Senior Engineer	100	40	$ 4,000	
Project Engineer	75		$ -	
Senior Scientist	100	16	$ 1,600	
Junior Engineer	60		$ -	
Junior Scientist	55	80	$ 4,400	
Permitting Specialist	70		$ -	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65	2	$ 130	

Field Labor	Rate	Hours	Subtotal	$ 3,600
Field Supervisor	70		$ -	
Field Engineer	75		$ -	
Field Equipment Operator	50		$ -	
Field Driver	45		$ -	
Field Technician	45	80	$ 3,600	
Field Laborer	35		$ -	
Field Craft Labor	50		$ -	
Field Electrician	65		$ -	
Field Equipment Operator - PT	25		$ -	
Field Driver - PT	22.5		$ -	
Field Technician - PT	22.5		$ -	
Field Laborer - PT	17.5		$ -	
Field Craft Labor - PT	25		$ -	
Field Electrician - PT	32.5		$ -	

Equipment	Rate	Month	Subtotal	$ 100
Truck	400	0.25	$ 100	

Other	UOM	Rate	Qty	Subtotal	$ 3,388
metal prep	each	$ 16	14	$ 224	
barium	each	$ 16	14	$ 224	
8330	each	$ 210	14	$ 2,940	

Table C-10
Groundwater Interceptor Trenches and Central Treatment (Alternative III.3)

Summary

Phase	Subtotal	NMGRT	Total
Phase I Preliminary Design and Permitting (Year 1)	$ 404,839	$ 23,531	$ 428,370
Phase II Final Design (Year 1)	$ 116,520	$ 6,773	$ 123,293
Phase III Installation (Year 2)	$ 532,604	$ 30,958	$ 563,562
Phase IV Operations and Maintenance Year 2-31, Per Year	$ 114,112	$ 6,633	$ 120,745
Phase IV Monitoring, Sampling and Reporting, Per Event	$ 20,478	$ 1,190	$ 21,668

Capital Installation Cost	**$1,115,225**
30 Year O&M Costs (NPV)	**$2,640,348**
Total Cost (NPV)	**$3,755,573**

30 Year NPV Calculation

Discount Rate = 5.00%

Year	Incurred Cost	Divisor	Subtotal
1	$ 207,418	1.05	$ 197,541
2	$ 207,418	1.1025	$ 188,134
3	$ 207,418	1.157625	$ 179,175
4	$ 164,081	1.21550625	$ 134,990
5	$ 164,081	1.27628156	$ 128,562
6	$ 164,081	1.34009564	$ 122,440
7	$ 164,081	1.40710042	$ 116,610
8	$ 164,081	1.47745544	$ 111,057
9	$ 164,081	1.55132822	$ 105,768
10	$ 164,081	1.62889463	$ 100,732
11	$ 164,081	1.71033936	$ 95,935
12	$ 164,081	1.79585633	$ 91,367
13	$ 164,081	1.88564914	$ 87,016
14	$ 164,081	1.9799316	$ 82,872
15	$ 164,081	2.07892818	$ 78,926
16	$ 164,081	2.18287459	$ 75,168
17	$ 164,081	2.29201832	$ 71,588
18	$ 164,081	2.40661923	$ 68,179
19	$ 164,081	2.5269502	$ 64,933
20	$ 164,081	2.65329771	$ 61,841
21	$ 164,081	2.78596259	$ 58,896
22	$ 164,081	2.92526072	$ 56,091
23	$ 164,081	3.07152376	$ 53,420
24	$ 164,081	3.22509994	$ 50,876
25	$ 164,081	3.38635494	$ 48,454
26	$ 164,081	3.55567269	$ 46,146
27	$ 164,081	3.73345632	$ 43,949
28	$ 164,081	3.92012914	$ 41,856
29	$ 164,081	4.1161356	$ 39,863
30	$ 164,081	4.32194238	$ 37,965
			$2,640,348

Table C-11
Storm Water Filters for Springs (Component of Alternatives III.1 and III.2)

Assumptions

1. The Martin Spring Canyon storm water filter will remain.
2. Two new storm water filters for SWSC and Burning Ground Springs will be installed
3. Each unit has GAC cartridges, 2 each.
4. Yearly maintenance requires 2 replacements per year of cartridges
5. Installation costs taken from Martin Spring Canyon actual installation cost
6. The discount rate for the NPV calculation is 5%.
7. New Mexico Gross Receipts Tax is 5.8125%.

Phase I&II Design and Phase III Installation (Year 1) $ 88,436

Task 1 Project Plans $ 6,260

Office Labor	Rate	Hours	Subtotal	$ 6,260
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	4	$ 400	
Program Manager	120	4	$ 480	
Project Manager	110	4	$ 440	
Senior Engineer	100	8	$ 800	
Project Engineer	75	24	$ 1,800	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	
Permitting Specialist	70	2	$ 140	
Draftsman	55	8	$ 440	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 2 Safety Plan $ 4,210

Office Labor	Rate	Hours	Subtotal	$ 4,210
LANL Project Manager	175	2	$ 350	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	4	$ 440	
Senior Engineer	100		$ -	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60	24	$ 1,440	
Junior Scientist	55		$ -	
Permitting Specialist	70		$ -	
Draftsman	55	4	$ 220	
Word Processor	45	8	$ 360	
Quality Assurance	55		$ -	
Administrative Assistant	40		$ -	
Cost/Schedule Engineer	65		$ -	

Task 3 Readiness Review $ 3,680

Office Labor	Rate	Hours	Subtotal	$ 3,680
LANL Project Manager	175	8	$ 1,400	
LANL H&S	100	8	$ 800	
Program Manager	120		$ -	
Project Manager	110	8	$ 880	
Senior Engineer	100		$ -	
Project Engineer	75	8	$ 600	
Senior Scientist	100		$ -	
Junior Engineer	60		$ -	
Junior Scientist	55		$ -	

Table C-11
Storm Water Filters for Springs (Component of Alternatives III.1 and III.2)

Permitting Specialist		70		$ -		
Draftsman		55		$ -		
Word Processor		45		$ -		
Quality Assurance		55		$ -		
Administrative Assistant		40		$ -		
Cost/Schedule Engineer		65		$ -		

Task 4 Installation $ 74,286

Office Labor		Rate	Hours	Subtotal	$ 9,490
LANL Project Manager		175	16	$ 2,800	
LANL H&S		100		$ -	
Program Manager		120		$ -	
Project Manager		110	16	$ 1,760	
Senior Engineer		100		$ -	
Project Engineer		75		$ -	
Senior Scientist		100		$ -	
Junior Engineer		60	80	$ 4,800	
Junior Scientist		55		$ -	
Permitting Specialist		70		$ -	
Draftsman		55		$ -	
Word Processor		45		$ -	
Quality Assurance		55		$ -	
Administrative Assistant		40		$ -	
Cost/Schedule Engineer		65	2	$ 130	
Field Labor		Rate	Hours	Subtotal	$ 17,300
Field Supervisor		70	80	$ 5,600	
Field Engineer		75		$ -	
Field Equipment Operator		50	80	$ 4,000	
Field Driver		45	80	$ 3,600	
Field Technician		45		$ -	
Field Laborer		35	80	$ 2,800	
Field Craft Labor		50		$ -	
Field Electrician		65		$ -	
Field Equipment Operator - PT		25	20	$ 500	
Field Driver - PT		22.5	20	$ 450	
Field Technician - PT		22.5		$ -	
Field Laborer - PT		17.5	20	$ 350	
Field Craft Labor - PT		25		$ -	
Field Electrician - PT		32.5		$ -	
Equipment		Rate	Weeks	Subtotal	$ 9,296
Backhoe		1557	2	$ 3,114	
Dump Truck		2641	2	$ 5,282	
Truck		100	2	$ 200	
FOM		250	2	$ 500	
Mob/Demob				$ 200	
Materials	UOM	Rate	Qty	Subtotal	$ 38,200
Cartridge Stormfilter w/ media filled	each	16400	2	$ 32,800	
GAC Cartridge	each	100	4	$ 400	
Pipes, Hoses, & Fittings	LS	2000	1	$ 2,000	
PPE	LS	500	2	$ 1,000	
Concrete, Form, etc	LS	1000	2	$ 2,000	

Phase IV Operations and Maintenance Year 1-30, Per Year $ 38,500

Table C-11
Storm Water Filters for Springs (Component of Alternatives III.1 and III.2)

Task 1 Yearly Operations and Maintenance and Reporting $ 38,500

Office Labor		**Rate**	**Hours**	**Subtotal**	$ 17,860
LANL Project Manager		175	16	$ 2,800	
LANL H&S		100		$ -	
Program Manager		120	8	$ 960	
Project Manager		110	48	$ 5,280	
Senior Engineer		100		$ -	
Project Engineer		75	48	$ 3,600	
Senior Scientist		100		$ -	
Junior Engineer		60		$ -	
Junior Scientist		55		$ -	
Permitting Specialist		70		$ -	
Draftsman		55		$ -	
Word Processor		45	4	$ 180	
Quality Assurance		55		$ -	
Administrative Assistant		40	48	$ 1,920	
Cost/Schedule Engineer		65	48	$ 3,120	
Field Labor		**Rate**	**Hours**	**Subtotal**	**$ 4,320**
Field Supervisor		70		$ -	
Field Engineer		75		$ -	
Field Equipment Operator		50		$ -	
Field Driver		45		$ -	
Field Technician		45	96	$ 4,320	
Field Laborer		35		$ -	
Field Craft Labor		50		$ -	
Field Electrician		65		$ -	
Field Equipment Operator - PT		25		$ -	
Field Driver - PT		22.5		$ -	
Field Technician - PT		22.5		$ -	
Field Laborer - PT		17.5		$ -	
Field Craft Labor - PT		25		$ -	
Field Electrician - PT		32.5		$ -	
Other	**UOM**	**Rate**	**Qty**	**Subtotal**	**$ 16,320**
GAC Cartridge	each	100	12	$ 1,200	
8330	each	210	72	$ 15,120	

Summary

Phase	**Subtotal**	**NMGRT**	**Total**
Phase I&II Design and Phase III Installation (Year 1)	$ 88,436	$ 5,140	$ 93,576
Phase IV Operations and Maintenance (Year 1-30) (per year)	$ 38,500	$ 2,238	$ 40,738

Capital Installation Cost	**$ 93,576**
30 Year O&M Costs (NPV)	**$ 626,240**
Total Cost (NPV)	**$ 719,816**

Table C-11
Storm Water Filters for Springs (Component of Alternatives III.1 and III.2)

30 Year NPV Calculation
Discount Rate = 5.00%

Year	Incurred Cost	Divisor	Subtotal
1	$ 40,738	1.05	$ 38,798
2	$ 40,738	1.1025	$ 36,950
3	$ 40,738	1.157625	$ 35,191
4	$ 40,738	1.2155063	$ 33,515
5	$ 40,738	1.2762816	$ 31,919
6	$ 40,738	1.3400956	$ 30,399
7	$ 40,738	1.4071004	$ 28,952
8	$ 40,738	1.4774554	$ 27,573
9	$ 40,738	1.5513282	$ 26,260
10	$ 40,738	1.6288946	$ 25,009
11	$ 40,738	1.7103394	$ 23,819
12	$ 40,738	1.7958563	$ 22,684
13	$ 40,738	1.8856491	$ 21,604
14	$ 40,738	1.9799316	$ 20,575
15	$ 40,738	2.0789282	$ 19,596
16	$ 40,738	2.1828746	$ 18,662
17	$ 40,738	2.2920183	$ 17,774
18	$ 40,738	2.4066192	$ 16,927
19	$ 40,738	2.5269502	$ 16,121
20	$ 40,738	2.6532977	$ 15,354
21	$ 40,738	2.7859626	$ 14,623
22	$ 40,738	2.9252607	$ 13,926
23	$ 40,738	3.0715238	$ 13,263
24	$ 40,738	3.2250999	$ 12,631
25	$ 40,738	3.3863549	$ 12,030
26	$ 40,738	3.5556727	$ 11,457
27	$ 40,738	3.7334563	$ 10,912
28	$ 40,738	3.9201291	$ 10,392
29	$ 40,738	4.1161356	$ 9,897
30	$ 40,738	4.3219424	$ 9,426
			$ 626,240

Appendix D

Public Involvement Plan

Los Alamos
NATIONAL LABORATORY

Corrective Measures Study
SWMU 16-021(c)-99, TA-16
Public Involvement Plan
2 December 2003

RRES

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Public Involvement Plan

Purpose of Public Involvement

As described in Section Q, Task II, Section D of Module VIII of the Laboratory's Hazardous Waste Facility permit, the Laboratory is required to incorporate community relations planning into the Corrective Measures Study process. Risk Reduction and Environmental Stewardship–Remediation Services (RRES-RS) has developed an outreach program to provide the public timely and complete access to information and the decision-making process.

This public involvement plan identifies specific activities that the Laboratory will undertake to disseminate information and facilitate public involvement during the CMS project at Solid Waste Management Unit (SWMU) 16-021(c)-99. This plan is considered a working document; therefore some of the processes or schedule may change throughout the duration of the project. The objectives of the plan are to:

- provide the public/stakeholders with timely and objective information to assist them in understanding the potential risks associated with the site, the proposed remediation alternatives, and solutions;
- provide interpretations of data
- ensure that the public/stakeholders concerns are understood and considered in the decision-making process;
- provide the surrounding communities with public access to RRES-RS program technical staff; and,
- increase RRES-RS contact with the public/stakeholders in ways that encourage interaction and involvement in the corrective action process.
- The RRES-RS Program is accountable to:
- anyone who resides in the communities surrounding the Laboratory or has an interest in the activities of the Resource Conservation and Recovery Act (RCRA) corrective action process at the Laboratory,
- organizations representing or protecting specific groups or interests in our region, and
- public agencies including local, state, federal, and tribal governments.

Project Description

TA-16 was established during World War II for the development of explosive formulations, production and machining of explosive charges, and the assembly and testing of explosive components for the U.S. nuclear weapons program. Present-day use of this site is essentially unchanged, although facilities have been upgraded and expanded as explosive and manufacturing technologies have advanced.

The TA-16-260 facility is a high explosive- (HE) machining building that processes large quantities of HE. Machine turnings and HE wastewater were routed as waste to 13 sumps associated with the building. Historically, discharge from the sumps was routed to an outfall that was permitted to operate by the EPA as EPA 05A056 under the Laboratory's National Pollution Discharge Elimination System (NPDES) permit. The last NPDES permitting effort for this outfall occurred in 1994. The NPDES outfall was deactivated in November 1996, and it was officially removed from the Laboratory's NPDES permit by the EPA in January 1998.

The outfall, drainage channel below the outfall, and underlying alluvium and vadose zone are contaminated with the primary chemicals of potential concern, primarily HE wastes and barium. The combined areas of the outfall, pond area, and drainage are designated as SWMU 16-021(c)-99. Potential exposure pathways to human and ecological receptors include ingestion of groundwater and surface water, soil and sediment inhalation of suspended particulate matter, adsorption through dermal contact with affected soils or water, and ingestion related to food chain effects.

TA-16 is located in the southwest corner of the Laboratory. It covers 2410 acres, or 3.8 square mi. The land is a portion of that acquired by the Department of Army for the Manhattan Project in 1943. TA-16 is bordered by Bandelier National Monument along State Road 4 to the south and by the Santa Fe National Forest along State Road 501 to the west. To the north and east, it is bordered by TA-8, -9, -14, -15, and -49. TA-16 is fenced and posted along State Road 4. Water Canyon, a 200-ft-deep ravine with steep walls, separates State Road 4 from active sites at TA-16. Cañon de Valle forms the northern border of TA-16. Security fences surround the production facilities.

The Laboratory has implemented a phased corrective action program for SWMU 16-021(c)-99 in accordance with the requirements of Module VIII of the HSWA permit. The corrective action process, including those phases currently being implemented, include the following:

- RCRA facility assessment (RFA),
- Phase I RFI,
- RFI Phase II,
- Interim measure (IM) of source removal,
- RFI Phase III,
- CMS (current), and,
- Corrective Measure Implementation (CMI) (future).

Target Audience

For the purposes of this plan, the public includes all individuals, organizations, or public agencies potentially affected by the CMS phase of the project. Surrounding communities potentially affected by the CMS include Los Alamos County, San Ildefonso Pueblo, Santa Clara Pueblo, Cochiti Pueblo, Santa Fe, and Espanola and smaller communities.

Project Objectives

The purpose of the CMS is to evaluate the alternatives for remediation, and propose corrective measures, media cleanup standards, and a long–term monitoring program for SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon.

Proposed activities, purpose and date

Activity	Purpose	Projected Date
Mailer to Laboratory's mailing list, composed of individuals, organizations, and government and tribal officials in northern New Mexico	Introduce RRES-RS program, the SWMU-021(c)-99 High Performing Team, the RCRA corrective action process and the current RFI/CMS phases of the project. Notify public of planned open house.	December 2003, and every 6 months throughout the CMS/CMI.
Information Sheet to be posted on-line and made available in public reading room	Highlight the history and current activities at SWMU-16-021(c)-99 site. Provide update of CMS status.	January 2003, and every 6 months throughout the CMS/CMI.
Newspaper notice informing the public about SWMU-021(c)-99 activities	Placed in the Albuquerque Journal North, Santa Fe New Mexican, Rio Grand Sun, and the Los Alamos Monitor to advise the public on general project activities. Notify public of planned open house.	January 2003, and every 6 months throughout the CMS/CMI.
Open house hosted at Los Alamos Area Office or elsewhere	Provide informal overview through posters, handouts, and provide for interaction/Q&A with RRES-RS program staff.	January 2003, and every 6 months throughout the CMS/CMI.
Web Site at http://erproject.lanl.gov/	Access to all RFI and CMS documentation on the RRES-RS virtual library web site, and available at the Laboratory's Public Reading Room. Documents posted will include the CMS Plan and the CMS Report.	January 2003, and every 6 months throughout the CMS/CMI.
Tour of Cañon de Valle	Tour to view site setting, site habitat, and other site conditions.	May, 2003
Public comments to be maintained and made available on-line	Comments will be solicited throughout the project via all mechanisms listed above. The RRES-RS project staff will identify major public concerns.	January 2003, and every 6 months throughout the CMS/CMI.

Key Messages

The CMS process proposes preferred alternatives for site remediation. The choice of a preferred alternative involved criteria such as effectiveness, reliability, safety, ability to meet the remediation objectives, institutional constraints, and cost. At this site, additional important factors for consideration include the presence of wetlands and Mexican Spotted Owl habitat in Canon de Valle. The proposed preferred alternatives are the result of a balanced approach that considers these criteria and factors.

Key Contacts

Name	Organization	Phone	Email	Role
Donald Hickmott	LANL	667-8753	dhickmott@lanl.gov	LANL Project Lead
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Carmine Rodriguez	LANL	665-6770	carmenr@lanl.gov	PIP ER Lead
Dave McInroy	LANL	667-0819	mcinroy@lanl.gov	LANL ER Project Lead
David Gregory	DOE	667-5808	dgregory@lanl.gov	DOE ER Project Lead

LA-UR-98-3918
September 1998

CMS Plan for Potential Release Site

16-021(c)

Environmental Restoration Project
A Department of Energy Environmental Cleanup Program

Los Alamos
NATIONAL LABORATORY
Los Alamos, NM 87545

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EXECUTIVE SUMMARY

This document is the Corrective Measures Study (CMS) Plan for proceeding with the selection of remedial alternatives for Potential Release Site (PRS) 16-021(c) (the 260 outfall), for evaluating the transport pathways that carry contaminants from that PRS to Cañon de Valle and Martin Spring Canyon, and for designing a long term monitoring program for active contaminant transport pathways. This PRS is located at Technical Area (TA)-16 at Los Alamos National Laboratory (LANL). Two phases of RCRA Facility Investigations (RFI) have been conducted for PRS 16-021(c) and environs. The information in these reports form the basis for scoping the issues to be addressed by the CMS and for identifying remedial alternatives that are likely to be effective in reducing potential impacts to human health and the environment to acceptable levels. This CMS Plan is an element of the RCRA Corrective Action Process, which typically consists of a RCRA Facilities Assessment (RFA), an RFI, the CMS Plan, the CMS, and the Corrective Measures Implementation (CMI).

TA-16 is located on a mesa in the southwest corner of LANL. The TA-16-260 facility is a High Explosives (HE) machining building that processes production quantities of high explosives. Machine turnings and HE washwater are routed as waste to thirteen sumps associated with the building. Historically, discharges from the sumps were routed to an outfall that was permitted under LANL's National Pollutant Discharge Elimination System (NPDES) by the Environmental Protection Agency (EPA). Discharge from this outfall contaminated with HE waste and barium was reportedly as high as several million gallons per year. Consequently, the outfall and drainage channel from the outfall are contaminated with high levels of HE, and barium, and with low levels of many other constituents. Waters in nearby springs — SWSC Spring, Burning Ground Spring, and Martin Spring — and Cañon de Valle are also contaminated with HE and other constituents.

The impacts of the discharges from TA-16-260 have extended beyond the boundaries of the PRS necessitating that investigations and remedial actions be considered at scales larger than the PRS. The administrative boundary for this CMS includes the entire Cañon de Valle basin, which extends east to the confluence of Canon de Valle and Water Canyon and south to Martin Spring Canyon, The conceptual model for contaminant dispersal from PRS 16-021(c) includes four components: the contaminant source area, the subsurface, the transport pathways and springs, and the alluvial system in the canyon bottom. The four components are combined into one conceptual model because transport mechanisms result in interactions among the components. Contaminants in the source area impact the unsaturated subsurface, which impacts the springs and seep, which impact the alluvial system. Changes in one component of the model is likely to affect other downgradient components as well.

Actions have been proposed for TA-16-260 that dovetail with the site conceptual model components. The source area is proposed for an Interim Measure (IM) removal in the Phase II RFI Report to remove this major contaminant source at TA-16 from further opportunity for transport into the physical system. This CMS Plan focuses on those portions of the conceptual model that will remain in the environment following the IM.

This CMS Plan provides:

1. A preliminary evaluation of technologies that can be applied to the source area contaminated soils, alluvial sediments, spring waters and surface water,

2. A process and criteria for evaluating remedial alternatives

3. A Phase III sampling and analysis plan to characterize contaminant transport through the mesa, to the springs and to the alluvial system,

4. A design strategy for long-term monitoring to assess trends in contaminant concentrations and fluxes over time.

HE treatment technologies were evaluated through an Innovative Treatment Remediation Demonstration (ITRD) project. The ITRD panel evaluated both baseline and innovative technologies. Baseline technologies under consideration include granular activated carbon (GAC) for water. Technologies recommended for further investigation, including site-specific laboratory and bench scale studies, include: ex-situ stabilization, zero-valent iron and other chemical treatments, and anaerobic bioslurry for sediments, and passive barriers and phytoremediation for waters. LANL will also share the results of laboratory and pilot scale studies performed at Pantex as part of the ITRD project.

Phase III sampling focuses on five issues: 1) connectivity between the TA-16-260 source region and nearby springs and seeps; 2) residence times of water in the saturated subsurface at TA-16; 3) the dynamics of flow and contaminant concentrations in springs and seeps; 4) the dynamics of the alluvial water system; and 5) contaminant inventories in the alluvial sediment system. These issues are being addressed via extensive sampling for contaminants, stable isotopes and geological/geophysical parameters in springs, seeps, alluvial waters, and alluvial sediments in the Cañon de Valle basin.

Questions remain regarding the impacts of the 260 outfall upon perched aquifers and the regional aquifer. Impacts to deeper groundwater will be estimated using the Phase III sampling results. The scale of these questions exceeds TA-16 and is being addressed in collaboration with the site-wide hydrogeological investigations for the laboratory. A deep well is being drilled on the mesa east of PRS 16-021 (c) and another is planned for the confluence of Cañon de Valle and Water Canyon. Information gained from these wells and larger scale modeling may also be used to assess the impacts PRS 16-021(c) upon groundwater resources.

1.0 INTRODUCTION

This document presents an evaluation of possible remediation alternatives and describes additional data needs for potential release site (PRS) 16-021(c), which is located at Los Alamos National Laboratory's (LANL's) Technical Area (TA) 16. This site, and the associated hydrogeologic system including Cañon de Valle, represents a significant potential risk to human health and the environment; hence, it is being evaluated in a corrective measures study (CMS) and will undergo a corrective measure implementation (CMI) (LANL 1996, 55077). The high explosives- (HE) contaminated source region at PRS 16-021 (c) will be removed in an interim measure (IM) during fiscal years (FYs) 1999 and 2000. The IM plan will be delivered as a separate document during FY99. The IM will be conducted independently of, and concurrently with, the CMS. However, results of the CMS technology evaluations may be used as part of the IM waste management design. If source removal during the IM is successful, the CMS will focus primarily on surface water and the alluvial system in Cañon de Valle.

LANL is a multidisciplinary research facility owned by the Department of Energy (DOE) and managed by the University of California. LANL is located in north-central New Mexico, approximately 60 miles northeast of Albuquerque and 20 miles northwest of Santa Fe. The LANL site covers 43 square miles of the Pajarito Plateau, which consists of a series of fingerlike mesas separated by deep canyons that contain ephemeral and intermittent streams running from west to east. Mesa tops range in elevation from approximately 6200–7800 ft. The eastern portion of the plateau stands 300–900 ft above the Rio Grande.

LANL's Environmental Restoration (ER) Project is involved in a national effort by the DOE to clean up facilities that were historically involved in weapons production. The goal of the ER Project is to ensure that DOE's past operations do not threaten human health, safety, or the environment in and around Los Alamos County, New Mexico. To achieve that goal, the ER Project is currently investigating sites potentially contaminated by past operations.

1.1 Purpose and Regulatory Context

This multi-phase investigation, including sampling and analysis, is being conducted under the requirements of the Resource Conservation and Recovery Act (RCRA). Los Alamos National Laboratory's ER Project is implementing a corrective action program for PRS 16-021(c) in accordance with requirements stipulated in the Hazardous and Solid Wastes Amendments (HSWA) of 1984, Permit (Module VIII). Appendix F presents a crosswalk of HSWA Permit requirements and the locations in this CMS plan (or other documents) where these requirements are satisfied or addressed.

The RCRA corrective action program at PRS 16-021(c) is being implemented in phases. The following is a list of the activities that have been, or will be, accomplished in each phase.

- RCRA facility assessment (RFA) – initial site assessment
- RCRA facility investigation (RFI) – site characterization
- Interim measure– control or abatement of ongoing risks
- Corrective measures study– evaluation of alternatives
- Corrective measure implementation–implementation of the selected alternative

This document is the CMS plan for proceeding with the selection of remedial alternatives for PRS 16-021(c) (the 260 outfall) and for evaluating the transport pathways that carry contaminants from that PRS to Cañon de Valle and the informally-named Martin Spring Canyon. The RFA and two phases of RFI have been conducted for PRS 16-021(c) (LANL 1996, 55077; Environmental Restoration Project 1998 in preparation). The information in these reports forms the basis for scoping the issues to be addressed by the CMS and for identifying remedial alternatives that are likely to be effective in reducing potential impacts to human health and the environment to acceptable levels. The purposes of the CMS plan are to:

- delineate the area under consideration for the CMS,
- describe current conditions at the facility,
- describe the general approach to investigation and potential remedies,
- define the overall objectives of the study,
- identify specific remedies to be studied that have a high likelihood of being effective given site-specific conditions,
- describe any pilot- or bench-scale studies necessary,
- describe a process for detailed evaluation of alternatives,
- identify additional data needs,
- present a Phase III investigation sampling plan to satisfy those needs,
- propose the schedule for conducting the studies, and
- propose the outline of the CMS report.

A major component of the CMS will be to collect contaminant data for active transport pathways that support the human health and ecological site-specific risk assessments. If remediation is necessary, these data will be used to develop specifications for remedial technologies.

The CMS will also provide a design for a long-term monitoring program for the Cañon de Valle basin. Long-term monitoring is necessary because contamination will likely remain in the subsurface and Cañon de Valle alluvial system after the PRS 16-021(c) remediations are completed. In addition, there are other contaminant sources to Cañon de Valle that may be impacting the active transport pathways. Monitoring will show the effects of the source removal and support site management decisions regarding the need for further actions.

The 260 outfall, pond area, and drainage are a major contaminant source for the active transport pathways. This source area is proposed for an IM in the Phase II RFI Report (Environmental Restoration Project 1998, in preparation). Consequently, the planning and design for the IM will occur separately from the CMS and CMI. The IM plan will describe a post-removal characterization of the outfall area that will be used during the CMS and CMI.

1.2 Facility Location and Background

TA-16 is located in the southwest corner of the Laboratory (Figure 1.2-1). It contains 2 410 acres or 3.8 square miles. The land is a portion of that acquired by the Department of Army for the Manhattan Project in 1943. TA-16 is bordered by Bandelier National Monument along State Road 4 to the south and the Santa Fe National Forest along State Road 501 to the west. To the north and east, it is bordered by TAs 8, 9, 14, 15, and 49. TA-16 is fenced and posted along State Road 4. Water Canyon, a 200-ft-deep ravine with steep walls, separates State Road 4 from active sites at TA-16. Cañon de Valle forms the northern border of TA-16. Security fences surround the production facilities. A complete discussion of the environmental setting for TA-16 is presented in Appendix B of the Phase II RFI Report for TA-16-260 (Environmental Restoration Project 1998, in preparation).

TA-16-260 is located on the north side of TA-16 (Figure 1.2-1). The structure was originally built in 1951, with only minor modifications to the structure since then.

1.2.1 Facility History and Operations

TA-16 was established during World War II to develop explosive formulations, cast and machine explosive charges, and assemble and test explosive components for the US nuclear weapons program. Almost all of the work was conducted in support of the development, testing, and production of explosive charges for the implosion method. Current use of this site is essentially unchanged, although facilities have been upgraded and expanded as explosive and manufacturing technologies have advanced.

The TA-16-260 facility is an HE machining building that processes large quantities of HE. Machine turnings and HE washwater are routed as waste to 13 sumps associated with the building. Historically, discharges from the sumps were routed to an outfall that the Environmental Protection Agency (EPA) permitted under the Laboratory's National Pollutant Discharge Elimination System (NPDES). The outfall and drainage channel from the outfall are contaminated with HE waste and barium. The NPDES outfall was deactivated in November 1996, and its NPDES permit (EPA 05A056) was deleted in January 1998. The sumps, drain lines, and troughs of this facility have been designated as PRS 16-003(k), and the outfall, pond area, and drainage as PRS 16-021(c). PRS 16-021(c) is the focus of this report. PRS 16-003(k) was addressed in the Phase I RFI report for this facility, as discussed in Section 1.3, Previous Investigations.

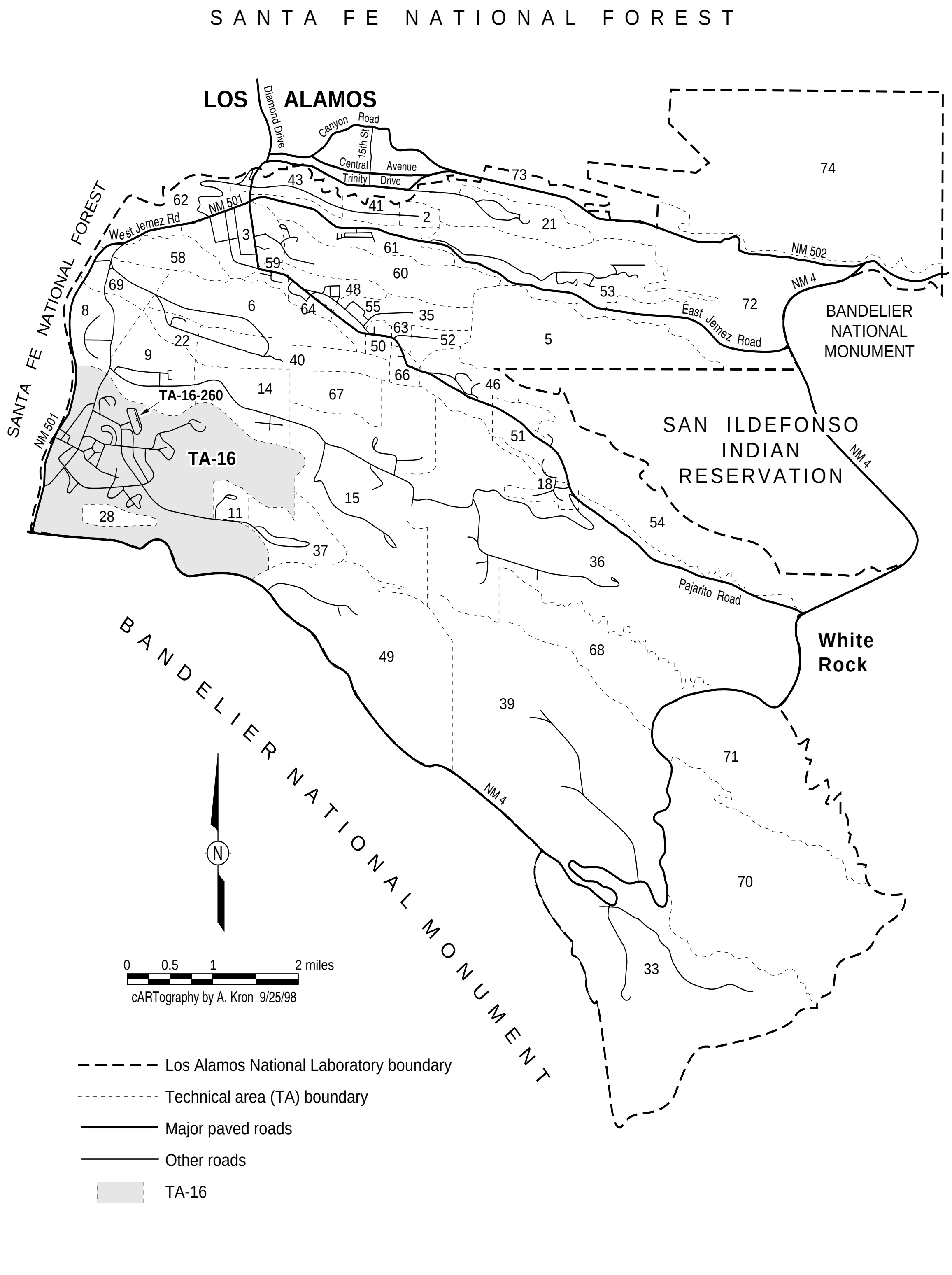


Figure 1.2-1.Location of TA-16 with respect to Laboratory technical areas and surrounding landholdings. Building TA-16-260 is also shown.

1.2.2 PRS Description

The PRS consists of the outfall and the drainage associated with PRS 16-003(k), the 13 HE sumps on the northeast side of TA-16-260 (Figure 1.2-2). HE-contaminated water from the outfall entered a pond about 40 ft from the outfall. The small pond is approximately 55 ft long and was formed by a rock dam located 93 ft from the outfall. The longitudinal axis of the former pond is oriented east-west, with flow in the easterly direction. The dam is about 9-ft thick, but only the first 2 ft of rock are closely packed. At present there is no perennial water in the pond, although the soil and sediment are wet sporadically. Rainwater from the roadway on the northeast side of TA-16-260 also flowed into the pond before an interim action was performed in 1995 and 1996 to divert all runoff to and from the pond area. The drainage channel from the outfall flows approximately 600 ft to the bottom of Cañon de Valle over a drop in elevation of 80 ft. The drainage channel from the outfall is well defined, with apparent high-water marks. The water flows over a 15-ft-high cliff approximately 400 ft from the outfall.

HE contamination in the outfall and drainage area has been recognized since at least 1960, when the first known soil samples from the outfall were analyzed. Contaminants known to be present before RFI investigations included barium, and the HEs RDX, TNT, and HMX. RFI investigations confirmed these constituents and identified additional constituents of concern. These additional constituents include: DNT, amino-DNT, TNB, acetone, chloromethane, dichloroethane, isopropyltoluene, tetrachloroethene, trichloroethene, anthracene, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, copper, cadmium, chromium, cobalt, lead, nickel, silver, vanadium, uranium, and zinc.

Stressed vegetation is evident within the PRS boundaries between the rock dam and the cliff. There are a few dead trees in Cañon de Valle, possibly associated with TA-16-260 discharge, downstream from PRS 16-021(c).

HE, barium, and low levels of other constituents have been observed in waters at Sanitary Wastewater System Consolidation (SWSC) Spring, Burning Ground Spring, and Martin Spring, in surface and alluvial waters in Cañon de Valle, and in intermittent perched waters observed during drilling (Figure 1.2-3). RDX is observed most frequently and presents the most significant potential risk to human health. Constituent concentrations in water vary significantly with season and with flow rates of the springs and surface water.

A series of best management practices (BMPs) were instituted at PRS 16-021(c) during 1995 and 1996 as an Interim Action (LANL 1996, 53838). These BMPs were implemented when a significant amount of inorganic and HE contamination became evident in nearby springs and surface waters. The BMPs consist of four engineered controls:

- a sandbag dam and diversion pipe upgradient from the former HE pond,
- a sandbag dam east of the parking lot behind TA-16-260,
- geotextile fabric matting in the former HE pond area, and
- straw-bale check dams within the PRS drainage between the rock dam and the 15-ft-high cliff.

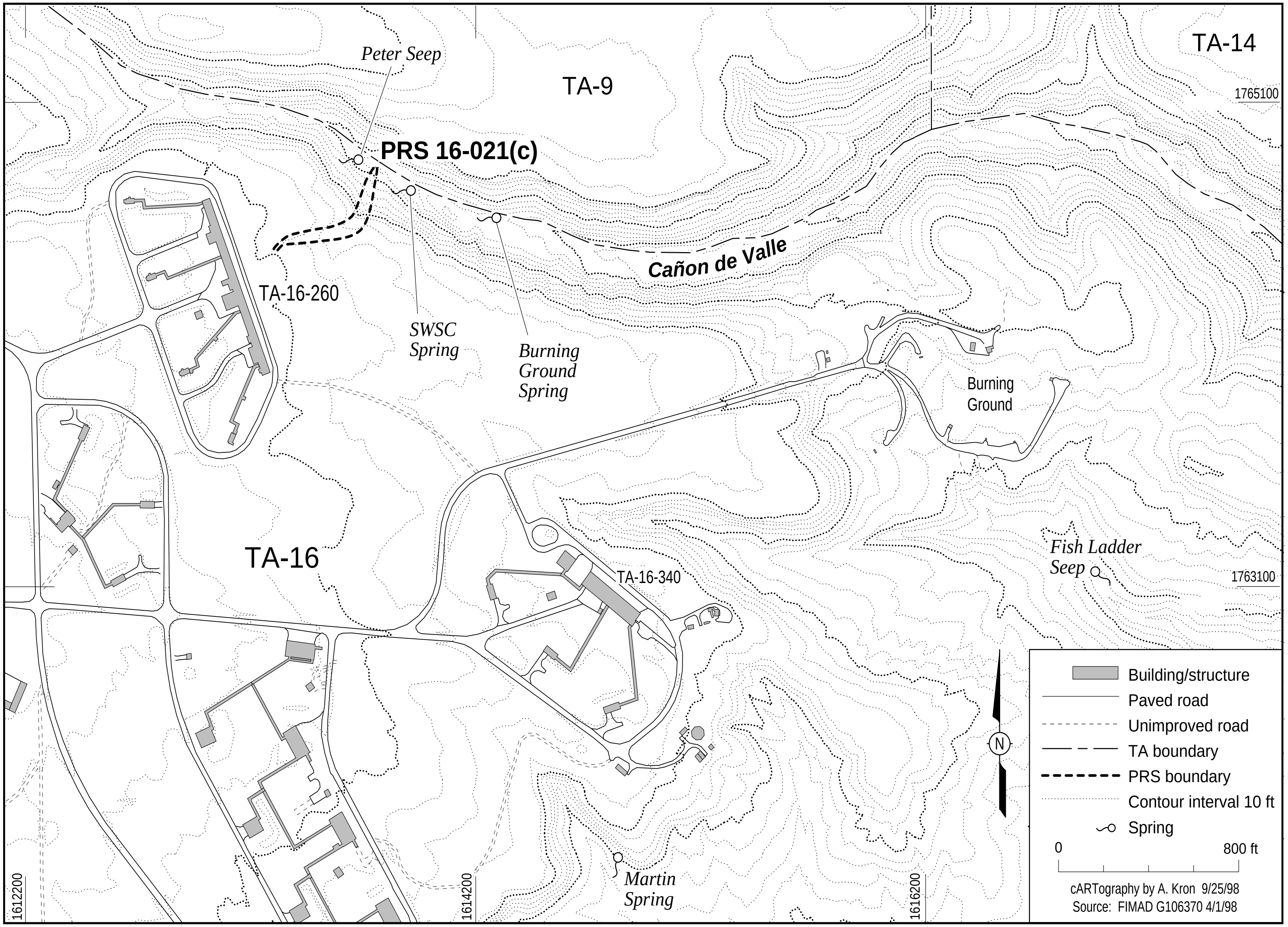


Figure 1.2-2 Location of PRS 16-021(c) and associated physical features.

The rationale for these BMPs is to minimize infiltration in the 260 pond area and runoff from the PRS, thereby decreasing contaminant migration to surface water and groundwater. Casual contact with contaminants by the public or workers is extremely unlikely because the outfall is in a restricted access area and all activity behind the 260 building is forbidden during operations. These BMPs are inspected regularly (at least quarterly) and are maintained and upgraded to ensure that runoff from this site are minimized.

1.2.3 Land Use and Nearby PRSs

The land adjacent to PRS 16-021(c) is dedicated to continued Laboratory operations. PRSs in the vicinity of the 260 outfall are shown in Figure 1.2-3. Several sites with the greatest potential influence on the 260 outfall investigation include the following:

- MDA-R (PRS 16-019). This site is a material disposal area (MDA) located north of the TA-16-260 outfall area. MDA-R was constructed in the mid-1940s and used as a burning ground for waste explosives and possibly other debris. Potential contaminants at this disposal area include HE, HE byproducts, and metals (particularly barium). The site was abandoned in the early 1950s.

- TA-16 Burning Ground [PRSs 16-010(a–n), 16-016(c)]. This site is located on a level portion of the mesa in the northeast corner of TA-16. The burning ground was constructed in 1951 for HE waste treatment and disposal. Over the years many hundreds of thousands of pounds of HE and HE-contaminated waste material have been burned at this location. The remaining noncombustible material was subsequently placed in the MDA-P landfill north of the burning ground (through 1984) or taken to TA-54 for disposal (1984 to present). A barium nitrate pile was located at the TA-16 Burning Ground for many years.

- MDA-P (PRS 16-018). This site is a material disposal area that contains wastes from the synthesis, processing, and testing of HE, residues from the burning of HE-contaminated equipment, and construction debris. HE waste disposal activities at this site started in the early 1950s and ceased in 1984. The site is located on the south slope of Cañon de Valle. MDA-P is currently subject to RCRA clean closure activities, and will be removed by 1999.

These three sites may contain similar contaminants to those found in PRS 16-021(c), and all drain into Cañon de Valle.

1.3 Conceptual Understanding and Approach

Overall, the approach to the RFI/CMS process at the 260 outfall has focused on source identification, including delineation of soil and sediment contamination, and confirmation of groundwater and surface water contamination. In this process data were evaluated to determine if contamination is present, if contamination presents a threat to human health or the environment, if contamination has been sufficiently delineated, and what further action is needed. Because data evaluation presented in both the Phase I RFI report (LANL 1996, 55077) and the Phase II RFI report (Environmental Restoration Project 1998, in preparation) shows contaminant concentrations in the outfall area to be a source of ongoing potential risk, an IM will be conducted to mitigate further contaminant transport from the source area. Once the IM is complete and the source area is removed, potential impacts to groundwater and/or surface water quality will continue to be evaluated during the CMS process and in a site-specific risk assessment (SSRA).

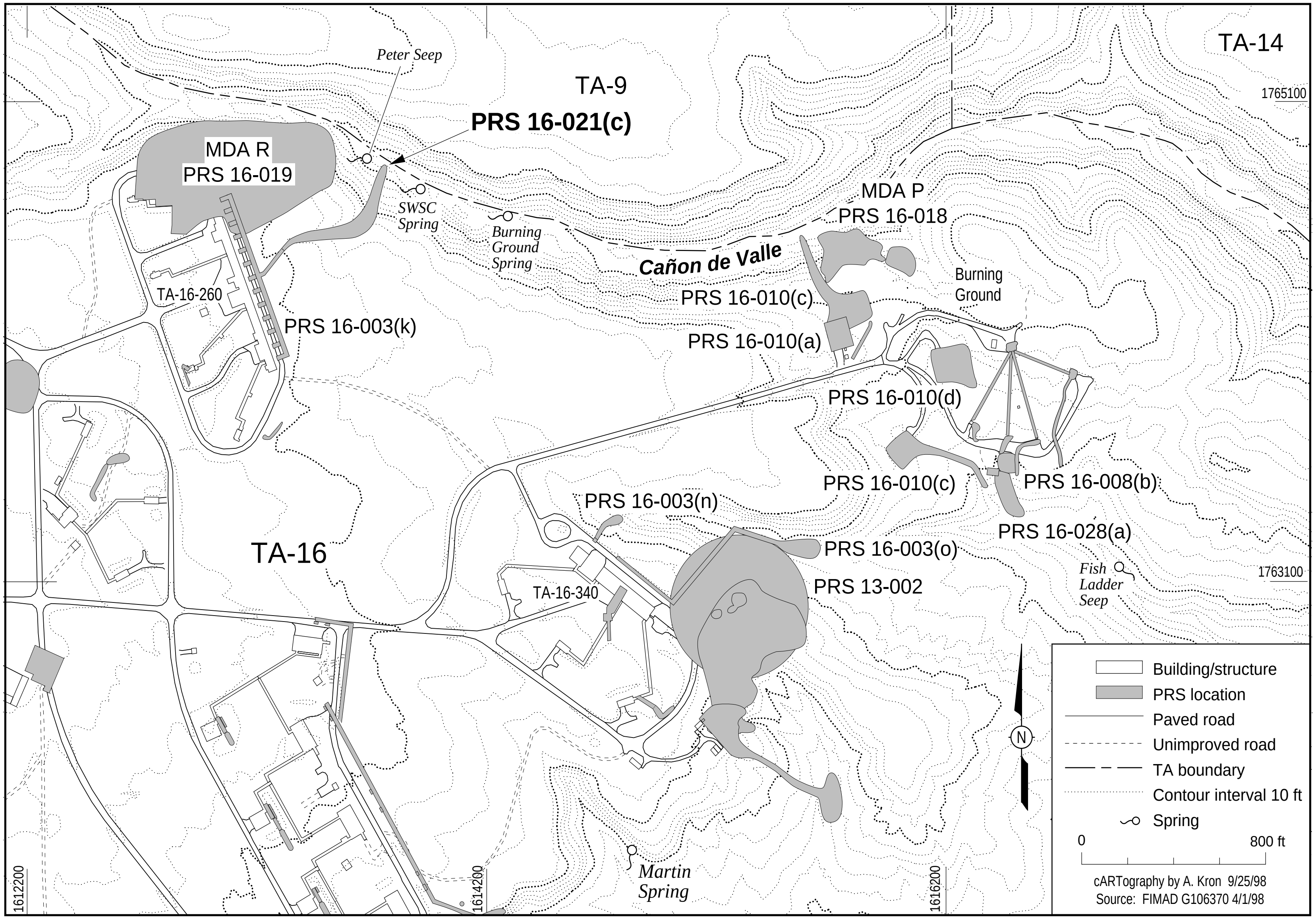


Figure 1.2-3 PRSs in the vicinity of PRS 16-021(c).

According to the 1995 Update of the LANL Site Development Plan (LANL 1995, 57224) future land use at TA-16 is designated for industrial operations, such as HE research and development and testing. Most of the areas of TA-16 are active sites for the Engineering Sciences and Applications Division of the Laboratory, and construction of new buildings and other facilities in the area is possible. On-site workers (individuals who work on or near the site) and construction workers (individuals who would be exposed to near-surface and subsurface soils through various activities, including excavation) are considered the most likely individuals to be exposed. They are therefore used in the exposure scenarios that will be evaluated in the human-health screening assessment and the SSRA.

In order to complete the CMS process at the site, the following activities and associated documents are proposed:

1. The Phase II RFI report (FY98). The Phase II RFI report includes data assessment, conceptual model development, and both human-health and ecological screening assessments. This report will also include a recommendation for a source removal IM, targeted for completion in FY2000. Removal of the highly contaminated source material at this outfall will alleviate additional transport of contaminants into the subsurface and alluvial systems in Cañon de Valle. Because additional data will be required to complete the conceptual model and SSRA, the SSRA for the site will be delayed until this information is available.

2. The CMS plan and Phase III sampling plan. This document, the CMS plan, proposes an approach for selecting remedial approaches that will mitigate potential risks to human health and the environment and proposes Phase III investigations at the site to further evaluate contaminant pathways and prepare for the human-health and ecological site-specific risk assessments.

3. IM plan and implementation. A plan detailing the source removal effort will be prepared to accomplish an IM source removal of several thousand cubic yards of highly contaminated material in FY99 and FY2000. This plan will consider both risk-based cleanup levels and practical engineering approaches. The plan will include a sampling and analysis plan (SAP) to characterize the extent of contamination remaining in the environment following source removal. This information will be included in the risk assessment and CMS efforts to follow.

4. Phase III RFI/IM report. A report documenting the results of the Phase III data collection, conceptual model refinement, and IM efforts will be prepared. This report will include both human-health and ecological risk SSRAs to be used during the final CMS process to follow. This report may be submitted concurrently with the CMS report.

5. CMS report. A CMS report will be prepared that evaluates the remedial alternatives for contaminants remaining in the unsaturated subsurface, the alluvial system in Cañon de Valle (both surface and alluvial water), and groundwater. Long-term monitoring requirements will also be addressed in this report.

1.4 Special Problems

Based on current understanding of the site, the conceptual model for the 260 outfall includes a highly complex set of contaminant transport pathways and hydrogeologic features. Contaminant transport pathways are structurally controlled in the underlying Bandelier Tuff by fractures and other preferential pathways such as surge beds between tuff units. Major uncertainties in the conceptual model result from this complexity, particularly regarding the location of saturated zones in the subsurface and associated contaminant pathways at the site. The presence of these saturated zones may also be seasonal or episodic. Further study of the site is warranted to understand the dynamics of contaminant transport and to demonstrate the effects of remedial actions. Even as more data are collected at the site, significant uncertainties may remain in the conceptual model. It is not necessary or feasible to determine the exact extent of contamination at the site in a detailed and spatially explicit manner. Extent can only be described in a gross sense based on current understanding and on monitoring data as it is obtained. Sufficient understanding of the site will be obtained for the purposes of selecting and implementing remedial approaches that will mitigate risks to human and ecological receptors.

1.5 Plan Organization

This CMS plan is organized into seven chapters and seven appendices. The first chapter is this introduction. The second chapter is a summary of the RFI investigations that have been performed and reported to-date. Chapter 3, The Corrective Measure Objectives and Scope, defines the objectives of the CMS and delineates the setting and institutional considerations.

Chapter 4 of this document identifies and selects remedial approaches that are likely to be successful in meeting corrective action objectives. Technologies for treating source area wastes generated during the IM are also evaluated in Chapter 4. Information on the effectiveness of these technologies will be provided to the IM project.

Chapter 5 provides the criteria to be used for comparing and selecting remedial approach alternatives. Most of the criteria are taken from Module VIII of the HSWA Permit (EPA 1990, 01585). Additional criteria relevant to site management decisions at the Laboratory are identified.

Chapter 6 addresses additional data needs for characterization of the active transport pathways, including connections from the source area to the seep and springs, dynamics of the seep and springs, discharge profiles of Cañon de Valle surface water, surface water–alluvial water interactions, and contaminant concentrations and inventories in sediments. Results of the sampling and analysis program will be used for the human-health and ecological SSRAs and for designing the monitoring program.

Chapter 7 presents an approach for designing the long-term monitoring program. It is not possible to develop a specific design for the monitoring program without analyzing and interpreting the data collected through implementation of the SAP described in Chapter 6. The considerations outlined in Chapter 7 can be used to guide the analysis and interpretation of the data.

Appendix A is a glossary and list of acronyms. Appendix B is a schedule for the CMS/CMI process at PRS 16-021(c). Appendix C is a proposed outline for the CMS report. Appendix D describes project management roles and responsibilities. Appendix E describes cost/benefit and risk/benefit considerations that will be applied in the CMS report. Appendix F contains excerpts from LANL's HSWA Module to the RCRA permit. Appendix G contains hard copies of the references cited in this report.

2.0 SUMMARY OF RFI DATA

The summary of the RFI data are broken into three subsections that correspond to the more detailed results that were reported in the Phase II RFI report (Environmental Restoration Project 1998, in preparation). The three subsections are entitled:

- Source Area,
- Cañon de Valle Alluvial System, and
- Subsurface Tuff and Subsurface Saturated System.

2.1 Source Area

Sampling at the source area included collection of surface and near-surface samples of drainage sediments in the outfall area from the outfall itself to Cañon de Valle and also sampling in 15 boreholes drilled in or near the drainage (Figure 2.1-1). The main contaminants identified in the drainage sediments were the major constituents of HE, including barium, HMX, RDX, and TNT, at percent levels, particularly in the ponded area, and other HE, including DNT, amino-DNT, and TNB, at lower levels. In addition, a number of other chemicals were found in these sediments with trends similar to those of the major contaminants. Inorganic chemicals included copper, cadmium, chromium, cobalt, lead, nickel, silver, vanadium, uranium, and zinc, and possibly arsenic, mercury, and manganese. These inorganic chemicals were compared with BVs and were present at levels up to five times BVs in the sediment samples, but some only appear above background in subsurface samples from the boreholes, and generally at less than twice the BVs. The significant non-HE organics in the surface/near-surface were bis(2-ethylhexyl)phthalate and anthracene. Other phthalates and polycyclic aromatic hydrocarbons(PAHs) were detected at much lower levels in subsurface samples where detection levels were not inflated (as they were for some of the sediment samples) by extremely high concentrations of HE. Other organics in the subsurface were detected sporadically and/or at very low levels, although acetone was reported in many samples.

The highest concentrations of HE and barium, as well as of the other chemicals mentioned above, were found in samples collected down the center of the drainage above the soil/tuff interface, particularly within 300 ft of the outfall. Lateral bounding samples within 12 ft of the centerline were sometimes contaminated, especially with HE and barium, but at much lower levels. Almost no surface contamination was found outside the drainage proper.

Collocation among almost all of the contaminants was pronounced in the surface/near-surface samples; exceptions are the inorganics more tentatively identified above (arsenic, manganese, and mercury). Most showed a marked decrease between the pond area and the lower end of the drainage. Barium, however, was found in the 1–3% range all the way down into Cañon de Valle. The average levels of HMX, although not as high as in the pond area, are close to 1% even at the lower end of the drainage, which is more than 400 ft from the outfall. The area affected by the outfall also widens lower in the drainage (approximately 300–400 ft from the outfall); percent levels of barium, as well as HMX at concentrations exceeding 1000 mg/kg, were reported in some of the lateral bounding samples 200–600 ft from the outfall.

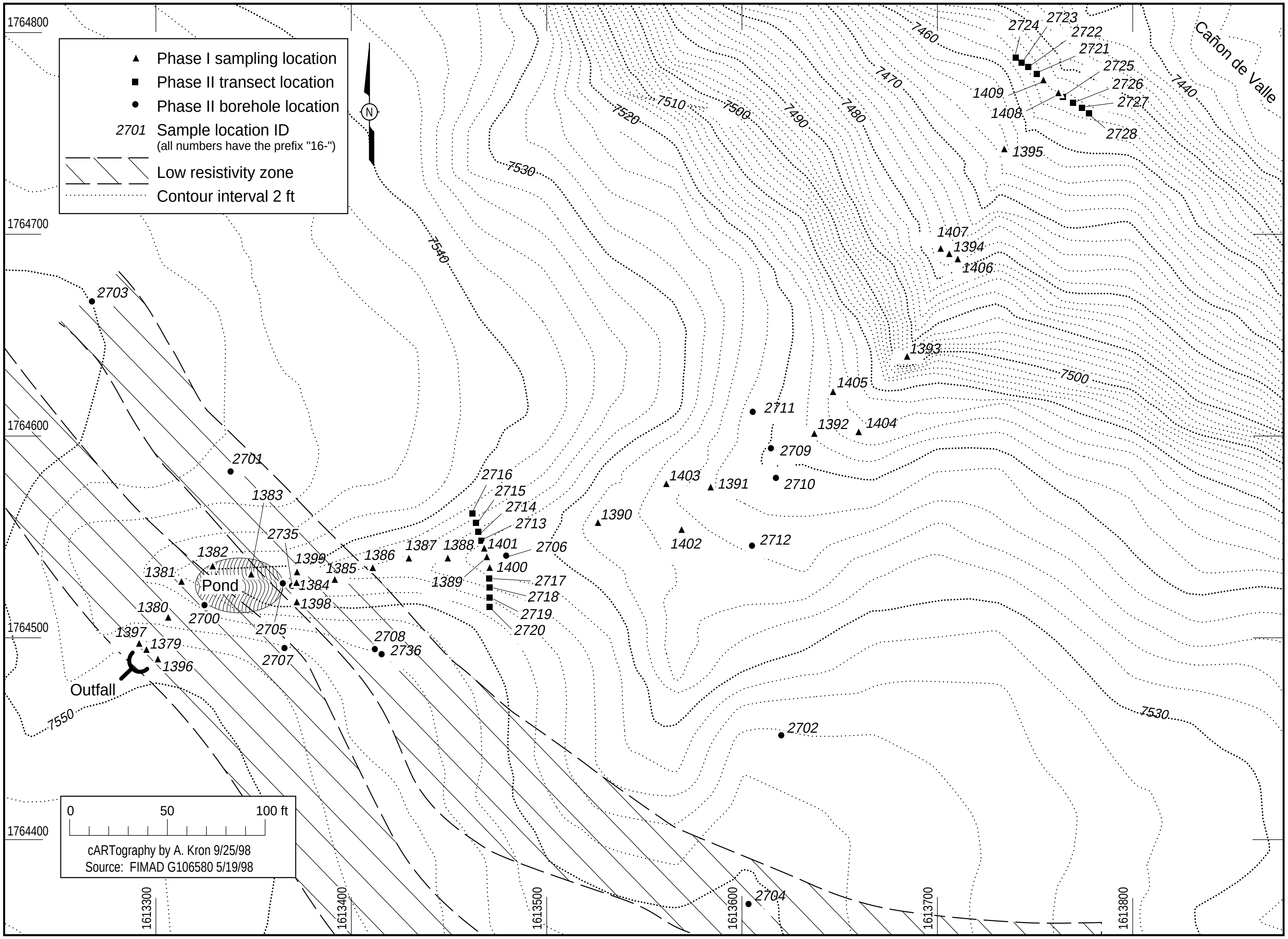


Figure 2.1-1 Phase I and Phase II sampling locations for the TA-16-260 outfall source area.

Collocation of contaminants is not so readily demonstrated in the subsurface data, in part because most of the minor contaminants are found only sporadically and at low levels, if at all, in these data. However, the six boreholes drilled within the drainage account for the great majority of detected or above-background subsurface results for both HE and other chemicals.

The trends seen in these data suggest that the planned IM removal action, targeting sediments in the first 400 ft of the drainage, plus up to 20 ft of tuff beneath the pond or an additional 100 ft down drainage from the pond, will be highly effective. Not only will the IM remove the bulk of the HE and barium contamination, but also most of the contamination associated with other organic and inorganic compounds. The numbers in Table 2.1-1 are approximate, but they show that 80–95% of the major contaminants at the TA-16-260 outfall reside in the sediments between the outfall and the 15-ft cliff where the drainage drops into Cañon de Valle, approximately 420 ft below the outfall. Most of the remaining barium and HMX is in the sediments on the slope of Cañon de Valle, while the remaining RDX and TNT is largely in the tuff beneath the pond.

Table 2.1-1. Average Concentration and Percent of Total Contamination in the TA-16-260 Outfall Drainage by Section and Medium

	Volume (yd^3)	Barium (mg/kg)		HMX (mg/kg)		RDX (mg/kg)		TNT (mg/kg)	
		Average	%	Average	%	Average	%	Average	%
Sediments: Outfall to pond	90	8 700	5.4	4 700	1.1	20 400	9.9	9 500	10.4
Sediments: Pond to 260 ft from outfall	570	15 100	57.8	60 300	88.3	27 500	83.2	11 600	79.0
Qbt5: Pond to 260 ft from outfall	180	240	2.8	270	1.2	660	6.0	510	10.4
Sediments: 260– 420 ft from outfall	200	16 200	19.4	9 800	4.5	550	0.5	70	0.1
Qbt5: 260– 420 ft from outfall	1710	90	0.8	2	0.0	1	0.0	0	0.0
Sediments: more than 420 ft from outfall	1330	10 300	13.9	9 600	5.0	350	0.4	21	0.0

For conceptual model development, the key stratigraphic features noted in source area boreholes are the soil/tuff interface, the upper surge bed that separates unit Qbt4 from unit Qbt5, the powder unit within the Qbt4 unit, and, in the deepest holes, another surge bed near the bottom of the Qbt4 (Figure 2.1-2). Consolidated strata between the soil/tuff interface and the upper surge bed, between this surge bed and the top of the powder unit, and below the powder unit include partially, moderately, and densely welded tuffs. These variations in welding appear to influence the transport of contaminants away from the outfall. In particular, each of the layers of moderately to densely welded tuff appears to correspond to at least 1 order of magnitude drop in levels of HE contamination: from percent levels to less than 1000 mg/kg across the soil/tuff interface, to less than 5 mg/kg below the upper surge bed, and finally to below detection levels at the bottoms of the deeper boreholes.

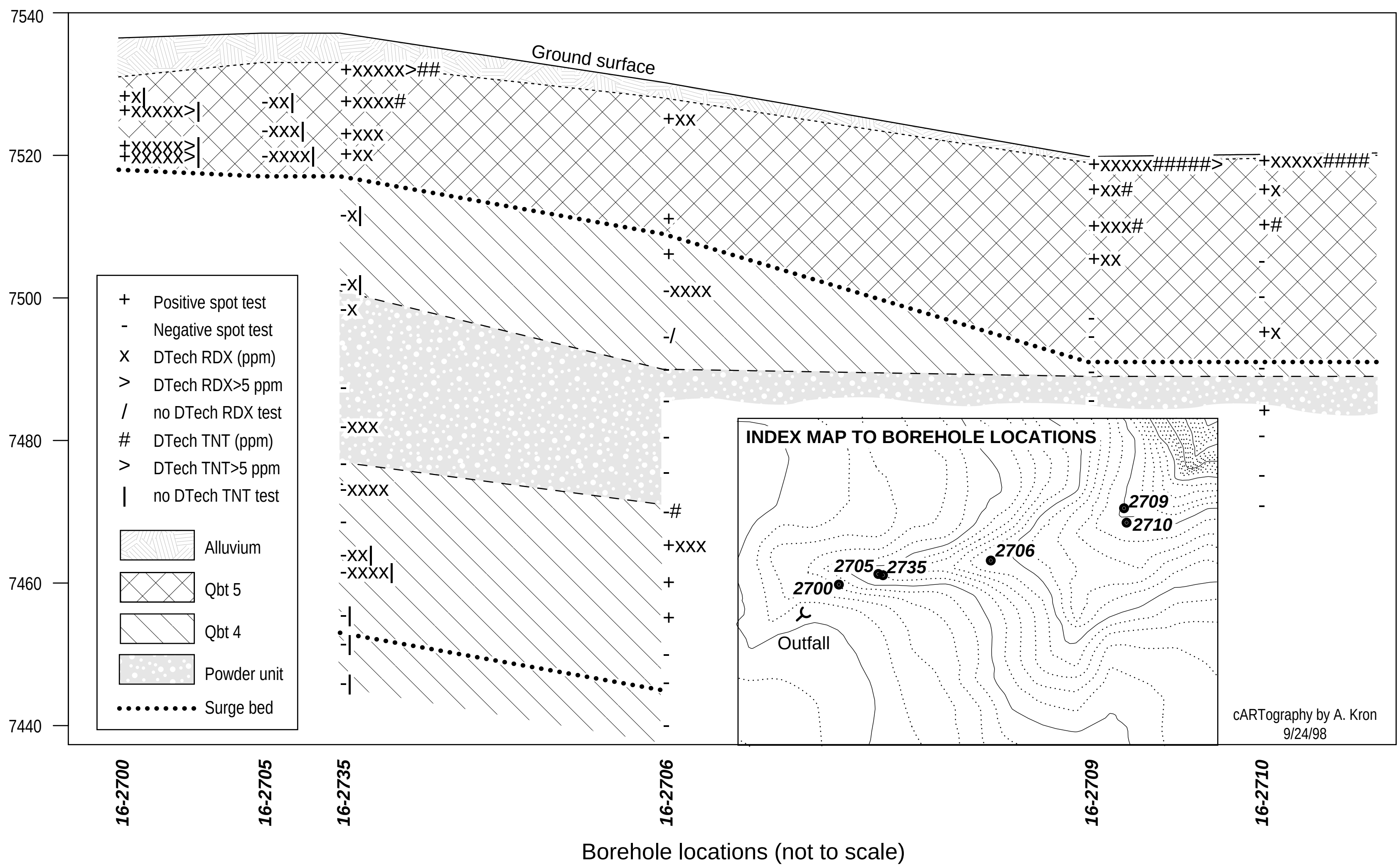


Figure 2.1-2 Stratigraphy beneath the TA-16-260 outfall drainage. HE screening results in tuff are also shown.

Field HE screening samples, collected at the rate of approximately one sample per five feet of core, provide the most complete set of downhole observations, although the results are only semiquantitative and exhibit a fairly high false positive rate. These results suggest the following:

- significant levels of HE contamination between the soil/tuff interface and the upper surge bed in the six boreholes within the drainage, particularly in the boreholes drilled in and just below the ponded area,
- some contamination, but at much lower levels, at the top of Qbt4 below the upper surge bed, both within the drainage and in some of the holes to the south and east of the pond,
- relatively few positive readings in the powder unit, even in the drainage boreholes,
- a rise in contamination at the base of the powder unit, again in holes to the south of the drainage, as well as in the two holes within the drainage that penetrate to this depth, and
- clean intervals at the bottom of most boreholes.

The laboratory data are much sparser than field data, but they provide additional information. Screening results, whether positive or negative, are not always confirmed, but positive results in which the screening results were negative (relative to a nominal detection level of 0.5 mg/kg for the field screening kits) do not exceed 3.5 mg/kg and are generally less than 1.5 mg/kg. These results provide some confidence that the vertical extent of contamination near the source area has, in fact, been bounded at 70–100 ft below the surface.

Based largely on samples from a single borehole at the upper end of the ponded area, the upper surge bed appears to be a preferential pathway for contamination, with connections to the surface that were not intercepted during drilling. One of these samples was a saturated sample from which the liquid evaporated before analysis, and the analytical results showed not only very high levels of HE and other previously-identified contaminants but also several PAHs not found in any other sample. Unfortunately, no other laboratory samples were collected from this important geological interface because core in this interval was lost at the other drilling locations. One important exception to the statement that most of the positive laboratory results come from drainage boreholes is the observation of RDX, TNB, and butylbenzylphthalate in two samples collected near the bottom of the powder unit in Borehole 16-2707, located about 30 ft south of the pond. RDX was also found in a sample (0316-97-0390 at 54-55' depth) from a comparable depth in Borehole 16-2735 to the north within the drainage. Butylbenzylphthalate was reported in sample 0316-97-0391 from a depth of 63-3.8' in the same hole, (Recall that the top of borehole 16-2375 is about 10 feet below the top of Borehole 16-2707.) These paired observations provide one of the main indications of stratigraphic control of lateral migration, in this case at a depth that appears to correspond to the top of a welded stratum.

Evidence for interflow migration along the soil/tuff interface is inconclusive. HE was reported at 1– 2 mg/kg in two soil/tuff interface samples from Boreholes 16-2711 and 16-2712 that are about 30 ft north and south of the center of the drainage, respectively. However, the drainage at this point is broad and fairly level and the presence of HE in these samples could be the result of both surface transport and interflow along the soil/tuff boundary.

In summary, the available evidence suggests that HE and other contaminants have generally penetrated the upper layer of tuff (above the upper surge bed), but at concentrations that are 1 order of magnitude smaller than contaminants observed in sediments above the soil/tuff interface. Sporadic hits below the upper surge bed, both under and south of the drainage, indicate that further distribution of contamination, particularly near the pond area, has occurred along pathways that may be determined by vertical fractures and dense horizontal strata. While laboratory evidence is quite limited, there is nothing in the data to suggest the presence of pockets with high levels of contaminants in the deep subsurface, that is, below the level of the upper surge bed at the Qbt4/Qbt5 contact.

2.2 Cañon de Valle Alluvial System

2.2.1 Contaminant of Potential Concern Summary

Sampling in the Cañon de Valle alluvial system included collection of surface and subsurface sediments, three pairs of overbank sediment samples, filtered and unfiltered surface water, and one quarterly round of filtered and unfiltered alluvial well water. These samples were collected during three different investigations: 1994, 1996, and 1997/98. All sampling locations are shown in Figure 2.2-1.

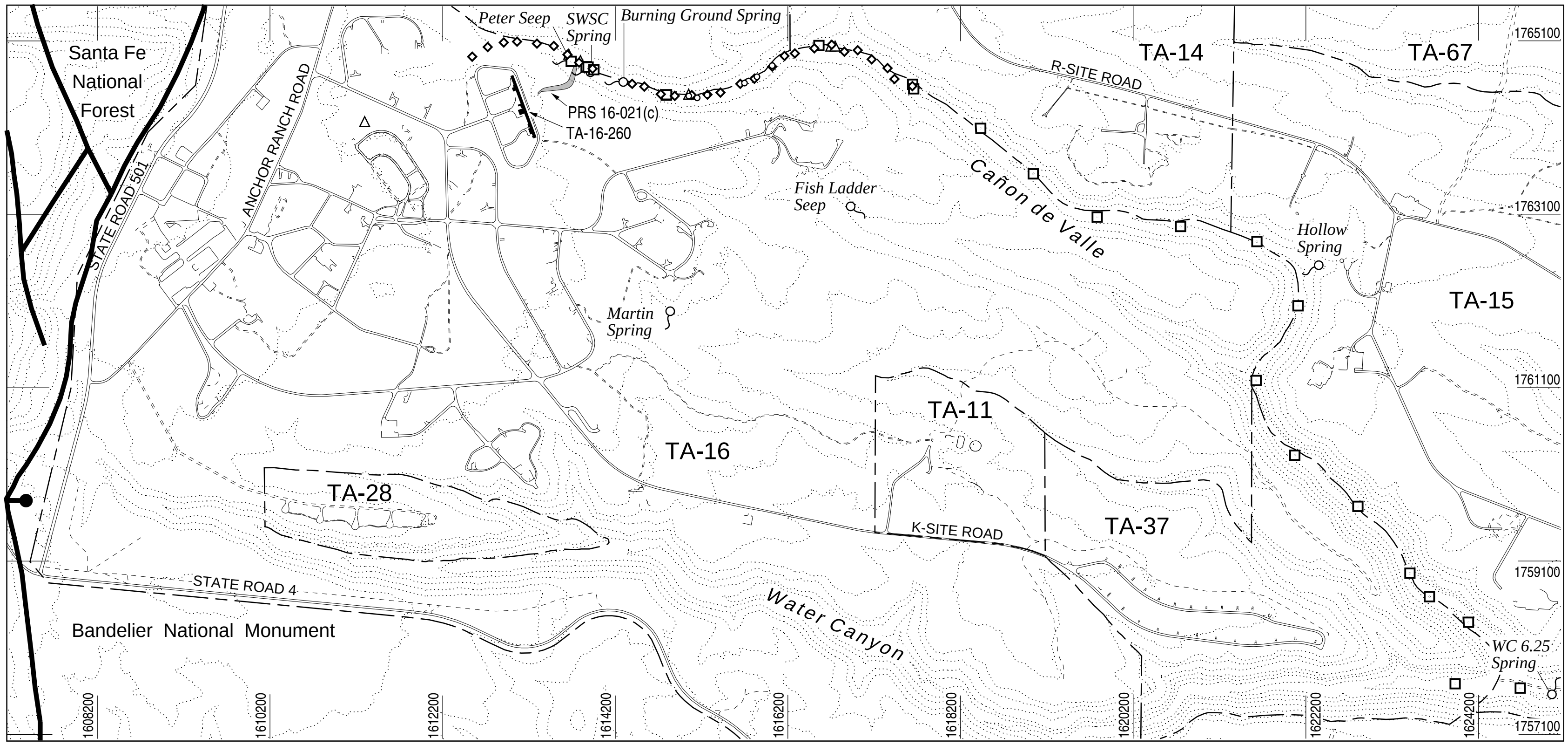
The sediment samples from all three investigations were primarily collected from the 0–6-in. depth in the center of the channel. However, in the 1997/98 campaign, three pairs of overbank samples were collected and eight subsurface samples were collected while drilling five alluvial wells.

Barium is the most abundant inorganic contaminant of potential concern (COPC) in sediments. For the surface samples, the range of barium concentrations is 130–40 300 mg/kg. Other inorganics above BVs include arsenic, cadmium, chromium, cobalt, copper, lead, manganese, mercury, selenium, silver, vanadium, zinc, and possibly antimony and cyanide. Concentrations of these chemicals are generally less than two times the BVs. Cesium-137 (1.06 pCi/g) is the only radionuclide reported above the BV in any of the surface or subsurface samples.

Several HE were found at concentrations greater than the detection limits: 2,6- amino-DNT, 4,6-amino-DNT, HMX, nitrobenzene, 3-nitrotoluene, RDX, TNB, and TNT. HMX and RDX were the two HE greatest in abundance and highest in concentration with maximums of 170 mg/kg and 42 mg/kg, respectively. The highest RDX value comes from an overbank sample collected approximately 6200 ft below the 260 outfall/Cañon de Valle confluence. The significant non-HE organics detected were bis(2-ethylhexyl)phthalate and di-n-butylphthalate.

Surface water samples and water from the five alluvial wells were collected in Cañon de Valle. For the purposes of comparison, Peter Seep was grouped with the alluvial well water samples. Peter Seep may simply be the westernmost expression of the alluvial groundwater system, or it may be fed by one or more sources from the adjacent mesas. Data were compiled during the three different investigations: filtered/unfiltered sample pairs were collected in 1994 and 1997/98, and primarily unfiltered samples were collected in 1996. However, there are only small differences in concentrations between the filtered and unfiltered samples, suggesting that most of the observed constituents are dissolved

For the Phase II RFI report the TA-16 water samples are compared with preliminary background water data sets (note that NMED-approved statistical BVs for springs are not available). A simple statistical test (Gehan 1965, 55611) was used to determine whether the TA-16 data set was greater than this background data set at a specific confidence level. The inorganics determined to be above background



- Paved road
- Unimproved road
- TA boundary
- Contour interval 50 ft
- ∘ 1994 sample location
- ◇ 1996 sample location
- □ 1997/98 surface sample location
- △ 1997/98 alluvial borehole sample location
- Spring or seep
- Pajarito Fault Zone (bar and ball on downthrown side)

0 1000 2000 ft

cARTography by A. Kron 9/25/98
Source: FIMAD G106370 4/1/98

Figure 2.2-1. Sampling locations in Cañon de Valle.

and carried forward as COPCs are antimony, arsenic, barium, calcium, chromium, iron, lead, magnesium, manganese, mercury, nickel, potassium, sodium, vanadium, and zinc. Barium is the most abundant COPC in this list, with concentrations ranging from 99–16 000 µg/L. The highest barium value was in alluvial well 16-2658 located just upgradient from MDA-P. In fact, all of the samples collected from the alluvial wells in Cañon de Valle have barium concentrations higher than those in the surface water samples. However, the alluvial well samples were collected in winter when flow in the canyon was very low, and the majority of the surface water samples were collected during higher flow conditions.

As in the sediment data, HE appears to be the other major contaminant in Cañon de Valle water. The HE identified are 2,6- amino-DNT, 4,6-amino-DNT, HMX, nitrobenzene, 2-nitrotoluene, RDX, TNB, and TNT. RDX is the HE highest in concentration with a maximum concentration of 818 µg/L. Acetone, 1,2-dichloroethane, and methylene chloride are all low in concentration.

2.2.2 Contaminant Distribution

When considering Cañon de Valle from Peter Seep to the confluence with Water Canyon, the data suggest that contaminants decrease in concentration downgradient. However, when looking at the upper canyon in smaller scale, concentrations of many of the COPCs fluctuate. These fluctuations may be attributed to contaminant sources other than the TA-16-260 outfall, sediment packages where COPCs accumulate, or the sampling events occurring during different flow conditions. Constituent transport in Cañon de Valle appears to be largely due to the input of Peter Seep, SWSC Spring, and Burning Ground Spring, with the additional input of surface runoff during precipitation events and snowmelt. No other discrete sources of water to this system have been identified. Flow rates in Cañon de Valle range up to 0.178 cfs. (Dale 1997, 57286)

2.3 Subsurface Tuff and Subsurface Saturated System

2.3.1 COPC Identification

Sampling in the subsurface hydrologic system included collection of tuff samples from four intermediate-depth borehole locations, sampling of intermittent perched water from two of those boreholes, and quarterly sampling at three springs—SWSC, Burning Ground, and Martin—that tap the shallow perched zone at TA-16 (Figure 2.3-1).

Subsurface tuff outside of the source region contained few constituents at levels greater than background. Semiquantitative D-Tech screening of tuff samples showed no HE present in the cores. Constituents retained as COPCs include the inorganics antimony, calcium, mercury, selenium, and silver. Of these, only calcium was detected at levels greater than tuff background levels; the other constituents had detection limits greater than the tuff background values. No HE constituents were detected in the tuff samples. Detected organic constituents included bis(2-ethylhexyl)phthalate and acetone, both of which are common laboratory constituents and blank contaminants. Intermittent perched water, that was observed in Boreholes 16-2665 and 16-2669 (Figure 2.3-1) contained aluminum, barium, calcium, iron, magnesium, manganese, nickel, potassium, in unfiltered samples at levels greater than the background range (note that NMED-approved statistical background values for springs are not available). Borehole waters also contained the HE constituents 2,4-DNT, HMX, RDX, and 2,4,6-TNT.

Spring waters contained many analytes at levels greater than background distributions. Inorganic constituents detected at levels greater than the background distribution based on statistical tests

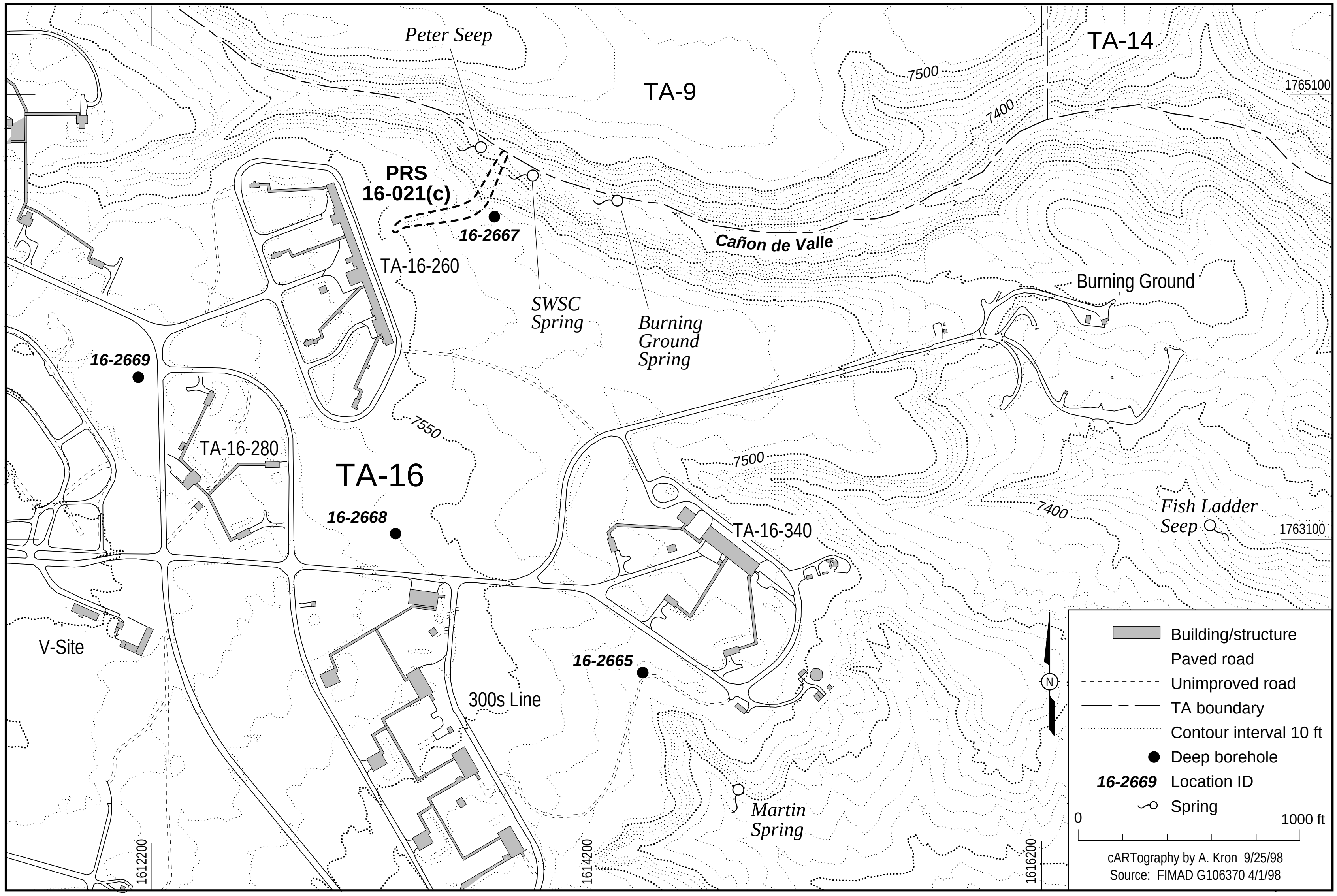


Figure 2.3-1 Location map for deep boreholes and springs.

included: aluminum, ammonium, barium, boron, bicarbonate, calcium, chloride, fluoride, iron, magnesium, manganese, nitrate, phosphate, silicon dioxide, sodium, strontium, and sulfate. Of these inorganic constituents barium, boron, nitrate, and phosphate are almost certainly related to anthropogenic discharges. Barium levels were higher in SWSC and Burning Ground Springs than in Martin Spring. HE constituents detected in springs were 4-amino-2,6-dinitrotoluene, 2-amino-4,6-dinitrotoluene, 1,3-dinitrobenzene, 2, 4-dinitrotoluene, HMX, 3-nitrotoluene, RDX, tetryl, 1,3,5-TNB, and 2,4,6-TNT. RDX was the most frequently detected HE constituent; also it was detected at the highest total concentration. HE constituents were detected at the highest levels in Martin Spring. Other organic constituents detected were acetone, bromomethane, chloromethane, 1,2-dichloroethane, di-n-butylphthalate, tetrachloroethene, and trichloroethene. Of these organic constituents only acetone was detected in more than half of the spring water samples.

Many of these constituents were also identified as COPCs in the TA-16 source region, suggesting that a hydrogeologic link between the TA-16-260 outfall and the springs is likely. Of the constituents identified, HE and barium are probably the constituents of greatest potential concern to human health and the environment.

2.3.2 Extent of Contamination

The analytical data from the deep borehole tuff and water suggest that the standard notion of extent of contamination, in which a plume of steadily decreasing constituent concentration is observed in the environment radiating out from a source of anthropogenic contamination, is not relevant for the subsurface at TA-16. High levels of HE were observed in water samples collected in intermittently saturated zones in two hydrologic boreholes (16-2665 and 16-2669). These waters with high HE concentrations were each found at the bottom of greater-than-100-ft-deep, clean tuff boreholes near the QBt3/Qbt4 contact. Constituent transport in the TA-16 subsurface appears to be dominated by transport along fast, saturated pathways such as surge beds and heavily fractured units. Saturation in these pathways is most likely to be either seasonal or intermittent.

2.3.3 Spring & Well Dynamics

Quarterly sampling of all three springs showed significant variability in constituent concentrations and flow with time. Flow rates for springs ranged up to 0.023 cfs for SWSC spring, to 0.157 cfs for Burning Ground Spring and to 0.009 cfs for Martin Spring. In addition, RDX in Martin Spring varied from greater than 150 µg/L during December 1996 sampling to less than 10 µg/L during March 1997 sampling. Inorganic constituent abundances also vary by up to a factor of 5. Three modes of variation in constituent abundance with flow were observed: (1) decreases followed by increases in abundance with increases in flow, e. g., barium, major cations, (2) a continuous increase in concentration with flow, e.g., iron, aluminum, and (3) a decrease followed by both increases and decreases with flow, apparently depending on the season, e.g., HE.

The observations of variability in constituent abundance with flow suggest

- that the hydrogeologic systems that feed SWSC and Burning Ground Springs are similar to each other and different from that for Martin Spring,
- that multiple recharge sources are active for the springs, and

- spring of the year and monsoon recharge occur by different flow paths. This dynamic is suggested by high HE during monsoonal high-flow intervals in SWSC and Martin Spring relative to low HE during snowmelt high-flow intervals.

Examination of detailed hydrographs for the springs provides additional insights into recharge at the springs, and hence into the subsurface hydrogeologic conceptual model. Spring response to rainfall occurs on up to three timescales. For example, following an initial rainfall event of greater than 0.5 in. during the summer monsoon season at SWSC spring:

- initial response of spring flow is seen less than 2 hours,
- a slightly larger response is seen less than 20 hours later, and finally,
- the mass of monsoon water impacts the spring baseflow a few days to weeks later.

These data suggest that at least three distinct recharge sources impact the springs. Three plausible candidates for these recharge sources are (1) direct runoff into the spring catchments with a response time of a few hours, (2) an interflow pathway with a response time of 1–2 days, and (3) a subsurface pathway with a response time of several weeks.

Two out of four intermediate-depth (less than 200 ft) boreholes drilled during the Phase II investigation intersected ephemeral perched water that was contaminated by HE constituents. These water-bearing zones were located near the contact between Qbt3 and Qbt4. Each borehole contained water for less than a month, and no additional water has been seen. This observation supports a hydrogeologic conceptual model in which subsurface contaminant transport is controlled by intermittently-saturated ribbons that are structurally controlled by surge beds and/or fractured intervals, particularly near the Qbt3/QBt4contact, which is also the elevation of the springs and seep The ribbons appear to be seasonally or episodically saturated because of the changes in contaminant concentrations at the springs described above.

2.4 COPC Screening

As described in the previous sections, extensive data evaluation was performed during the RFI to identify those constituents associated with various media that should be carried forward into a screening level assessment for human health and ecological effects. The screening assessment included a combination of comparison to medium-specific risk-based criteria and applicable water quality standards. For a given medium, the maximum reported concentration of each analyte was compared to the corresponding screening value. If the maximum reported concentration is less than the screening concentration, the contaminant is not selected as a COPC.

Constituents of greatest concern that wee identified as COPCs as a result of the screening assessment for both human health and ecological effects are barium, bis(2-ethylhexyl)phthalate, HMX, RDX, and trinitrotoluene[2,4,6-]. These constituents are consistently found in the highest concentrations in all the media considered in the RFI, but particularly in the surface soil. The site-specific risk assessment and CMS process to follow will focus on this set of constituents. Bis(2ethylhexyl)phthalate will receive the least attention because it is concentrated almost entirely in the HE pond, which will be removed during the interim measure.

3.0 CORRECTIVE MEASURES OBJECTIVES AND SCOPE

3.1 Setting

3.1.1 Areal Extent and Administrative Boundary

The administrative boundary for the CMS is shown in Figure 3.1-1. The boundary runs along State Route 501, which coincides with the Pajarito Fault to the west, and follows the basin divides between Water Canyon and Cañon de Valle to the south, as far as Martin Spring Canyon and Pajarito Canyon, and Cañon de Valle to the north. These basin divides converge at the confluence of Cañon de Valle and Water Canyon. This area will be referred to as the Cañon de Valle basin. The areal extent of the study includes all of the surface and subsurface terrain within the boundary except (1) individual PRSs and associated downgradient areas to the edge of Cañon de Valle and (2) Fish Ladder Seep and its sub-basin. These potential contaminant sources are being addressed within the scope of other ER Project activities.

The administrative boundary is designed to incorporate contaminant sources and the fate and transport mechanisms of the Cañon de Valle basin. The TA-16-260 outfall is considered the major source of contaminants in the basin. Monitoring and data analysis at the basin scale will support decisions on whether to conduct remedial activities at other potential contaminant source locations as well.

3.1.2 Four Component Conceptual Model

The conceptual model used in the CMS is composed of four components: the contaminant source area, the subsurface, the transport pathways and springs, and the alluvial system in the canyon bottom (Figure 3.1-2). Sources of recharge to the mesa, springs, and canyon alluvial system are inputs to the model. Structuring the conceptual model in this manner identifies and separates the parts of the physical system that warrant individual remediation or monitoring approaches. For example, approaches to addressing the contaminant source area are different from approaches to addressing contaminants in the springs. The four components are combined into one conceptual model because transport mechanisms result in interactions among the components. Contaminants in the source area impact the unsaturated subsurface, which impacts the springs and seep, which impact the alluvial system. As the conceptual model shows, anything that affects one component of the model is also likely to affect other downgradient components.

The source area will be addressed by the IM proposed in the Phase II RFI report that is being submitted concurrently with this CMS plan. The details of the IM will be provided in a separate IM plan to be submitted during FY99. The IM will require removal of all highly contaminated soil and tuff in the TA-16-260 outfall, pond, and drainage and characterization of low levels of contamination present in the residual soil and tuff. The subsurface consists of the volume of the mesa that connects the source area to the seep, springs, and the canyon alluvial system. This is a physically complex system including multiple geologic units, fracture sets, and porous media. Phase II drilling results show that there are low levels of HE (less than 10 mg/kg) in this part of the system. These data suggest that transport occurs along preferential flow paths controlled by stratigraphy and fractures rather than through a large plume in porous media.

The transport pathways and springs component of the conceptual model specifically addresses contaminant transport in the subsurface from source areas and the unsaturated subsurface. Sources of

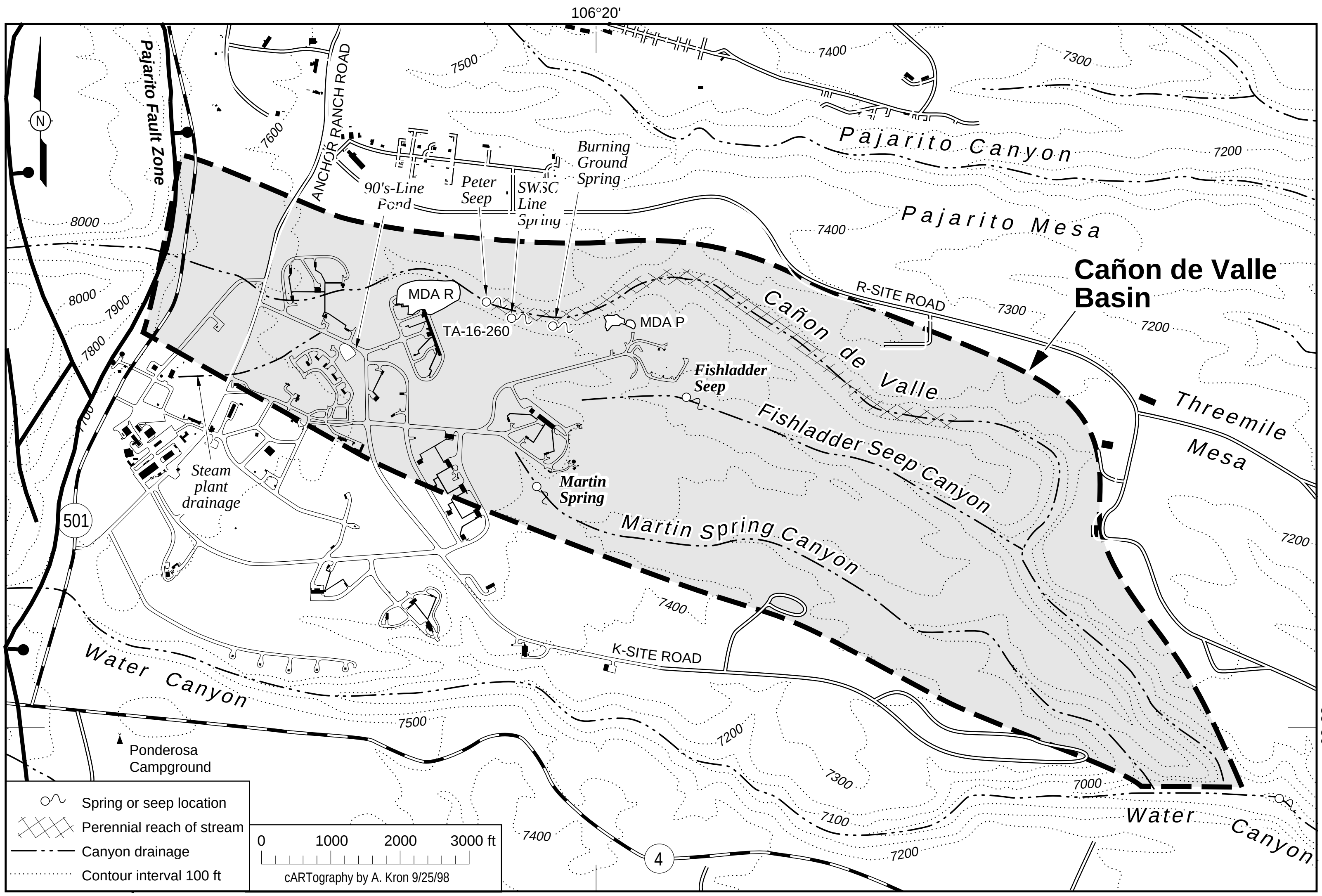


Figure 3.1-1. Administrative boundaries for PRS 16-021(c) CMS/CMI.

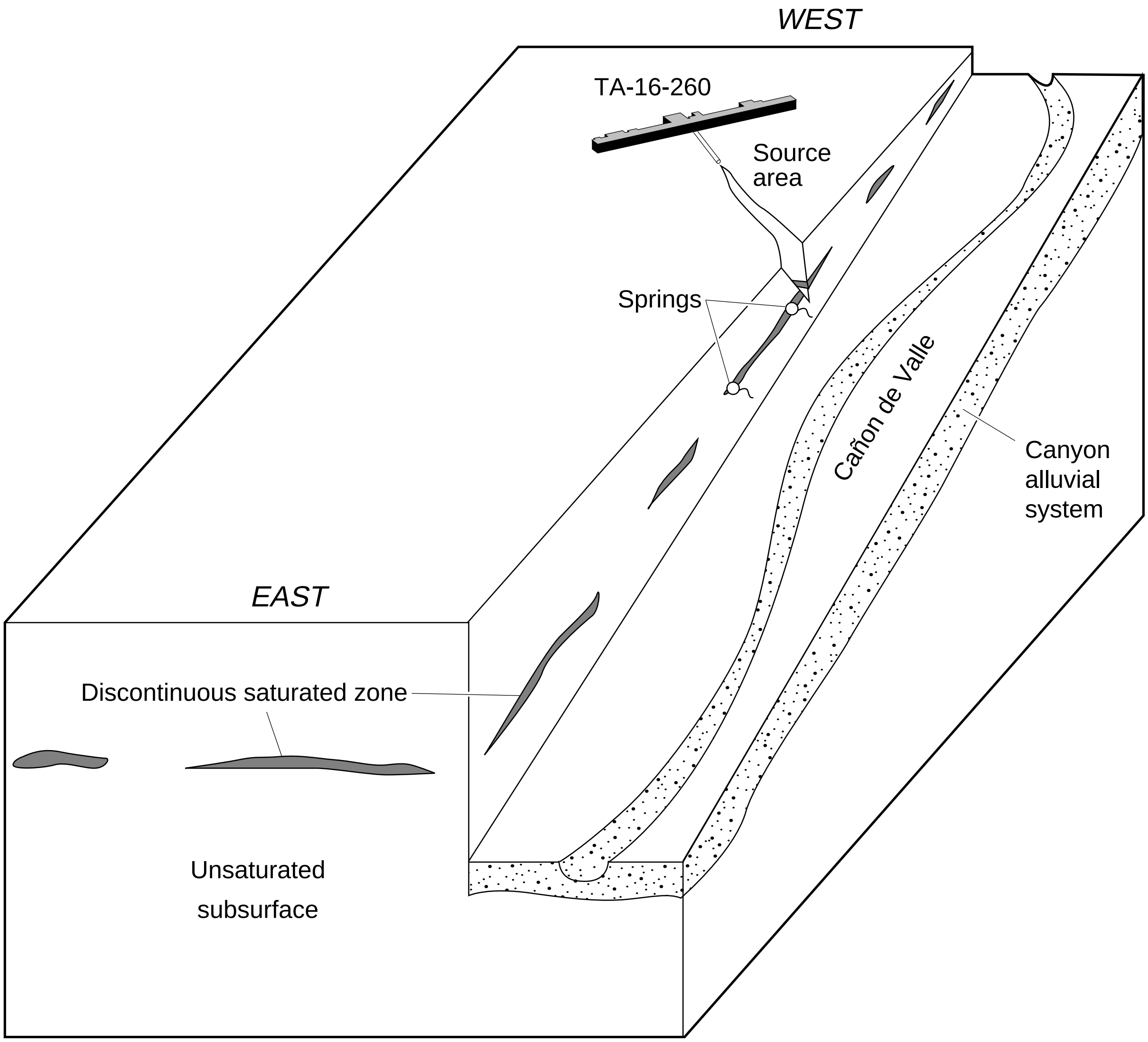


Figure 3.1-2 Simplified conceptual model for TA-16-260, PRS 16-021(c) contaminant dispersal.

recharge to these pathways and the interactions between recharge and primary or secondary contaminant sources are essentially unknown. Data from the Phase II RFI show that these pathways are highly dynamic. Rates of spring flows range over 1 order of magnitude. The hydrographs show multiple responses to individual storms, as well as changes in base flow rates with season. Contaminant abundances and types also change as discharge changes. The alluvial system is presently considered a receiving system for contaminants transported from the mesa. Concentrations of contaminants vary among the different components of the alluvial system: surface water, alluvial aquifer, and sediments.

The connection between the alluvial system, the deeper perched aquifer(s), and the regional aquifer is an important issue that is in part being addressed by the site-wide hydrogeologic investigation (LANL 1996, 55430). Well R-25 will be drilled approximately 2000 ft to the east of the TA-16-260 outfall during late FY98 and early FY99. Well R-27 is currently scheduled to be drilled at the confluence of Cañon de Valle and Water Canyon during FY2000. Both wells could potentially provide useful information on subsurface transport phenomena near PRS 16-021(c) and may identify other perched aquifer systems. LANL will include a detailed discussion of results from these wells in a future report focused on PRS 16-021(c), either the Phase III RFI report or the CMS report. The results of R-25 and R-27 drilling could potentially drive further sampling of the deeper subsurface system in association with the CMS/CMI for PRS 16-021(c).

3.2 Remedial Approach

The proposed remedial approach for the TA-16-260 outfall is to perform a CMS/CMI for the residual contamination left in the source area and the remainder of the hydrogeologic system contaminated by discharges at PRS 16-021(c). The source area is contaminated at levels up to 20% HE by weight and 3% barium by weight. It is estimated that removal of approximately 2500 yd^3 of material in the source area would eliminate 80–95% of the contaminated media in the 260 outfall region. Conducting a SSRA to justify the IM removal is not useful or necessary.

The IM will be performed according to what is feasible in terms of engineering rather than to remediation concentration goals because the contaminant concentrations drop quickly with depth. To achieve the best possible results, remedial approach evaluations conducted in the CMS will support selection of waste treatment options used in the IM. There are known to be low levels (less than 10 mg/kg) of contaminants at depths to 70 ft below ground surface. These contaminated locations cannot be reliably predicted and will be left in the unsaturated subsurface when the IM is complete. The CMS treatability studies and the CMS Phase III sampling will focus on evaluating remediation options for the remainder of the hydrogeologic system. Remediation for other components of the physical system will depend upon monitoring results for transport pathways, including the springs, seep, surface water, and alluvial water. Decisions to remediate water will depend upon concentrations, potential exposures, observable biological effects, and applicable relevant and appropriate regulations (ARARs). Methods to be considered will include active and passive treatment systems, phyto-remediation, and natural monitored attenuation.

3.2.1 Parallel Tracks of Action and Monitoring

The physical system addressed by the CMS consists of four components that are related by transport pathways (see Subsection 3.1.2). Changing the contaminant mass in one component of the system eventually affects the contaminant mass in other components downstream. Routine monitoring will be established for the springs and alluvial system before remedial actions are taken. This monitoring will make it possible to evaluate trends in the types and levels of contaminants present over time and to assess the efficacy of the remediation, particularly the impact of the IM on contaminants in the remainder of the hydrogeologic system. Analysis of the baseline monitoring data will be used to finalize the long-term monitoring program.

3.3 Objectives of the Corrective Measures Study

The overall objective of the CMS and subsequent CMI is to ensure that contaminant concentrations within the four components of the site conceptual model (as discussed in Section 3.1.2) meet acceptable levels relative to human health and ecological criteria. The primary objective of the CMS is to select the remedial technologies that will be used to achieve media cleanup standards (MCSs) in each of the four components of the site conceptual model. A fundamental component of this selection process will be the evaluation of candidate technologies in bench-scale and pilot-scale studies. An additional objective of the CMS is to define preliminary MCSs for each of the four conceptual model components. These cleanup standards will be based extensively on human health and ecological risk criteria. The CMS will also define regulatory points of compliance (POCs) for the four components of the site conceptual model. POCs are developed and negotiated with the AA as monitoring locations to determine if MCSs have been achieved. Preliminary POCs are proposed in Section 3.4.2 of this CMS plan.

Existing data from previous investigations and additional site characterization data will be used to meet the objectives of the CMS outlined above. This plan discusses in the following subsections the fundamental data objectives, the adequacy and source of existing data, and the need for additional data for each component of the site conceptual model. Chapter 6 of this plan also presents PRS 16-021(c) RFI Phase III sampling investigations for collecting the majority of the required additional data.

3.3.1 Investigation Objectives

The objectives of investigation to support the CMS are (1) to define the extent of contamination, and (2) to characterize the behavior of active transport pathways for specific components of the site conceptual model. Sufficient data generated in previous investigations may already meet one or both of these objectives for certain components of the site model. For example, the nature of contamination has been adequately addressed in previous RFI reports. The following subsections discuss the existing data and the need for additional data relative to these two objectives for each model component. The sections also discuss explicitly how the additional objectives support the CMS. The individual objectives are numbered investigation objective (IO) 1 , IO2, etc. This numbering scheme is then used in Chapter 6 to show the correlation of the investigation objectives presented here to the site investigations presented in Chapter 6.

3.3.1.1 The Contaminated Source Area

Nature and Extent, IO1

As stated previously, an IM will be implemented at the source area prior to the CMS. The extent of residual contamination remaining in the source area will require characterization. This investigation will be designed in conjunction with the IM plan and is, therefore, not included in the RFI Phase III investigation presented in this report. The data generated in the post-IM investigation will be used to support the selection of a remedial technology for the post-IM source area. The nature of contamination has been adequately characterized by previous investigations.

The post-IM sampling plan will focus on determining the mean contaminant concentrations remaining in the area. This data will then be used to support the risk-based contaminant concentrations proposed as MCSs in the CMS report. The sampling plan will also focus on identifying points of maximum contaminant concentration to support the definition of the POC for the source area.

Transport Pathways, IO2

The drainage channel associated with the source area will remain a potential surface contaminant transport pathway following the IM. The extent data generated during the post-IM sampling, along with existing extent data, will be used to estimate contaminant inventories remaining in the drainage channel and will be used to support the selection of remedial technologies for the drainage channel and POCs for the entire source area. The surface transport pathway within the source area is well understood and the nature and extent data should be sufficient to make meaningful calculations of future risk to potential receptors.

The subsurface transport pathways are discussed in subsection 3.3.1.3

3.3.1.2 Unsaturated Mesa Subsurface

Nature and Extent of Contamination, IO3

The nature and extent of subsurface contamination in the unsaturated subsurface has been evaluated in both the source area and the intermediate-depth subsurface phases of the PRS 16-021(c) RFI Phase II investigation. An additional borehole will be drilled in the source area to a total depth of 80 ft as part of the post-IM investigation. Data from this borehole and previous investigation data are expected to be sufficient to finalize the evaluation of the unsaturated mesa system. This data will support the remedial technology decision for this component of the site conceptual model. It is currently anticipated that due to the low expected contaminant concentrations and the lack of a viable exposure route to receptors, MCSs and POCs will not need to be defined for this conceptual model component.

Transport Pathways, IO4

Transport pathways connecting the unsaturated subsurface to groundwaters, such as intermediate perched aquifers or the regional aquifer, will be evaluated following the same phased approach proposed in Section 3.4.2.3. The phased approach will be used to support decisions on whether remediation of deeper groundwater is necessary and, if so, the selection of remedial technologies for this component of the site conceptual model.

3.3.1.3 Transport Pathways and Associated Springs

Nature and Extent of contamination, IO5

Dynamics in the physical behavior of the springs are expected to have significant impacts on contaminant concentrations and fluxes observed at the springs. As a result, the physical behavior of the springs and the relationships between flow rate and contaminant concentration must be understood in order to evaluate the nature of contamination observed at the springs and the short- and long-term trends in springs contaminant data. Understanding trends in spring contaminant data, in turn, directly effects all three objectives of the CMS. Trends in springs' contaminant data must be evaluated in order to assess the viability of natural attenuation as a remedial alternative. Furthermore, trend data must be understood in order to assess the effectiveness of the source removal. This has implications for establishing MCSs at the source area. MCSs at the springs themselves may also be based on a set of data that more accurately measure maximum expected contaminant concentrations or fluxes. In addition, the physical behavior of the springs must be understood in order to establish an effective monitoring strategy. This, then, is of paramount importance for demonstrating compliance with MCSs.

The nature and extent of contamination as observed at the springs has been evaluated in several investigations, most recently in association with the PRS 16-021(c) Phase II investigation. Significant additional investigations are proposed in Chapter 6 that primarily focus on establishing the physical behavior of the springs.

Transport Pathways, IO6

Understanding the transport pathways connecting the source area to the seeps and springs is necessary for evaluating exposures to potential receptors at the seeps and springs. This information will then be used directly to support the CMS objective of selecting an appropriate remedial technology for the seeps and springs. Source-to-springs transport pathways are currently being evaluated in an ongoing potassium bromide tracer study. The results of the study to date are discussed in the Phase II RFI (LANL 1998 in preparation). However, because only a small mass of tracer has been observed in the springs, additional sampling in support of the tracer study is presented in Chapter 6.

3.3.1.4 Alluvial System Surface and Groundwaters

Nature and Extent of Contamination, IO7

The nature and extent of contamination in surface and groundwaters in both Cañon de Valle and Martin Spring Canyon is needed to support the remedial technology decision for this component of the site conceptual model. This data is also necessary to define the groundwater POCs for both Martin Spring Canyon and Cañon de Valle. In addition, the nature of the physical system and the interactions between the surface water and groundwater component of this system need to be defined. This will provide the basis for developing long-term monitoring strategies for the alluvial surface and groundwater systems that will be required for demonstrating compliance with MCSs.

Cañon de Valle has been sampled several times, most recently as part of the PRS 16-021(c) RFI Phase II investigation. Martin Spring Canyon has not been sampled to date. Current data does not adequately define the nature and extent of contamination in this component of the conceptual model. This plan describes additional sampling to be conducted as part of the RFI Phase III investigation presented in Chapter 6.

Transport Pathways, IO8

Transport pathways connecting alluvial groundwaters to other groundwaters, such as intermediate perched aquifers or the regional aquifer, will be evaluated following the same phased approach proposed in Section 3.4.2.3. The subsurface transport pathways between the source region and the alluvial system and deeper groundwaters will probably be indistinguishable, given the scale of hydrogeologic processes. The phased approach will be used to support the selection of remedial technologies for this component of the site conceptual model. Some preliminary information on the potential impacts of the alluvial groundwater systems on deeper systems will be generated in the water mass balance studies proposed in Chapter 6.

Alluvium

Nature and Extent of Contamination, IO9

The nature and extent of contamination present in canyon alluvium is necessary to select the appropriate remedial technology for this component of the site conceptual model. The data will also be used to perform risk assessments to establish MCSs and establish compliance with the negotiated cleanup standards.

The alluvium in Cañon de Valle has been investigated previously, most recently during the PRS 16-021(c) RFI Phase II sampling campaign. The existing data is not sufficient to determine the mass of contaminants stored in the alluvium; sampling proposed in Chapter 6 is designed to address this concern.

Transport Pathways, IO10

Interactions between contaminants stored in canyon alluvium and surface and groundwaters is not currently understood. It is not known if a large mass of contaminants stored in alluvium can act as a continual source impacting the surface water and groundwater transport pathways. The alluvium contaminant inventory investigation proposed in Chapter 6 will provide data that can be used to predict the impacts of stored contamination on these transport mechanisms.

3.4 Institutional Considerations

3.4.1 Land Use

TA-16 is planned for continued operation as an HE production and machining facility. Consequently, the area within the administrative boundary is subject to controlled access. Industrial land use is being used as the driver for exposure scenarios in human-health risk assessments, as documented in a letter from DOE to the NMED Hazardous and Radioactive Materials Board (HRMB), {"Request To Use Industrial Exposure Scenarios In Lieu Of Residential Scenarios For Human Health Risk Assessment In 260 Outfall [PRS 16-021(c)] RFI/CMS Process (Former OU 1082, FU 3).(LANL:1998, 59173).

3.4.2 Establishment of Media Cleanup Standards

MCSs will be developed as part of the CMS and recommended to the AA in the CMS report. Following the CMS, MCSs will be included in the LANL permit modification as constituent concentrations in soil and water that must be achieved for successful completion of the corrective action [proposed 40 CFR 264.525(d)] unless a determination is made under proposed 40 CFR 264.525(d)(2) that remediation to MCSs is not required.

As stated in *The General Standards for Corrective Measures* [proposed 40 CFR 264.525(a)], there are several types, and uses, of MCSs that need to be clarified. Target MCS s are not cleanup goals or action levels, but "…are preliminary cleanup goals established during the CMS to provide a benchmark for evaluating the effectiveness of the alternatives for the corrective measure." The final MCSs are actual remediation goals that must be attained for release of the site from the RCRA corrective action process. Section 3.4.3.1 describes the derivation and identification of target MCSs. Final MCSs, recommended to the AA, will be determined in the CMS process following completion of the IM, Phase III investigation, and the site-specific human and ecological risk assessments. This process is discussed briefly in Section 3.4.3.2.

Site constituents for which MCSs will be developed were identified in the Phase II RFI report (FY98) as COPCs to be carried forward into the CMS. These COPCs were determined from the following activities:

- a human-health screen to site-specific action levels (SSALs),
- an ecological screen to ecological benchmark values, and
- other applicable regulations (where appropriate).

3.4.2.1 Target MCSs

Target MCSs are generally derived by calculating concentrations in specific media that are protective of human health. These calculations are performed according to standard approved methodology provided by EPA and NMED. This approach was used to calculate SSALs for screening purposes in the Phase II RFI report (LANL 1998, in preparation). Therefore, it is proposed that these SSALs be used in the CMS as target MCSs. Complete details on derivation of these levels are provided in the Phase II RFI report.

Table 3.4.3-1 provides a list of constituents, by medium, that were identified as COPCs, based on human health screening, to be considered in the CMS along with the target MCS. The site-specific persistent bioaccumulators are also listed in this table.

Table 3.4.3-1

TARGET MCSs FOR COPCs BASED ON HUMAN HEALTH RISK SCREENING

COPC	Target MCS
Soil	mg/kg
Barium	5320
Bis(2-ethylhexyl)phthalate	48.7
HMX	639
RDX	6.19
2,4,6-Trinitrotoluene	227
Water	µg/L
Barium	1620
Lead	[a]
RDX	72.6

[a]No risk-based MCS for lead in water has been determined at this time.

3.4.2.2 Final MCSs

The CMS report will propose final MCSs for each site conceptual model component, media, and COPC. Many factors will be taken into consideration when establishing final MCSs during the CMS. These include the results of SSRAs for human health and ecological receptors, exposure issues specific to TA-16, and applicable regulations or promulgated standards. Other issues that will be considered, as set forth in proposed 40 CFR 264.525(d), include:

- effects of multiple contaminants in each environmental medium,
- environmental receptors that are threatened by the release,
- evaluation of the cumulative risk when populations may be exposed to multiple sources or through multiple pathways, and
- factors specific to the corrective measure under consideration, including reliability, effectiveness, practicality, and other factors.

The CMS report will also provide a petition to the AA to make a determination that remediation to a site conceptual model component-, media-, and contaminant-specific MCS is not required if:

- there is no threat of exposure to the contamination,
- remediation to MCSs will not result in any significant reduction in risk to humans or the environment, or
- remediation to MCSs is technically impracticable [proposed 40 CFR 264.525(d)(2)]

This petition will provide a careful evaluation of the technical circumstances involved and clear and convincing information supporting this recommendation.

3.4.3 Points of Compliance

Under 40 CFR 264.525(e)(1)(i)-(v) of the proposed Subpart S rule, the POC is the point(s) or area(s) where a facility must demonstrate compliance with MCSs. The location of the POC is medium-specific and depends on factors such as the potential for exposure of human or ecological receptors, the potential for migration, the potential for impact to sensitive ecosystems, and accessibility. In the absence of final corrective action regulations specifically addressing points of compliance, POCs are developed on a site-specific basis. It should be noted that a POC can be defined as an area with the potential for exposure to receptors (CFR 1995, 56034). Specific locations within these areas that are representative of the exposure to specific receptors are then selected as sampling locations to demonstrate compliance with the MCS.

Four preliminary POCs are proposed in this CMS plan. Each POC covers a different medium or system. The preliminary POCs will be refined during the CMS as additional information is obtained and remedial approaches are selected. Final POCs will be proposed to the Administrative Authority (AA) in the CMS report.

3.4.3.1 Soils and Alluvium

The preliminary POC for soils is any point where direct contact with a receptor may occur. This will extend within the 260 outfall drainage from the outfall to the confluence with Cañon de Valle. The preliminary POC for alluvium is any point in Cañon de Valle and Martin Spring Canyon within the area of contamination defined in Chapter 2 where direct contact with a receptor may occur. The POCs for the soils and alluvium are distinct because they have different exposure scenarios due to very different topography and ecosystems. EPA has established that the POC for soils (and by extension, alluvium) is limited to near-surface soils because subsurface soils have limited likelihood of exposure to receptors.

3.4.3.2 Surface Water

The preliminary POC for surface water is any point in Cañon de Valle and Martin Spring Canyon within the area of contamination defined in Chapter 2 where direct contact with a receptor may occur. This includes water from Burning Ground Spring, SWSC Spring, Martin Spring, and Peter Seep. EPA has established that the POC for surface water is generally the point where releases enter the surface water. However, in Cañon de Valle and possibly Martin Spring Canyon, contamination may enter by way of Burning Ground Spring, SWSC Spring, Martin Spring, Peter Seep, alluvial sediments, and surface runoff from sources other than the TA-16-260 outfall (i.e., MDA-P, MDA-R, and the Burning Ground). EPA recognizes that the point may not be clearly defined and the POC reflects the uses of the water and the environmental and ecological importance of the water body. Hence, a POC that is downgradient from all sources to alluvial water will also be considered during the CMS. Defining such a POC will require a detailed understanding of sources and sinks of water in Canon de Valle, which will be investigated in Phase III studies outlined in Chapter 6.

3.4.3.3 Groundwater

For the purposes of this CMS, the preliminary POC for groundwater will be defined as the alluvial water in Cañon de Valle and Martin Spring Canyon within areas of contamination defined in Chapter 2, or as indicated by results from the Phase III investigation. Under the Subpart S rule, the POC for remediation of groundwater generally will be the entire region of contaminated groundwater, or plume. EPA recommends consideration of the following factors when developing site-specific groundwater POCs:

- Proximity of sources of contaminants,
- Technical practicability of groundwater remediation,
- Vulnerability of groundwater and its uses, and
- Exposure and likelihood of exposure.

Other groundwaters, such as intermediate perched aquifers or the regional aquifer, will be evaluated under the following phased approach. The CMS will evaluate the potential risk to the nearest human and ecological receptors under the following conservative scenarios.

1. That the alluvial groundwater, subsurface saturated areas, and unsaturated flow through the mesas flow directly to the main aquifer and subsequently to the nearest human or ecological receptor.

2. That the alluvial groundwater and subsurface saturated areas flow directly to the nearest downgradient spring or seep to the human or ecological receptors at that location.

Should these conservative risk assessments indicate the potential for unacceptable human or ecological risk, an additional investigation will be designed and implemented that will provide the information necessary to refine the risk assessments. Such investigations will probably require detailed modeling of the hydrogeologic system at TA-16.

Another consideration for selecting POCs is sensitivity of biological systems in the canyon to contaminants in the seep, springs, and alluvial system. The ecological screening assessment for surface and alluvial waters in the Phase II RFI suggests that these biological systems are not seriously disturbed by the contaminants (LANL 1998, in preparation). If this is the case, then monitoring, treatment, and remediation to achieve compliance should be designed to minimize the impacts these engineered components may have on the natural system.

3.4.4 Risk-Based Decision Approach

The corrective measures study and implementation process is risk based. This is consistent with the HRMB's risk-based decision tree, EPA's 40 CFR Chapter 1, Subpart S, Part V, and DOE Order 5400.1, which includes the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and RCRA by reference for environmental remediation of hazardous wastes.

3.4.5 Applicable Regulation and Requirement Evaluation

This section presents an overview of laws and regulations that may apply to the PRS 16-021(c) CMS under the proposed EPA Subpart S and Module VIII of LANL's Hazard Waste Facility Permit. The medium (e.g., surface water or soil) that each relevant regulation applies to is also discussed.

Generator and Transporter Requirements Any action resulting in the generation of hazardous and solid wastes under the CMS will comply with the regulations under 40 CFR Part 260 et seq. for hazardous waste management. These requirements will also apply to the hazardous and solid wastes generated during the treatment of soils and water. These requirements will apply to the IM and will be addressed in the IM plan.

Land Disposal Restrictions The restrictions on the land disposal of hazardous wastes address the mitigation of hazards posed by waste constituents. All PRS 16-021(c) activities that generate hazardous waste as part of the RCRA corrective action will comply with the land disposal restriction (LDR) requirements of 40 CFR Part 268. If a media is treated in situ and a waste is not generated, the LDRs do not apply, as stated in the Federal Register Volume 63, pages 28556-28634, published May 26, 1998. However, any ex-situ CMS treatment (soil or water) that generates a waste will comply with LDR requirements, pending approval of these requirements by NMED.

Public Participation and Community Relations RCRA § 7004 encourages public participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program activities. The Public Participation and Community Relations regulation is currently implemented in the LANL ER Project through community meetings and meetings with stakeholders in the community such as the Northern New Mexico pueblos, the County of Los Alamos, and officials of the community. LANL currently complies with the DOE public participation policy that is outlined in *Public Participation Policy for Environmental Restoration and Waste Management, US DOE (October, 1992)*. Public Participation activities specific to PRS 16-021(c) are included in the CMS/CMI schedule found in Appendix B.

The National Environmental Policy Act Section 102(2)(c) of the **National Environmental Policy Act** (NEPA) requires that all federal agencies prepare an environmental impact statement (EIS) for all major federal actions significantly affecting the quality of the human environment. The DOE has established a procedure for compliance with NEPA defined in 10 CFR 1021 and 40 CFR 1500–1508. Before implementing the IM and the CMS, all NEPA procedures will be completed. The environmental safety and health (ESH) questionnaire will be completed and reviewed by the LANL Environmental Assessments and Resource Evaluations Group, ESH-20, NEPA team. All NEPA concerns will be addressed before implementing intrusive activities.

The Clean Water Act The Clean Water Act requirements apply to the CMS and IM at PRS 16-021(c) if additional discharges, impacts to stormwater, or lease of treatment agents result from implementing the IM or CMS.

The Clean Air Act The Clean Air Act is not applicable for the CMS or the IM at PRS 16-021(c) because there are no anticipated air releases. Dust will be mitigated for health and safety reasons during field activities, and the air will be continuously monitored with Miniram™ personal air monitors.

The Toxic Substances Control Act The Toxic Substances Control Act (TSCA) is not applicable to the CMS at 16-021(c) because no TSCA constituents will be released or removed from any soil or water treated.

The New Mexico Water Quality Control Commission and Drinking Water Regulations The New Mexico Water Quality Control Commission (NMWQCC) standards and The New Mexico Drinking Water standards for barium are applicable to the corrective action at PRS 16-021(c). Barium is the only COPC present at the site that exceeds human health, domestic water supply, wildlife habitat, or irrigation use standards that have been set under these regulations. The New Mexico Drinking Water Standard (2 000 µg/L) and the NMWQCC Ground Water Standard for Human Health for Barium (1 000 µg/L) will be applied to the nearest drinking water well under the groundwater evaluations described in Section 3.4.2.3. The NMWQCC Surface Water Standard for domestic water supply does not apply to the PRS 16-021(c) corrective action because the surface waters are not, and will not, be used for domestic water supply purposes.

4.0 IDENTIFICATION AND SCREENING OF TECHNOLOGIES

This section of the CMS plan presents the identification and screening of remediation alternatives under consideration for the 260 outfall and Cañon de Valle. Remediation technologies will be identified and screened and will address each compartment comprising the conceptual model: the contaminant source area, the unsaturated subsurface, the transport pathways and springs, and the alluvial system in the canyon bottom. The discussion of each potentially viable remediation approach will include:

- how the alternative works,
- results from previous usage under similar site conditions,
- anticipated technology limitations of the alternative, given waste characteristics,

- an estimate of the time required to implement the alternative, and
- recommendations.

The identification and screening process of remediation approaches has been ongoing since January 1998 through participation in an Innovative Treatment Remediation Demonstration (ITRD) Project. This ITRD project was designed to study HE and barium remediation technologies in both soils and water focusing on the unique problems associated with DOE HE processing facilities such as LANL and Pantex. Contamination at these sites differs from many Department of Defense (DoD) sites because of the occurrence of barium and because the principal HEs used were HMX and RDX (the nitrosamines) rather than TNT and DNT (the nitroaromatics).

In the ITRD program, DOE facilities work cooperatively with EPA, industry, national laboratories, and state and federal regulatory agencies to identify applicable, innovative technologies for use at their sites. Selected technologies are used to remediate small, representative areas as technology demonstrations; and then hopefully move to full-scale corrective actions. During the technology demonstrations, operating, treatment, performance, and cost data are generated. The ITRD technology screening was deemed to be more than sufficient for meeting the CMS technology screening requirements. The format of an ITRD project is to invite a panel of experts from government, industry, and regulatory agencies to form a team with site technical personnel. The team uses a combination of experience and brainstorming to generate a list of technologies that may be applicable to the conditions and challenges at the site. At this stage, approaches that have yet to be proven at full scale are given equal weight with mature technologies. After the list of technologies is assembled, individuals on the team take technologies and collect information on their maturity, cost, and likelihood of effectiveness for the site in question. The full panel then uses the information assembled to sort the technologies by applicability and maturity. The ITRD program is interested in fostering the demonstration of new technologies, provided that the technology development has progressed sufficiently to be evaluated for full-scale application within approximately two years. Good ideas and conceptual technologies that will require more than two years to get to pilot-scale demonstration exceed the time horizon for ITRD.

Active and passive treatment technologies for soil and water contaminated with HE were reviewed for both in situ and ex situ applications. These remediation approaches address all four compartments within the conceptual model. The general maturity, cost, and performance characteristics of the technologies were reviewed in detail. The major factors considered included protection of human health and the environment, technology implementation costs and ease of implementation, technology maturity, life cycle costs and overall cost effectiveness, ability to reduce the contaminants of concern to likely regulatory levels, time required for completion, safety issues, permitting, and remediation operations. These criteria were all applied in the context of: (1) the TA-16-260 site characteristics, (2) the TA-16-260 waste characteristics, and (3) technology limitations. To ensure that they hold some potential advantage over existing methods, remediation approaches or innovative technologies are screened against mature, or baseline, technologies. These criteria both meet and exceed the screening criteria established in EPA proposed 40 CFR Part 264.525.

Based on available technical information, the most promising technologies (those alternatives that meet the above criteria) have been proposed for in-depth assessment, laboratory treatability and pilot studies, and detailed engineering evaluations of expected site application costs and performance. These include pilot-scale and laboratory studies of several conceptual designs for soil and groundwater remediation.

Technologies such as zero-valent iron, granular activated carbon, and phytoaccelerated natural attenuation are proposed to be evaluated for use on LANL surface water and groundwater. These technologies address both the transport pathways and springs and the alluvial system compartments of the conceptual model. Technologies applicable to stream sediments and the source removal are also being evaluated. These include zero-valent iron, zero-valent iron enhanced by microbial activity, and stabilization. These remediation approaches address both the contaminated soil/tuff and the alluvial system compartments of the conceptual model. Natural attenuation or no action are to be evaluated for the unsaturated subsurface compartment. Information from the evaluations of technologies for treating soil/tuff will be utilized in the IM design. Initial treatment studies will be conducted through the summer, fall, and winter of FY98/99. The results of these studies will be compared with common remediation strategies such as incineration, composting, and capping to identify possible benefits and suggest cost-effective remediation alternatives.

Subsection 4.1 identifies all of the technologies evaluated. Many of these were discarded as impractical without detailed discussions. Subsections 4.2 through 4.4 describe those technologies that were evaluated in detail during the ITRD process.

Each technology described in Subsections 4.2 through 4.4 includes a recommendation for the LANL site derived from the ITRD participants. In those cases where further site-specific studies are recommended, a brief implementation strategy is provided.

For the more mature technologies, such as composting, direct reference to the literature is provided. For many innovative technologies references are not available. The recommendations below represent the consensus of the ITRD participants, many of whom are currently performing bench-scale and pilot-scale studies for the innovative technologies.

4.1. Identification of Potential Remediation Technologies

At the initial Pantex/LANL Explosives Project meeting in January 1998, approximately 40 active or passive treatment technologies were identified by the participants for in situ or ex situ applications, each with the potential to improve the schedule or costs of remediating the LANL and Pantex sites. Technologies focused on HE and its principal co-contaminant at LANL, barium. Approximately 30 participants representing DOE, EPA, DoD, industry, and other regulatory agencies attended this meeting, and formed the HE Advisory Group. The technologies identified and their potential application at these two sites are shown in Table 4.1-1.

Based on this initial technology identification effort, the HE Advisory Group proceeded to assess the applicability of each technology at the LANL and Pantex sites. To help in this evaluation effort, Pantex and LANL provided detailed information about site monitoring, contaminant distribution, and geotechnical data to the HE Advisory Group. Additionally, a meeting was held at Santa Fe in March 1998 so participants could tour the LANL site.

During several subsequent meetings, the HE Advisory Group discussions focused on assessing the applicability of each technology identified in Table 4.1-1 to the technical needs and concerns, and cost and performance goals of each site. Each technology was evaluated on the basis of maturity, cost, and implementation feasibility. Sections 4.2 through 4.4 discuss the assessment of the suggested technologies and summarize the findings of the HE Advisory Group on the applicability of these technologies to enhance soil and groundwater remediation at LANL and Pantex. Only the more promising technologies listed in Table 4.1-1 are described in detail in subsections 4.2 through 4.4.

Table 4.1-1 identifies whether a technology is an in-situ or ex-situ technology. In-situ technologies have the advantage of minimal disruption of the local ecosystem, which supports a threatened and endangered species. The disadvantages of in-situ approaches are potentially leaving contaminants or their byproducts in the environment and difficulties with demonstrating effectiveness and completion. Ex-situ technologies, particularly when combined with off-site disposal, have the advantage of full removal of contaminants from the environment, and the disadvantage of significant disruption of the local ecosystem.

TABLE 4.1-1
Initial Technologies Identified for Consideration at LANL

Technology	Technology Class	In-situ/Ex-situ
Bioaugmentation Biosep/DuPont process	Biological	In-situ soils
Biodegradation(aerobic, anaerobic) with gas and liquid phase additions	Biological	In-situ soils
Biodegradation with thermal enhancement	Biological	In-situ soils
Biodegradation with natural attenuation	Biological	In-situ soils
Biodegradation – phytoextraction	Biological	In-situ soils
Soil flushing	Physical Chemical	In-situ soils
KM_nO_4 treatment	Physical Chemical	In-situ soils
Solidification/stabilization	Physical Chemical	In-situ soils
Co_{60} irradiation	Physical Chemical	In-situ soils
Fenton's reactions	Physical Chemical	In-situ soils
Chemoxidation	Physical Chemical	In-situ soils
Soil heating with soil vapor extractions	Thermal	In-situ soils
Soil vitrification	Thermal	In-situ soils
Radio frequency heating	Thermal	In-situ soils
Steam stripping	Thermal	In-situ soils
Downhole burner (disco)	Thermal	In-situ soils
RCRA cap/cover	Other	In-situ soils
Containment (slurry wall)	Other	In-situ soils
Composting	Biological	Ex-situ soils
Bioslurry – white rot fungi, Bioslurry – indigenous microbes	Biological	Ex-situ soils
Bioslurry—gas phase additions	Biological	Ex-situ soils
Zero Valent iron abiotic reduction	Physical Chemical	Ex-situ soils
Soil washing	Physical Chemical	Ex-situ soils
Solidification/stabilization	Physical Chemical	Ex-situ soils

TABLE 4.1-1 (continued)
Initial Technologies Identified for at LANL

Technology	Technology class	Applicability
Solvent extraction	Physical Chemical	Ex-situ soils
Fenton's reagent	Physical Chemical	Ex-situ soils
Base hydrolysis with humic acid	Physical Chemical	Ex-situ soils
Solvated electrons	Physical Chemical	Ex-situ soils
Gamma irradiation	Physical Chemical	Ex-situ soils
Molten salt	Physical Chemical	Ex-situ soils
Electron beam	Physical Chemical	Ex-situ soils
Thermal oxidation (incineration)	Thermal	Ex-situ soils
High-temperature thermal desorption	Thermal	Ex-situ soils
Low-temperature thermal desorption	Thermal	Ex-situ soils
Granular activated carbon (GAC)	Physical Chemical	Ex-situ surface and groundwater
UV/peroxide	Physical Chemical	Ex-situ surface and groundwater
Peroxone	Physical Chemical	Ex-situ surface and groundwater
Titanium oxide/UV	Physical Chemical	Ex-situ surface and groundwater
Phytoremediation	Biological	In-situ surface and groundwater
Electron beam	Physical Chemical	Ex-situ surface and groundwater
Zero valent iron	Physical Chemical	Ex-situ surface and groundwater
Supercritical water oxidation	Physical Chemical	Ex-situ surface and groundwater
Biotreatment	Biological	Ex-situ surface and groundwater
Reactive barriers	Physical Chemical	Ex-situ/in-situ surface and groundwater

4.2 Baseline Treatment Technologies

Several treatment technologies are considered as baseline technologies for the treatment of explosives-contaminated soil and water. These technologies are generally mature but often have limitations regarding application and cost-effectiveness at a specific site. Any innovative technology needs to be compared with these baseline technologies to determine the overall benefits to schedule, performance, cost, or regulatory acceptability. This section provides a short overview of the cost and performance of the baseline technologies. The information is summarized in Table 4.2-1 at the end of this section.

4.2.1 Thermal Treatment (Incineration)

Incineration was first demonstrated on explosives-contaminated soil in 1982 at the Savannah Army Depot (Sisk 1998, 58940). Projects have been completed at four sites, with costs that range from $250–$600 per ton. Pilot-scale feed rates were 200–400 lb/hour and full--scale rates are estimated to be 20–40 ton/hour. Advantages of incineration are that it is a process that can handle a wide range of waste characteristics and contaminant concentrations, has a large treatment rate, has little downtime, is not affected by the weather, and can treat both liquids and solids.

Disadvantages of incineration include a negative public perception, the need for air pollution control equipment and air permitting to control byproducts, high mobilization and demobilization costs ($2–3.5 million), and the energy-intensive nature of the process. It takes two years, on average, to obtain regulatory approval for incineration. Incineration has been used to treat explosive compounds down to

Table 4.2-1
Cost and Performance of Common Baseline Treatment Technologies

Treatment Technology	Unit Cost	Treatment Rate	Demonstrated Performance	Explosives Treated	Implementation Issues
Soils Treatment					
Incineration (ex situ)	$250–700/ton	20–40 ton/hour	1µg/g 80% uptime liquids and solids	All HE	Public perception, high mobilization & demobilization costs, ~2 years to get approvals
Stabilization (ex situ)	$150–200/ton	80 ton/hour	Meets LDRs	HE & mixed metals	None identified
Caps (in situ)	$1–2/ft2	NA	Permeable barrier	NA	Long-term performance maintenance & liability
Covers (in situ)	$2.50–$7.50/ft2	NA	Impermeable barrier, leachate collection	NA	Long-term performance maintenance & liability
Slurry walls (in situ)	$5–10/ft2	NA	Minimize horizontal migration	NA	Long-term performance maintenance & liability
Water Treatment					
GAC (ex situ)	$0.40–1.00/1000 gal.	Scale dependent	<5 µg/L	All HE	Operation & Maintenance costs

levels of 1 mg/kg. The small volumes of soil to be treated at LANL probably do not warrant the high mobilization costs incineration requires.

Recommendation: Do not pursue laboratory- or pilot-scale studies for PRS 16-021(c) at this time due to small volumes of soil requiring treatment.

4.2.2 Stabilization

Stabilization of explosives-contaminated soil has been demonstrated at the Umatilla Army Depot Site (EPA1995, 58942; Channel 1996, 58943). Stabilization was the selected remedy for the Umatilla Army Depot Burning Ground because the soil contained metals as well as explosives. Incineration was also evaluated, but addressing the metals would have required stabilization after incineration, for a total cost of $15 million. The cost of stabilization alone was estimated at $4 million. An on-site landfill accepted the stabilized soil, which had to meet toxicity characteristic leaching procedure (TCLP) criteria for metals and separate leaching criteria for HE. Lab- and pilot-scale tests were performed using combinations of the amendments Portland cement, fly ash, and GAC. Carbon in the cement mix improves performance, with 5% GAC providing optimum performance. The full-scale recipe used only 10% Portland cement, no fly ash and 1–1.5% GAC. This reduced recipe caused about 10% of the waste to fail TCLP, requiring breakup and retreatment. Approximately 30 000 tons of soil were processed at a cost of approximately $5 million.

The Umatilla Army Depot stabilization operation had a capacity of 80 ton/hour and cost $170 per ton (turnkey). It is estimated that costs at other sites would range from approximately $150–$200 per ton (turnkey costs). There is about a 50% increase in volume over the starting amount. Stabilization amendments could also include sulfates, in order to better stabilize barium as insoluble barium sulfate.

Stabilization could be a good option for soil contaminated with mixed metals and explosives, such as the soils at LANL.

Recommendation: Pursue as an option for soils at LANL. During the IM, PRS 16-021(c) outfall soils will need to be treated to meet LDRs before disposition in an approved landfill. Perform laboratory-scale studies on LANL wastes under ITRD program.

Laboratory-scale study implementation strategy : Provide soils from outfall area to a vendor experienced in soil stabilization. US Army Engineer Waterways Environmental Station (WES) in Vicksburg, Mississippi, performed the treatability studies for Umatilla Army Depot. The vendor will determine optimum mixes of carbon, Portland cement, sulfate, and fly ash to minimize leaching of HE and barium from the treated mixtures. Performance criteria will be determined by the waste characteristics and waste acceptance criteria of the treatment, storage, and disposal (TSD) facilities selected to receive IM wastes.

4.2.3 Containment Options

Much of industry uses caps and covers as a method of containing contaminants at a site. Caps or covers are used in conjunction with slurry walls to contain contaminants while a site is in operation. This option requires maintenance of the cap or cover and commonly requires a leachate collection system. This type of system provides an effective interim method to limit contaminant migration. DuPont, for example, uses these types of systems routinely at their facilities. Given the relatively small volume of highly contaminated material at LANL's PRS 16-021(c), removal is probably preferable to capping. After excavation capping might be warranted to hydrologically isolate residual contaminants in the subsurface directly beneath the excavation footprint.

Recommendation: Laboratory- or pilot-scale studies are not required. If capping is required at PRS 16-021(c) during the IM, use results from studies performed by the MDA focus area.

4.2.4 Water Treatment with Granular Activated Carbon

GAC treatment is the most common method for remediation of surface or pumped groundwater contaminated with explosives. For example, pump and treat units using GAC systems have been deployed at both the Umatilla Army Depot Site and at the Pantex site (EPA 1995, ER ID 58941). Estimated costs are $0.40–$1.00 per 1000 gal. of water treated. Pump and treat units for HE are typically scheduled for deployment for 15–30+ years, depending on the size of the HE plume and the concentration of HE in the groundwater. GAC units do not remove significant amounts of barium; however, they can be combined with other treatment methods (passive barriers, reverse osmosis) in a treatment train. This treatment method should continue to be evaluated for the contaminated surface waters at LANL.

Recommendation: Do not pursue laboratory- or pilot-scale studies at LANL at this time. This technology is sufficiently mature that implementation at LANL should be feasible with minimal or no laboratory- or pilot-scale studies.

4.3 Assessment of Additional Soil Treatment Technologies

Several in situ and ex situ treatment technologies were identified for the treatment of explosives-contaminated and mixed explosives/metals contaminated soil. In situ treatment technologies, such as bioremediation, chemical treatment, chemical flushing, or thermal treatment are often attractive options because of the ability to treat the soil in place, thereby reducing excavation costs. Excavation at LANL is expected to be somewhat complicated because of the difficult terrain and because work schedules are restricted by HE machining operations at the site. In situ techniques also minimally impact local ecosystems, including threatened and endangered species. Ex situ treatment technologies, such as composting, bio- or chemical-treatment reactors are attractive because they provide improved flexibility in treatment options, allowing optimum contaminant degradation performance. The type or combination of technologies used at a site should be based on the overall cost-effectiveness and performance of a system.

The HE Advisory Group assessed each technology option that was initially identified. Many were quickly determined to be at too immature a stage for use, not applicable to explosives-contaminated media, or not applicable at these sites. Several technologies appeared to have potential applicability at these two sites and were retained for more detailed evaluation. Based on these detailed evaluations several are being considered for site-specific laboratory treatment and pilot studies, as summarized in Table 4.3-1. This section provides an overview of the most appropriate in situ and ex situ treatment technologies identified by the HE Advisory Group.

4.3.1 In Situ Anaerobic and Aerobic Biotreatment Options

As the factors that control microbial degradation of contaminants become better understood, in situ biological treatment of contaminated soil is becoming recognized as a feasible remedial technology (Craig et al. 1995, 58939). This technology is finding use throughout the world and has significant potential as a low-cost remediation technology. For these reasons, the HE Advisory Group worked closely with the DOE, EPA, and DoD to assess the applicability of this technology at LANL.

The Idaho National Environmental Engineering Laboratory has found that gas-phase delivery of ethanol or acetic acid stimulates bioremediation of RDX and TNT, although high-concentration, solid-phase explosive contamination does not seem to be degraded. Laboratory tests have found increasing biological activity in soils at increasing depth, and anaerobic conditions showed higher activity than aerobic conditions. Microcosm experiments conducted at the University of Texas, Austin using Pantex soil also demonstrate that anaerobic conditions are related to significant RDX reduction. The lab results showed significant reductions in as little as two months. Therefore, it appears that anaerobic bioremediation would be appropriate for the contaminants of concern at LANL.

For applications in the vadose zone, it would be necessary to introduce nutrients to stimulate bacterial degradation of the explosives. It may be necessary to use an inert gas or a liquid in conjunction with nutrient enhancement to achieve anaerobic conditions. This process would require a robust nutrient injection system.

Therefore, vapor phase applications are expected to be easier to control and probably would be applicable at any depth. Other types of biological injection systems may have application at

Table 4.3-1
Summary Applicability of Soil Treatment Technologies

In situ Treatment of Soils			
Treatment Technology	Source	Alluvium	Subsurface
Biological			
Aerobic	No	No	No
Anaerobic	Uncertain	Uncertain	Uncertain
Natural Attenuation	No	Yes	Yes
Phytoextraction	No	Uncertain	No
Physical/Chemical			
Soil Flushing	No	No	No
Stabilization	No	No	No
Chemical Oxidation	No	No	No
Thermal			
Gas Heating	No	No	No
Ex situ Treatment of Soils			
Treatment Technology	Source	Alluvium	Subsurface
Biological			
Composting	Yes, With barium stabilization	Uncertain	No
Solid Phase	Yes, With barium stabilization	Uncertain/no	No
Bio Slurry	Yes, With barium stabilization	Uncertain/no	No
Physical/Chemical			
Soil Washing	No	No	No
Stabilization	Yes	Uncertain/no	No
Chemical Treatment	Yes	No	No

Note: LANL locations have barium that must be considered in any treatment process.

shallow or deeper depths, depending on how cost effectively the nutrients can be applied. Both vapor phase and other nutrient amendment applications, such as land farming applications, were identified for laboratory and pilot studies. This treatment technology is insufficiently mature to estimate a time for treatment. Biotreatment options do not remediate barium, and high metal levels are often antagonistic to bioremediation processes. The complex hydrogeology at LANL would complicate implementation of this technology. Despite these concerns, this technology is being retained for consideration at LANL

Recommendation: Do not pursue laboratory- or pilot-scale studies at LANL at this time. LANL will use results from the proposed pilot-scale study being performed at Pantex under the auspices of ITRD.

4.3.2 In Situ Natural Attenuation Applications

Empirical evidence exists at many HE-contaminated sites for natural attenuation of HE contaminants in the environment. For example, inspection of highly contaminated soil at numerous US Army ammunition plants over decades has shown that denuded areas have gradually reduced in size (McCutcheon personal communication, 1998). Plants, microbes, contaminant migration, and photodegradation reactions are probably responsible for reclaiming contaminated areas. TNT in denuded areas is often present at an average of about 5000 µg/g in the unvegetated soil, with hundreds of micrograms per gram of TNT in the soil on the fringe where grasses are growing and tens of micrograms per gram in the soil where the trees have established (that used to be part of the denuded areas). DoD/DOE/EPA's Strategic Environmental Research and Development Program is funding natural attenuation work on HE, in which kinetic reactions are being evaluated at Joliet Army Ammunition Plant and Crane Naval Weapon Station. Accurate characterization is vital for natural attenuation studies, and a conceptual model should be developed to describe the processes involved. US Army Engineer WES has developed a protocol for natural attenuation studies.

Natural attenuation is probably occurring at LANL, but verification of such processes will be difficult to quantify. Ongoing studies at LANL suggest that TNT breaks down readily in the environment, but that RDX and HMX do not (DuBois and Baytos 1991, 06994). This treatment technology is immature, treatment durations cannot be estimated at this time. Leachable barium levels are probably naturally attenuating due to conversion of barium to barium sulfate. Natural attenuation should not be discounted and should continue to be considered at LANL, especially in combination with active efforts to remove source terms and other significant contaminant concentration areas.

Recommendation: Do not pursue laboratory- or pilot- scale soil studies at LANL at this time. In-situ natural attenuation may be successfully implemented as part of the IM strategy.

4.3.3 In Situ Phytoremediation Applications

Empirical evidence for phytoremediation of soils has been observed at several army ammunition plants (McCutcheon 1998, 59170). Several types of phytoremediation have been observed: phytodegradation, phytostimulation, phytoaccumulation, phytovolatilization, and phytostabilization. Cellular enzymes are responsible for chemical reactions eliminating HE from natural systems. Nitroreductase enzyme has been shown to reduce nitro groups to amino groups on the structures of RDX and TNT. Lactase enzyme has been shown to participate in ring cleavage reactions. Experiments with several plant species have shown significant reductions in concentrations of aqueous phase HE. TNT reaction rates are apparently faster than those for RDX by approximately a factor of 10. For soil or sediments containing HE, the mass transfer from the solid to aqueous phase will likely be the rate-limiting step for in situ phytoremediation applications. The treatment depth of this technique is limited to the root zone and varies seasonally. Poplar trees produce nitroreductase and could treat the soil from 2–15 ft deep. Yucca plants have been shown to uptake explosives. Other native plants may also be effective at bioremediation of HE. The end product of the phytoremedation reactions is typically plant biomass. However, if the plants are bioaccumulating toxic byproducts or metals, biomass may need to be harvested to avoid ecotoxicity problems. High concentrations of HE have been shown to be toxic to plants.

Phytoremediation probably could be used as a polishing step for remediation processes at some of the shallow alluvial areas at LANL. Native plants may be capable of uptaking HE; uptake of HE by existing plants may be the reason for the apparent natural reduction of the explosive contaminants along Cañon de Valle. Barium sulfate particles have been observed in the xylem of ponderosa pine in Cañon de Valle, suggesting that plants may also be effective at sequestering barium. However, sequestration of metals such as barium still leaves a metal-bearing material in the environment. Phytoremediation and phytosequestration technology is immature, treatment durations cannot be estimated at this time. Because phytoremediation technologies may be appropriate for removal of HE and barium from soils and waters at LANL, the technology should be reviewed further.

Recommendation: Do not pursue as option for source area soils at LANL at this time. Consider as an option for the canyon alluvial sediments and soils.

4.3.4 In Situ Soil Flushing

Soil flushing with surfactants to treat dense non-aqueous phase liquids (DNAPLs) has been actively pursued by both the EPA and DOE for several years. The DoD is beginning to look at the use of soil flushing to treat explosives-contaminated soils and groundwater. At the DoD's Umatilla Army Depot, source term remediation efforts removed lagoon bottoms plus about 20 ft of subsoils, then the lagoon areas were used for a re-infiltration gallery for a pump and treat system, setting up a recirculation, or soil flushing cell (Defense Environmental Restoration Program 1994, 59172). The soils are a high hydraulic-conductivity gravel/sand mix. About 300 gal./min is flushed through the soils over a 1-acre area. The pump and treat system is remediating a 350-acre plume. In situ soil flushing has resulted in the following reductions in leachate concentrations: TNT 92%, TNB 68%, RDX 87%, and HMX 94%. This pump and treat soil flushing operation is expected to continue for approximately 20 years.

The principal concerns with soil flushing are: (1) controlling the flushing of the soil, (2) avoiding the possibility of increasing the mobility of contaminants in the vadose zone, (3) determining the technology's ability to reduce all the contaminants of concern, and (4) applying the technology cost-effectively. The injection of treated water to help flush RDX from the soil in situ is potentially feasible from a technical standpoint, but control of the injected water and verifying compliance are issues that need to be better understood. Soil flushing could also be used to mobilize soluble barium. The complexity of the hydrologic system at LANL is not conducive to soil flushing because of fractures in the subsurface and because of potential flushing media loss to a perched aquifer or the regional aquifer.

Recommendation: Do not pursue as an option for LANL at this time.

4.3.5 In Situ Chemical Oxidation

Oak Ridge National Laboratory (ORNL) has explored the use of potassium permanganate for the chemical oxidation of trichloroethene. Reagents cost approximately \$30–\$40 yd^3. There are no data for explosives; however, ORNL has operational lab facilities that are capable of performing lab tests if requested. WES has performed ex situ chemical oxidation lab and pilot tests. Fenton's Reagent is another potential oxidant for in situ chemical oxidation. Achieving the correct soil/contaminant/water/H_2O_2 ratios are critical, and the reactions work better at higher temperatures. The reaction takes place in the aqueous phase; therefore, it is likely to be water solubility limited and hence is not recommended for in situ use. This treatment technology is immature, treatment durations cannot be estimated at this time. This approach is not feasible at LANL because of the high barium concentrations that would still be present in the surface and because of concerns with mobilizing oxidation byproducts via surface and groundwater pathways.

Recommendation: Do not pursue as an option for LANL at this time.

4.3.6 In Situ Base Hydrolysis

Base hydrolysis methods have been developed in the laboratory as an alternative to open burning/open detonation of bulk explosive materials. The process requires considerable time (4–5 hours) and elevated temperatures (60–150°C), it requires a biotreatment step for the nonenergetic aqueous wastes generated, and the kinetics are thought to be mass transfer limited. The principal advantage of base hydrolysis is that it can accept high concentrations of HE. The disadvantages are that it is not appropriate for in situ applications, byproducts of TNT treatment may be problematic, and the technology has not matured sufficiently for field applications. This treatment technology is immature; treatment lengths cannot be estimated at this time. This approach is not feasible at LANL because of the high barium concentrations that would still be present in the surface and because of concerns with mobilizing byproducts via surface and groundwater pathways.

Recommendation: Do not pursue as an option for LANL at this time.

4.3.7 In Situ Thermal Treatment

The in situ HE catalytic oxidation process uses a downhole burner developed for oil field applications to raise the soil temperature sufficiently to thermally decompose explosive residues. Differential thermal analysis of pure RDX shows thermal decomposition occurs at approximately 250°C (400° F). Heated air from a burner is directed into a treatment zone using traditional soil vapor extraction technology. Calculations show that for each 1000 $yd^3$of contaminated soil it will take about 75 days at 450 ft^3/min to raise soil temperature to 400° F, using approximately 4500 gal. of propane (at a cost of about $3300).

Energy balance estimates indicate that it will take

- 90 288 BTU per $yd^3$to heat soil to 100°,
- 41 040 BTU per $yd^3$to heat the soil water to 100°C,
- 262 710 BTU per $yd^3$to evaporate the soil water, and
- 106 920 BTU per $yd^3$to heat the soil to 250°C,
- for a total of 500 960 BTU per yd^3.

The time required to heat the soil (33 days), heat the soil water to boiling (6 days), and the time to evaporate the soil water (38 days) are dependent on the burner temperature (estimated to be 1400° F) and flow rate (200 standard ft^3/min). While these figures indicate that the cost of propane is small ($4.6 per yd^3), the boreholes to perform the hot air injection and extraction are estimated to cost about \$30 per yd^3. This method might be cost-effective for deep applications.

The previous use of low-temperature thermal desorption on explosives indicated that TNT transformation products might include aniline, which is of concern for toxicity reasons. The army has evaluated the use of hot gas decontamination of buildings. Temperatures of 500–700° F are required for effective treatment. The major issues with in situ thermal systems are the temperatures required to achieve decontamination to a reasonable radius, and the safety issues of heating explosives. Both concerns could significantly drive the remediation costs above those estimated above. This treatment technology is immature; treatment lengths cannot be estimated at this time. Barium would not be effectively remediated using this technique. LANL's safety group has concerns with using such a system at sites where detonable quantities of HE are present. The HE Advisory Group recommended that these safety issues must be addressed before the application of this technology can be realistically considered at LANL.

Recommendation: Do not pursue as an option for LANL at this time.

4.3.8 Ex Situ Soil Composting/Biopile Applications

Composting has been implemented at pilot- and full-scale at several army sites (Craig et al. 1995, 58939). Composting requires the blending of about 30% soil and 70% amendments (typically manure or waste agricultural products) to generate thermophilic conditions (indicated by temperatures greater than 40°C). Biopile treatments are similar, but are considered mesophilic (occurring at less than 40°C). At Umatilla Army Depot about 11 000 yd^3 of TNT-contaminated soils (averaging 1200 µg/g after sieving to 1 in.) were treated for about 15 days to reach the preliminary remediation goal (PRG) of 30 µg/g. Turnkey cost was about \$300–\$350 per yd^3. It is estimated that costs would be about \$250–\$300 per yd^3 today. There appear to be commercial groups capable of performing full-scale work (six bids received, five were capable). Bench-scale tests are needed to assess amendment proportions.

Evaluation of composting at Hawthorne Army Depot found that it was necessary to use a substantial amount of water (1.7 gal. per yd^3 per day). Daily mixing was required. A building housing the operation was not required (although the process still required windbreaks to maintain thermophilic temperatures). Four recipes containing various proportions of soil, hay, potato, cow manure, and wood chips were evaluated. Soils contained TNT and RDX starting at about 5700 µg/g (after blending), and the PRGs of 233 µg/g for TNT and 67 µg/g for RDX were reached. Full-scale turnkey costs were about \$163 per $yd^3$for 40 500 yd^3.

At Toule Army Depot, soils containing about 1000 µg/g of HE were composted in 20 days and were able to reach the PRGs of 95 µg/g for TNT, 34 µg/g for RDX, and 18 000 µg/g for HMX. This work found that the SW-846 Method 8330 detection limits in compost were 2 µg/g for TNT and 4 µg/g for RDX. The soil volume was found to increase by about 85%.

The windrow composting method appears to apply an aerobic/anaerobic cycling and an effective method for adding water. In areas that did not receive adequate amounts of water, thermophilic conditions were not achieved. Biopile applications are similar to composting, however, soil is not mixed and water is not added, which limits treatment rates because in the absence of water, thermophilic conditions will be lost. Composting is thought to be available in the range of \$200-\$350 per yd^3. It is estimated that at approximately 30 000 yd^3, incineration becomes more cost-effective than composting. The US Army Corps of Engineers is developing a guidance document on composting.

Composting implementation times have ranged from 30–235 days in pilot studies (Craig et al. 1995, 58939). There are concerns about use of composting at LANL because soil also has high barium levels, which could be toxic to composting organisms. Also, barium-contaminated residues would require treatment before disposal.

Recommendation: Do not pursue laboratory- or pilot-scale studies at LANL at this time. LANL will utilize results of Pantex studies as needed. Ex-situ soil composting/biopile may be implemented as part of the IM strategy.

4.3.9 Ex Situ Bioslurry Reactors

Much of the work on ex situ bioslurry reactors for HE has been done by the DoD and DOE (Craig et al. 1995, ER ID 58939; Manning et al. 1996, 58937). A slurry reactor demonstration was recently performed at Joliet Army Depot. In this demonstration, a semibatch process was used that required a six- to eight-week startup period, used a 10–15% replacement method, and achieved 99.6% TNT reduction. The demonstration used aerobic/anoxic cycling, found molasses as an optimal co-substrate, and recycled the process water. At the Iowa Army Ammunition Plant, a 10 000 yd^3 demonstration was performed to develop cost and performance guidelines. The process used a 40% slurry in an open lagoon. Batch treatment times were about six to eight weeks to reach PRGs of 196 µg/g for TNT and 53 µg/g for RDX. After 11 weeks, the free release criteria were reached (47 µg/g for TNT and 2 µg/g for RDX). The system could not be operated in cold weather; at less than 20°C treatment slowed almost to a stop.

Dewatering of the slurry appears to be a major issue. The water will require treatment because it has high biological oxygen demand (BOD) and high suspended solids. Cost evaluations found that the aerobic tank method was about $345 per yd^3, the aerobic lagoon method was about $307 per yd^3, and the SABRE lagoon method was about $408 per yd^3. These costs are similar to composting ($300 $350per yd^3), but lower than incineration ($700 per yd^3). In conclusion, the ex situ bioslurry systems appear feasible for excavated materials, but there does not seem to be a clear advantage over composting. In composting waste volumes increase, while with slurry reactors, the volume of water that has to be treated and handled increases. Both composting and the bioreactors should be compared for specific application performance and costs at each site. Barium treatment of soil residues would be required at LANL. This technology is promising for the LANL site.

Recommendation: Pursue laboratory-scale studies at LANL. Bioslurry processes may successfully be implemented as part of the IM strategy.

Implementation Strategy: Provide PRS 16-021(c) soils to a vendor that can implement laboratory-scale treatability studies.

4.3.10 Ex Situ Soil Chemical Treatment Options

In the early 1980s the Army Environmental Center performed successful ex situ soil-slurry chemical-oxidation tests on HE and found that this process was pH dependent. However, the effluent failed the microtoxicity test, requires dewatering the slurry (with a high BOD load), and did not appear to be any more economical than incineration.

A commercial company claims to have an ex situ mixing system that can apply chemical oxidants. They have experience with PAHs, pesticides, and wood-treatment compounds and claim the process will work for TNT. They have a one-sixth scale treatability testing system. Another vendor has a solvated electron technology using ammonium that has recently been used for treatment of explosive soils. The system also is claimed to remove metals, such as barium. The costs for the system appear to be high relative to other types of technologies. Three firms have been identified that have capabilities and interest for chlorinated hydrocarbon treatments, but these companies voiced reluctance to work with explosives.

Reduction of HE in soil with zero-valent iron (ZVI) has been demonstrated in the lab (Agrawal and Tratnyek 1995, 58938). However, more work is needed to assess the reaction products and evaluate methods to recover the iron from the soils. Labwork found that adding hydrogen peroxide after ZVI treatment resulted in the oxidation of TNT ZVI reduction products, and that with time, the products became strongly sorbed and were not susceptible to further oxidation. Work with RDX found that the initial ZVI reduction products were not strongly sorbed and were more readily susceptible to oxidation. ZVI treated TNT was found to be more susceptible to biodegradation than untreated TNT in liquid media inoculated with a microbial consortium obtained from TNT-contaminated soil. However, even with pretreatment with ZVI, the rate of biodegradation was slow. These treatment technologies are immature; treatment lengths cannot be estimated at this time. Barium chemical treatment can be incorporated into some of these chemical treatment methods, primarily by including sulfates in the treatment process.

The data suggest that these types of systems may be technically feasible, depending on the application. However, the technical group needs to closely assess and compare the cost-effectiveness of the systems relative to other technologies before being suggested for full-scale implementation. Further evaluation for LANL soils is recommended.

Recommendation: Pursue laboratory-scale studies at LANL. Chemical treatment processes may successfully be implemented as part of the IM strategy.

4.4 Assessment of Surface/Groundwater Treatment Technologies

Another set of technologies reviewed by the HE Advisory Group were alternatives for the treatment of surface and groundwater. The technologies reviewed included biological reactors, iron filings treatment concepts, and phytoremediation options. The purpose was to identify treatment technologies capable of treating water containing RDX more cost-effectively than traditional chemical treatment processes, such as GAC units.

Based on a review of and assessment of the identified technologies, the HE Advisory Group identified several treatment technologies with the potential to reduce groundwater treatment costs and minimize generated wastes, while still achieving likely remediation goals. These technologies are being evaluated in more detail to better assess expected cost-effectiveness and overall performance at LANL. The assessment of each identified technology is discussed below and is summarized in Table 4.4-1.

4.4.1 Advanced Catalytic and Chemical Treatment

WES has performed ex situ chemical oxidation lab and pilot tests for extracted groundwater (Toro et al. 1995, 58936). Traditional advanced oxidation processes (AOPs), such as ultraviolet/peroxide and ultraviolet/ozone, have been evaluated by WES and shown to be effective for TNT. Production of the TNB intermediate was not a problem after a five-minute treatment in a 1-L reactor. Non-traditional AOPs, such as peroxone with and without ultrasound, were also evaluated by WES. These require more treatment time (25 min) to completely remove the TNB intermediate. Geocleanse has performed similar work for RDX in water using Fenton's reagent with reasonably good results. Barium would not be degraded by these treatments.

The cost-effectiveness and performance of the technologies depend on the contaminant levels and flow rates. The application of these technologies, therefore, is site-specific. These technologies will be further reviewed, but their application may be limited at LANL.

Recommendation: Do not pursue as an option for LANL at this time.

4.4.2 Reactive Treatment Material Applications

ZVI has been investigated for removal of HE from water. Treating an aqueous solution of TNT (70 mg/L) with 1% ZVI completely removed TNT from solution after eight hours of contact time. High Performance Liquid Chromatography (HPLC) analysis showed production of monoaminodinitrotoluenes during the initial 30 min, but these later disappeared indicating further transformation or sorption to the iron surface. Treating an aqueous solution of RDX (32 mg/L) with 1% ZVI completely removed RDX from solution after 96 hours of contact time. The issues with this treatment include assessment of the reduction products, and determination of the reaction kinetics, material longevity, and other design parameters. ZVI would not effectively remove barium from water.

In summary, ZVI has potential for use in treatment of HE in groundwater. However, the maturity of the technology is low, and much more work is needed to assess the viability for field applications. Because this treatment technology is immature, treatment lengths cannot be estimated at this time. The major advantage of this material is the passive applications that it may support; these passive applications could significantly reduce operations and maintenance costs for surface water and springs treatment.

Recommendation: Do not pursue as an option for LANL at this time.

4.4.3 Reactive Barriers

Reactive walls are passive, low maintenance systems that can be used to treat some types of groundwater contamination. Laboratory bench-scale tests and large-scale field demonstrations have focused on the chlorinated hydrocarbon groundwater contaminants such as trichloroethylene (TCE), perchloroethylene (PCE), and uranium/technetium inorganic ions. Treatment materials are typically characterized by the degradation half-life, as this impacts the amount of material used in field systems. Funnel and gate installations are often employed to direct groundwater flow through the reactive zone. Ideally the reactive wall should be tied into a confining unit so that water must pass through the reactive zone before moving downgradient. If a hanging wall is used, it should be installed to a depth 4 to 5 times the depth of the plume to avoid bypass. Various reactive materials have been used in reactive walls: sorbents, biological treatment zones, and ZVI. Reactive barrier materials that remove barium are available. These kinds of passive systems could have application at LANL, with the biggest issue being installation. This treatment technology is immature; treatment lengths cannot be estimated at this time. The technology appears feasible at LANL where the shallow nature of surface water may be cost-effectively treated by this technology.

Recommendation: Pursue laboratory-scale studies at LANL. Reactive barriers may be implemented for treatment of transport media.

Implementation Strategy: Cañon de Valle waters will be provided to a vendor with experience implementing this technology. A range of barrier materials will be evaluated to determine the optimum materials for HE and barium removal.

4.4.4 Phytoremediation for Water Treatment

Plants containing the nitroreductase enzyme are capable of treating HE-contaminated solutions with half-lives of 1– 70 hours (McCutcheon 1998, 59170). The applications of this technology for surface waters would be as constructed wetlands. Tests are being conducted at Iowa Army Ammunition Plant, Milan Army Ammunition Plant, and Volunteer Army Ammunition Plant of these types of systems. A cost and performance study of constructed wetlands will soon be available from Darlene Bader (AEC) from the Milan Army Ammunition Plant pilot studies. Barium may either pass through the treatment system or become sequestered in the plant material. If the latter occurs, harvesting the plant material may be necessary. This treatment technology is immature; treatment lengths cannot be estimated at this time. This type of system has potential applications at LANL.

Recommendation: Pursue laboratory-scale studies at LANL.

Implementation Strategy: Provide HE-contaminated LANL waters to EPA, WES, or another institute with experience in investigating phytoremediation of HE. Evaluate plant uptake of HE both in the laboratory and in the field.

4.4.5 Bioreactors

Several types of bioreactors were considered for application at LANL. The best concept would depend upon the overall cost of the process and factors such as total waste generated and operating and maintenance requirements. Anaerobic reactors would probably be most appropriate for effective operations. Barium would not be treated by a bioreactor. This option does not seem especially attractive at LANL. Based on the technology review, the HE Advisory Group believed that a passive, rather than an active, treatment system would be more appropriate for these sites because the passive systems appear to be more cost-effective and have similar performance characteristics. This treatment technology is immature; treatment lengths cannot be estimated at this time.

Recommendation: Do not pursue as an option for LANL at this time.

Table 4-4-1
Summary Applicability of Innovative Surface and Groundwater Treatment Technologies

Treatment Technology	LANL
Advanced Oxidation	No
Passive Treatment Walls	Yes
Zero Valent Iron	No
Phytoremediation	Possibly
Bioreactors	No

4.6 Summary and Recommendations for Innovative Treatment Technology Studies

Based on the technologies identified and reviewed by the HE Advisory Group for the Pantex/LANL Explosives ITRD Project, several technologies were identified that are capable of enhancing the remediation efforts. These technologies, or remedial approaches using the technologies, meet the screening criteria established in EPA proposed 40 CFR Part 264.525. The screening criteria are as follows:

- be protective of human health and the environment,
- attain likely media cleanup standards,
- control the sources of releases so as to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment, and
- comply with standards for management of wastes.

The screened technologies that meet the above standards, as well as other criteria discussed in Section 4.0, have been selected for site-specific laboratory treatment or pilot studies (Table 4.6-1). These studies will be conducted over the next several months to identify technology performance and costs in applications at the two sites, and to help define optimum operating parameters for possible full-scale remediation efforts. Pantex laboratory pilot studies are also identified in this table because LANL may directly utilize the results of the Pantex studies.

The site-specific treatment studies being considered for LANL include approaches for three compartments comprising the conceptual model: the contaminant source area (soils), transport pathways and springs pathway (water), and alluvial system (soil and water). Monitored natural attenuation or no action are considered for the unsaturated subsurface compartment. Treatment studies for excavated soils will include stabilization, chemical treatment, ZVI, and ZVI augmented in a bioslurry. The treatment studies for the seep and spring waters will include passive barrier surface water treatment and phyto-remediation. The alluvial waters will be evaluated for the same technologies as the seep and springs in addition to evaluating monitored natural attenuation through phytodegradation. The default technology for the seep, springs, and alluvial waters is an active pumping system using GAC. This technology is mature and does not require a treatability study.

Table 4.6-1
Technologies Recommended for Laboratory and Pilot Scale Application at LANL and Pantex

Technology	Site of Pilot Study	Media	Nature of Pilot Study
Stabilization	LANL	Soil	Laboratory scale
Chemical Treatment/ZVI	LANL	Soil	Laboratory scale
Bioslurry with ZVI	LANL/Pantex	Soil	Laboratory scale
Phytoremediation	LANL	Water	Pilot scale
Passive Barrier	LANL	Water	Laboratory and Pilot scale
Bioremediation– vapor phase augmented	Pantex	Soil	Pilot scale
Composting	Pantex	Soil	Pilot scale

As the results of the laboratory-scale and pilot studies are finalized, engineering evaluations of expected performance and cost of several possible remediation options and concepts at each site will be developed by the HE Advisory Group. The results of the HE Advisory Group engineering and cost evaluations, as well as the results of each treatability study, will be available to all project participants. Based on the current treatability study schedule, suggested remediation options for each site from the HE Advisory Group should be finalized in calendar year 1999. The suggested remediation approaches will be evaluated according to the process presented in Section 5.

5.0 PROCESS AND CRITERIA FOR EVALUATION OF REMEDIATION ALTERNATIVES

5.1 Process

Section 5 discusses the process for evaluating remediation technologies/alternatives, selected in Section 4, to determine the most appropriate remedy(s) for the site. Four components comprising the site conceptual model, have been identified for the 260 outfall and Cañon de Valle. These site conceptual model components include: the contaminant source area, the unsaturated subsurface, the transport pathways and springs, and the alluvial system in the canyon bottom. Remediation approaches that have been successfully screened for each component are discussed in Section 5.2. The process and criteria for evaluating these remediation approaches is the same regardless of the actual remedy or component. These criteria are discussed in Section 5.3.

5.2 Potential Remediation Alternatives

Remediation alternatives are based on corrective measure objectives, discussed in Section 3, and analysis of technologies, presented in Section 4. The remediation approaches represent either a single technology, combination of technologies, or no action. The approaches represent workable options that will adequately address the site problems. Potential remediation alternatives for each component of the conceptual model are discussed below.

Contaminated Source Area

The soil in the 260 pond source area will be removed during the IM. The remediation alternatives for this IM activity include technologies that are presented in Section 4. These alternatives will not be discussed here; however they will be evaluated according to the criteria discussed in Section 5.3. The contaminated source area included in this CMS is comprised of: soil and tuff beneath the excavated or remediated pond soils and soil in the drainage from the pond to Cañon de Valle. Because there will be no exposure to the soil and tuff remaining after the pond is remediated, the most likely alternative for this part of the source area is no action. Three alternatives are likely for any additional contaminated source area soils in the drainage that are not removed in the IM: (1) biodegradation/monitored natural attenuation, (2) no action, and (3) removal followed by treatment (for soil presenting unacceptable human health or ecological exposures).

Unsaturated Subsurface

Two likely remediation alternatives are considered for the unsaturated subsurface soils. One option, biodegradation/monitored natural attenuation, is presented in Section 4.. The second option is no action.

<u>Transport Pathway and Springs</u>

Four likely remediation alternatives are considered for the surface water and groundwater and springs. Four principal treatment options are presented as technologies in Section 4; passive barrier surface water treatment, GAC treatment, phytoremediation, and biodegradation/monitored monitored natural attenuation. The fifth alternative is no action. Pilot-scale studies will be conducted for the relevant technologies, as needed. These studies will determine the feasibility of removing contaminants specific to the site. Dependent on the results of the studies, a single technology or combination of technologies may be selected.

<u>Alluvial System – Soil</u>

Three likely remediation alternatives are considered for the alluvial system soils: (1) biodegradation/monitored natural attenuation, (2) no action, and (3) removal followed by treatment (for soil presenting unacceptable human health or ecological exposures).

<u>Alluvial System – Water</u>

Four likely remediation alternatives are considered for the alluvial water. Four treatment options are presented as technologies in Section 4; passive barrier surface water treatment, GAC treatment, phytoremediation, and biodegradation/monitored natural attenuation. The fifth alternative is no action. Pilot-scale studies will be conducted for the technologies, as needed. These studies will determine the feasibility of removing contaminants specific to the site. Dependent on the results of the studies, a single technology or combination of technologies may be selected.

5.3 Criteria

Remediation approaches retained for evaluation beyond the initial screening (those approaches presented in Section 4 and presented above) will be compared and contrasted using criteria established in Task VIII of Module VIII of the HSWA Permit for Los Alamos National Laboratory (NM0890010515) and in EPA proposed 40 CFR Part 264.522(a). These applicable regulations are presented in Appendix F. The intent of this evaluation is to determine the most plausible remedy(s) specific to each component. Each of the retained remediation approaches will be evaluated based on the following criteria:

- performance and reliability,
- reduction of toxicity, mobility, or volumes of contaminants or wastes,
- effectiveness of remedy in achieving target concentrations,
- timing of the potential remedy,
- ease of implementation,
- long-term reliability,
- impacts of institutional requirements on remedy implementation,
- mitigation of human health and environmental exposures, and
- costs.

5.3.1 Performance and Reliability

The CMS will assess the effectiveness of considered remedial approaches in controlling the source of release and the impacts associated with the potential remedy. The effectiveness of remedial approaches at similar sites and under analogous conditions will be evaluated.

5.3.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

The CMS will evaluate if the considered remedies are effective at reducing the contamination at the site and determine if the remedy will successfully eliminate or reduce the toxicity, reduce the ability of the contaminant(s) to move, or substantially decrease the volume.

5.3.3 Effectiveness of Remedy in Achieving Target Concentrations

The CMS will assess each potential remedy in terms of its effectiveness and ability to achieve the target MCS.

5.3.4 Timing of the Potential Remedy

The CMS will evaluate the time required to implement each potential remedy and the time anticipated to see the results. The setup and implementation of a remedy includes the design, mobilization, demobilization, construction, permitting, and waste acceptance for off-site disposal. For hazardous waste treatment, permits will be required prior to construction.

5.3.5 Ease of Implementation

The CMS will evaluate the ease of implementation of the considered remedial approaches. Some examples of site conditions that may affect the ease of implementation include depth to water table, heterogeneity of surface and subsurface materials, terrain, and site location. Other conditions include the need for special permits or agreements, equipment availability, and location of suitable off-site treatment or disposal facilities.

5.3.6 Long-Term Reliability

The CMS will evaluate the useful life of the considered remedies in terms of the length of time that the remedy can effectively be maintained and whether the remedy will deteriorate with time.

5.3.7 Impacts of Institutional Requirements on Remedy Implementation

The CMS will evaluate federal, state, local, public health regulations, or permitting requirements that may substantially impact the implementation of the investigated remedies.

5.3.8 Mitigation of Human Health and Environmental Exposures

The CMS will assess each remedy in terms of the extent that it mitigates short- and long-term potential exposure to any human health or ecological receptors both during and after implementation of the remedy.

5.3.9 Costs

The CMS will evaluate each potential remedial approach in terms of cost. The cost estimate will include costs for each phase of the remedy and will include capital, operation, and maintenance costs. Capital costs include the direct construction costs and indirect non-construction and overhead costs. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of the corrective measure.

Additional criteria have been identified that are important to the successful completion of a corrective measure. These criteria will be used in the evaluation process and are as follows:

- public acceptance of feasible technologies,
- pollution prevention and waste minimization, including the relative quantities of waste generated by competing technologies, energy efficiency, and resource conservation,
- progress toward nature systems recovery, and
- mitigating conditions that could result in natural resource damage assessments.

Remedial approaches will be selected based on the above criteria and process of evaluation. The approaches will be recommended to the Administrative Authority in the CMS Report.

6.0 PHASE III RFI INVESTIGATIONS

6.1 Objectives and Scope

This section presents the objectives and scope of the CMS data needs addressed by the Phase III RFI. These data needs support the investigation objectives described in Chapter 3. The scope of the investigation required to sufficiently satisfy these objectives may be classified into five components:

- connectivity,
- residence times,
- spring and seep dynamics,
- alluvial water dynamics, and
- alluvial sediment dynamics.

The investigations that are associated with the first and last of the components will be one-time events. Sampling and analysis to address the second, third, and fourth components will continue for the duration of Phase III, nominally three years. As a point of reference, previous ER data associated with the TA-16-260 outfall are summarized in Chapter 2 of this document.

This Phase III investigation will nominally span three years and will be reviewed after the first year of data collection. Any refinement to the plan at that time will be discussed with the Administrative Authority. Ecological risk assessment approaches are under development in concert with the Administrative Authority. As ecological data needs for the PRS 16-021(c) CMS/CMI become evident, they too will be discussed with the Administrative Authority and appended to the CMS Plan.

6.1.1 Connectivity

How is the TA-16-260 outfall source area connected to the TA-16 springs and seeps? This question must be answered in order to identify potential monitoring locations, as well as points for remediation beyond the source removal IM. Are there other transport pathways that connect directly with the main aquifer, not expressed in the springs or seeps? This question may not be answered, but is considered in the groundwater point of compliance discussion in Section 3.4.2.3. This question will also be partially addressed by the R-25 and R-27 deep-groundwater well investigations.

6.1.2 Residence Times

How long does it take for water to travel from the point or points of recharge to the TA-16 springs and seeps? The answer to this question will evaluate the association of the contamination in the springs and seep with the 260 outfall and is also related to the design of short- and long-term monitoring plans.

6.1.3 Spring and Seep Dynamics

How do contaminant fluxes change with discharge, season, and (in the case of Peter Seep) location at the TA-16 springs and seeps? Do contaminants at the various springs and seeps represent the same sources or different subsets of sources at TA-16? As discussed at length in Section 6.3.3, understanding the dynamics of springs and seeps that are potential monitoring points is essential for the interpretation of monitoring data. These data will also begin to identify sources of contamination other than PRS 16-021(c), if any, and address the potential impact of residual contamination in the subsurface. Understanding these dynamics will also provide information needed to evaluate certain remedial alternatives, such as the feasibility of hydrologic isolation and the viability of monitored natural attenuation for this site.

6.1.4 Alluvial Water Dynamics

Does the perennial reach of Cañon de Valle act as a simple "pipe," conducting all water that enters it (surface runoff, springs, and seeps) past MDA-P to the point where it disappears near the Qbt3/Qbt2 contact via its surface and alluvial groundwater components? Or are there unidentified losing stretches in intermediate reaches? The answer to this question has implications for selecting points of remediation of surface water, if necessary, and the selecting monitoring points and points of compliance. In particular, understanding the alluvial water dynamics is important in determining the number of monitoring points and points of compliance that may be required to address not only PRS 16-021(c), but other contaminant sources that impact Cañon de Valle. This understanding also has direct application for modeling the potential impact of these PRSs on deeper groundwater aquifers and for siting potential future deeper monitoring wells.

Virtually nothing is known about the alluvial system associated with Martin Spring. Martin Spring and its canyon may or may not be impacted by PRS 16-021(c), but investigation of its alluvial system will be initiated as part of the Phase III investigations.

6.1.5 Alluvial Sediment Dynamics

What are the inventories of contaminants in active channel and overbank deposits? Are these sediments an active source of contamination to alluvial waters? How are contaminants associated with sediments redistributed within the alluvial system? How will this redistribution affect future contaminant concentrations and future contaminant inventories in areas both within the administrative boundaries and downstream of the administrative boundaries? The answers to these questions will be used directly to evaluate the impact of residual contamination on assessment endpoints, as well as to address the feasibility and selection of remediation alternatives if alternatives are called for.

6.1.6 Other Data Campaigns

The inventory and distribution of residual contamination at the TA-16-260 outfall source area will be addressed in a separate sampling and analysis plan (SAP), included in the IM plan scheduled for completion in 1999.

For the purposes of the CMS, receptor exposure to groundwater will be limited to the areas in Cañon de Valle and Martin Spring Canyon that contain contaminated perched alluvial groundwater. The CMS will evaluate the potential risk to the nearest human and ecological receptors under the conservative scenarios described in Section 3.4.2.3.

Should these conservative risk assessments indicate the potential for unacceptable human or ecological risk, an additional investigation will be designed and implemented that will provide the information necessary to refine the risk assessments. Information gained from the hydrologic boreholes R-25 (scheduled to be completed in 1998) and R-27 (scheduled to be completed in 2000) will be useful in performing these risk assessments.

6.2 Approach and Implementation

This section provides a brief overview of the information that will be collected to address the five components of the Phase III investigation listed in Section 6.1. Much more detail, including specific problem histories, is provided in Section 6.3. Field implementation procedures are discussed in Section 6.4.

1. Connectivity

   This sampling plan is designed to estimate the mass of a potassium bromide tracer that still remains near its point of deployment, which was the ponded area of the TA-16-260 outfall. Very little of this tracer has been recovered to date, although it was deployed in April 1997. Grab samples of soil and tuff will be collected and analyzed for bromide and percent moisture during the source removal IM. Both field and laboratory analyses will be performed; a statistical design will be used to select the subset of samples for laboratory analysis.

   The sampling program to detect the tracer in the TA-16 springs and seeps (see the Phase I RFI report, (LANL 1996, 55077) will continue during the Phase III investigations.

2. Residence times

   Unfiltered grab samples will be collected from the TA-16 springs and seeps in coordination with the continuing tracer sampling at those points. Precipitation samples will also be collected at a central TA-16 location. Subsets of these samples will be selected for laboratory determination of stable isotope ratios that reflect seasonal atmospheric conditions. Additional samples will be archived and may be analyzed later. Isotopic signatures in springs will be compared with those of individual precipitation events to estimate the apparent ages of waters emerging at the springs and seeps. This will provide a lower bound for the residence times of contaminants in the subsurface.

3. Spring and seep dynamics

Discharge records and flow-integrated filtered water samples will be collected at the springs. The Isco autosamplers at Burning Ground, SWSC, and Martin Spring will be instrumented with data loggers for pH, conductivity, and temperature. Paired filtered grab samples will be collected at Peter Seep in Cañon de Valle, and additional observations will also be made to characterize the migration of Peter Seep (location, discharge, and concurrent water levels in the alluvial wells). A standard suite of field measurements will be used for all samples. Laboratory analyses of a standard suite of contaminants (HE and inorganics) and water quality parameters will be obtained for a subset of weekly flow-integrated samples and Peter Seep samples, selected to represent a range of hydrologic conditions. Some monthly composites of remaining flow-integrated samples will also be analyzed for inorganics and water quality parameters.

The data will be used to establish dynamic baselines for future monitoring (i.e., concentration–discharge relationships, with possible dependence on seasonal factors as well). The data may also be used to estimate seasonally-dependent parameters of a mixing model for each spring. The quarterly sampling program for water in the springs (see the Phase I RFI report, ref.) (Environmental Restoration Project 1996, 55077) will be continued for the duration of Phase III. These samples include both filtered and unfiltered samples for HE, metals, VOCs, SVOCs, and water quality parameters.

4. Alluvial water dynamics

Surface and subsurface discharge profiles will be estimated for the perennial reach of Cañon de Valle and the upper reach of Martin Spring Canyon. Concurrent filtered grab samples of surface water, alluvial water, and springs will be collected. The standard field parameters, plus a field HE measurements, will be provided for all samples, and laboratory contaminant and water quality analyses will obtained for subsets selected to represent high and low baseflow conditions.

The data will be used to determine whether there are sources to the alluvial system other than those already identified and to identify reaches where significant exchange between the surface water and alluvial groundwater components of the system occur.

The quarterly sampling program for water in the alluvial wells (see the Phase I RFI report, (LANL 1996, 55077) will be continued for the duration of Phase III. These samples include both filtered and unfiltered samples for HE, metals, VOCs, SVOCs, and water quality parameters.

5. Alluvial sediment dynamics

Geomorphic mapping of the sediments in restricted reaches of Cañon de Valle and Martin Spring Canyon will be completed following the procedures used in the Core Document for Canyons Investigations (LANL 1997, 55622). The mapping will focus on identifying and subdividing post-1940 sediments into geomorphic units with different characteristics (i.e., age, thickness, particle size) that may relate to varying contaminant concentrations and inventories. Following this, a statistical sampling plan will be designed to sample the post-1940 floodplain sediments. Field HE measurements will be made on all sediments, and subsets will be selected, again according to a statistical design, for analysis for the full suite of contaminants associated with PRS 16-021(c). Data will be used to estimate the spatial distribution and inventory of contamination in the sediments of Cañon de Valle and Martin Spring Canyon. Additional biased sampling may be necessary to evaluate hypotheses concerning sediment dynamics, such as defining how COPC concentrations vary with distance, time (gained by sampling sediment with variable age), and particle size.

6.3 Phase III Sampling and Analysis Plans

The following subsections provide background for each of the components of the Phase III investigation. Each subsection identifies the types of data needed and the proposed use of these data, together with the assumptions and physical and temporal constraints that affect the design of the data collection plan. The specific investigation objective (as defined in Chapter 3) that the data supports is explicitly identified for each of the Phase III investigation components. Finally, a sampling and analysis plan is proposed for each component. Procedural and other implementation aspects of these plans are described in Section 6.4.

6.3.1 Connectivity

6.3.1.1 Overview

In April 1997, 100 kg of potassium bromide tracer dissolved in 450 gal. of water was deployed at the head of the TA-16-260 outfall pond. The tracer was followed by 200 gal. of water on two consecutive days for a total of 400 gal. The purpose of the tracer was to test the hypothesis that the 260 outfall is the source of contamination in Peter Seep, SWSC Spring, Burning Ground Spring, and Martin Spring.

Thus far, tracer has been detected in SWSC Spring at low microgram per liter levels and possibly in Burning Ground Spring. The total amount of tracer recovered to date is estimated to be less than 1% of what was deployed in 1997.

There are several possible explanations for why tracer concentrations in the springs are low or at background levels.

- There may be insufficient water impacting the pond area to transport the tracer away from the point of origin, given that the outfall is no longer in service and that BMPs are placed to prevent runoff to the pond area.

- The tracer may be moving through the subsurface, but at a slow rate. The tracer may have primarily intersected slower flow paths during and following deployment. In general, residence times for water in the hydrologic system are not well understood.

- The subsurface flow paths from the point of tracer deployment may not be connected to some of the springs. The tracer is migrating through the hydrologic system, but not to the locations being monitored for breakthrough.

This subsection describes an investigation to test the first of the above hypotheses. Subsection 6.3.2 describes investigations of residence times of water in the subsurface, the results of which will impact the second hypothesis. The third hypothesis is not being directly evaluated in this investigation. The data generated in the investigation presented in this subsection will directly support investigation objective IO6.

6.3.1.2 Investigation Design

An investigation will be conducted to determine the mass of tracer remaining in and near the source area. The remainder of the tracer will be assumed to have migrated into the subsurface system, although little of it has been recovered to date. This investigation will be conducted in two parts.

1. During the IM, before removal of pond sediments, soil and tuff samples will be collected at or near the point of tracer deployment within the TA-16-260 outfall pond area.

2. Following the IM, after the source area has been removed, a borehole will be drilled to collect data on the extent of contamination and bromide in tuff below the ponded area. Data generated during the drilling of this borehole will also be used to determine bromide concentrations at or near the source area.

Samples generated during this two-part investigation will be analyzed for bromide and moisture content at the field support facilities. A subset of soil and tuff samples will be selected from the screening samples and analyzed for bromide at an off-site analytical laboratory. Bromide will be measured by drying the samples to get sample weights, and then leaching the samples with deionized water and measuring bromide concentrations with an ion-specific electrode; soil moisture content will be measured using American Society of Testing and Materials (ASTM) methods. Laboratory analyses will be conducted in accordance with contract-specified procedures.

The field and analytical laboratory data will be used to determine the following information.

1. An estimate of the total inventory of tracer at the source area will be obtained. The extent and trend of bromide concentrations in pond sediments and tuff will be estimated based on the field screening data. Estimates of mean contamination in soil and tuff will be based on the laboratory sample results. These estimates will be combined to produce the total bromide inventory estimate.

   A statistical approach, ranked set sampling (RSS) (Patil et al., 1994, 59113, pp. 57-97 will be used to select the subset of soil and tuff samples for laboratory analysis. This method will improve the accuracy and precision for the mean bromide concentration estimate. At most, bromide concentrations on the order of 500–2000 mg/kg may remain in the sediments near the point of deployment. However, some tracer has clearly left the source area, so much lower concentrations may be observed.

2. The data will show whether bromide, as a conservative tracer, is collocated with relatively high moisture in soil and tuff samples. The data could be used to improve the estimate of the mass remaining at the source area.

3. The data will show how well the field bromide analytical methods perform.

6.3.1.3 Sampling Activities

During the IM, a trench will be excavated through the outfall pond sediments to the soil/tuff interface. (Figure 6.3-1). The trench will be excavated along the center axis of the pond from the point just below where the drainage channel intersects the pond, downgradient to the top of the rock dam. The trench should be approximately 30 ft long (the estimated length of the pond), up to 8 ft deep and at least one backhoe bucket wide. Eight vertical profiles, spaced approximately four feet apart, will be sampled along the trench. Each profile will extend to the soil/tuff interface, and four screening samples will be collected from each vertical profile. The depth intervals that the samples will be collected on are expected to vary from profile to profile. A tighter, but evenly spaced, sampling interval will have to be used where the depth to tuff is shallower and a larger (again, evenly spaced) interval will have to be used where the depth to tuff is greater. This will require particular care during trenching activities to control the sampling depth. Initially, provisional samples may also need to be collected on a tight interval (as little as 0.5 ft) to ensure that four samples are collected on even intervals from each profile, particularly at profile locations where the depth to tuff is expected to be very shallow. This will produce a total of 32 systematic (unbiased) field-screening samples.Eight samples for laboratory analysis will be selected from the 32 field screening samples following the RSS strategy outlined below.

The four samples from each profile will be ranked from one (low concentration) to four (high concentration) based on the field bromide results. Selection of samples for laboratory analysis will begin with the lowest ranked sample in the first profile, the next lowest in the second profile, through the highest in the fourth profile, and then again the lowest in the fifth profile through the highest in the eighth profile.

After the IM removal of outfall sediments has been completed, a borehole located at the center of the (removed) pond will be advanced to a total depth of 80 ft. The borehole will be continuously cored and sampled on five-foot intervals. This will generate sixteen unbiased (systematic) field screening samples. The core samples will be field screened for bromide concentration and percent moisture.

An RSS strategy will again be used to select four samples for laboratory analysis from the 16 screening samples. The systematic (unbiased) samples will be assigned at random to four subgroups of four samples each. The samples will be ranked one through four (again based on lowest to highest bromide concentration) within each of the four subgroups. Finally, the sample ranked number one in the first subgroup, two in the second subgroup, and so on will be submitted for laboratory analysis.

Additional screening samples may be selected to target moist strata or fractures if any are encountered, but these biased samples will be kept separate from the unbiased samples and will not be used in the RSS estimate of the mean bromide concentration. Up to six of these biased samples will be submitted for laboratory analysis for bromide and moisture content.

Table 6.3-1 summarizes the field screening and laboratory analyses.

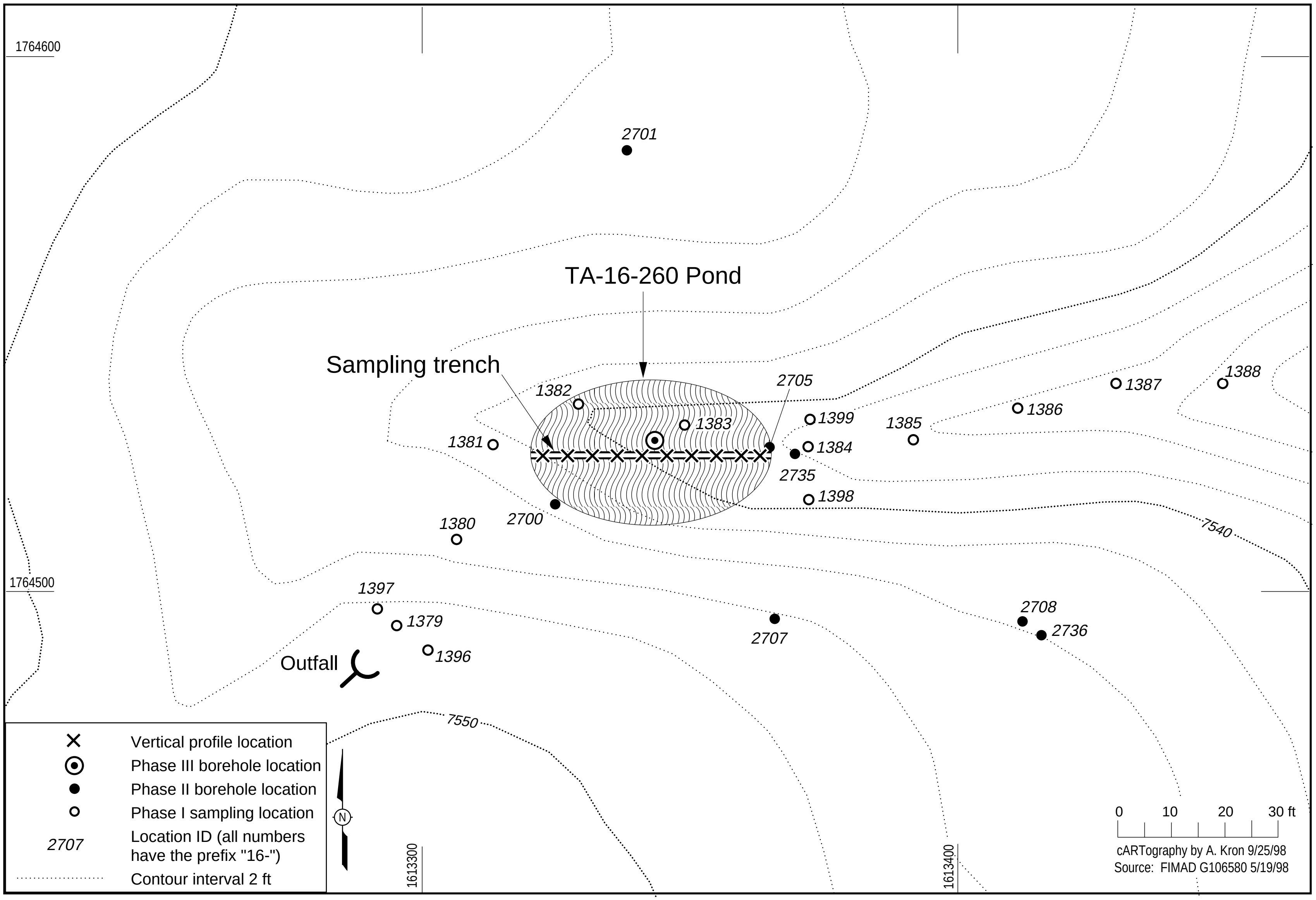


Figure 6.3-1 Trench and vertical profile locations in the 260 pond.

Table 6.3-1
Summary of Sampling and Analysis for the Connectivity Investigation at the TA-16-260 Outfall Source Area

Sample or Survey Measurement	Number collected	Number Analyzed	Field Measurements and Analytical Suites
During IM: sediment samples from trench	32	32 field 8 laboratory	Field bromide, % moisture Laboratory bromide
After IM: tuff samples from borehole	16 + additional biased	16 + additional biased 4-+up to 6 biased	Field Br-, % moisture Laboratory bromide
After IM: tuff samples from borehole	16 + additional biased	16 + additional biased 4-+up to 6 biased	Field bromide, % moisture Laboratory bromide

6.3.2 Residence Times

6.3.2.1 Overview

The characteristics of the subsurface transport system, as represented by the discharge records for the springs, show significant variations with seasons and rainfall events. Comparison of the rainfall records for TA-16 with spring discharge plots**,** as in Figure 6.3-2, suggests three separate and distinct responses by the springs to precipitation. There is a rapid response that occurs within a few hours of an individual event, a slightly delayed response observed within days, and a seasonal response observed as overall higher baseflow discharge rates during the monsoon season.

These response times do not necessarily reflect actual residence times in the subsurface. The early responses to significant precipitation events, in particular, may represent the displacement of water already in the system by the influx of new water, rather than the immediate transport of the new water to the springs. However, these relatively rapid response times suggest that fast pathways exist between recharge points and the springs.

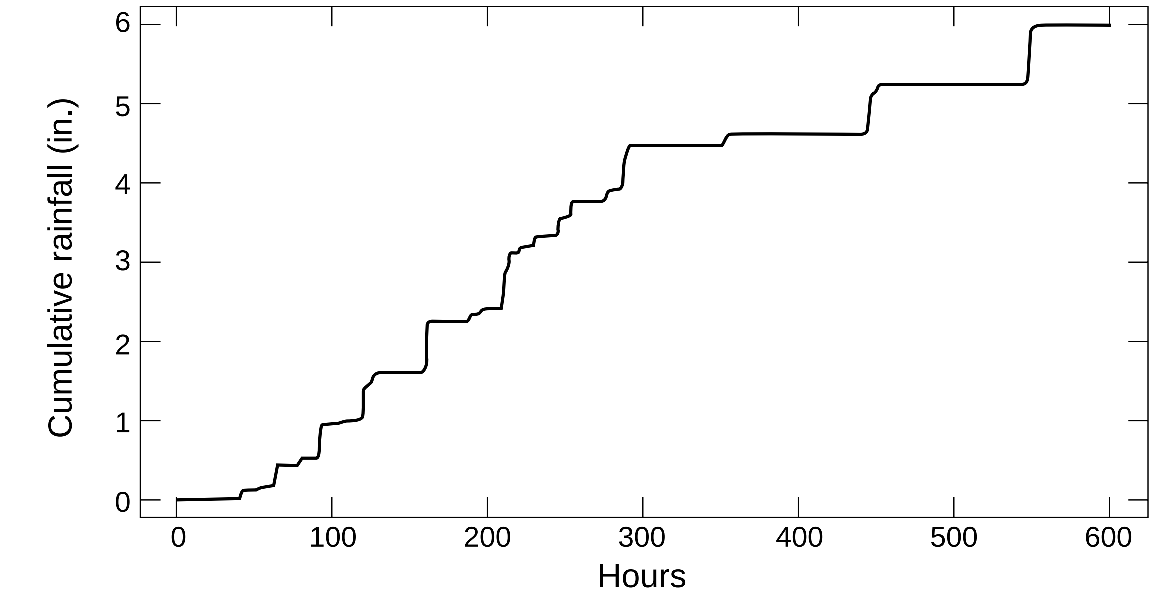
Residence times for contaminants are generally longer than the residence times for water or a conservative tracer, such as bromide, because of various retardation mechanisms. Nevertheless, monitoring for the effects of source removals and other remedial actions at the springs and seeps can be improved by estimating the anticipated time lag to response expected to be effective.

This subsection describes investigations intended to provide data to estimate the range of residence times for water in the subsurface hydrological system. The investigations described in Section 6.3.3 will also have some bearing on the question of multiple pathways. The data generated in the investigation presented in this subsection will directly support investigation data objectives IO6.

6.3.2.2 Investigation Design

Residence times will be estimated by analyzing oxygen and hydrogen stable isotope ratios ($\delta^{18}O$ and δD) in the spring and seep waters and comparing these data with the corresponding isotope signatures in

(a)



(b)

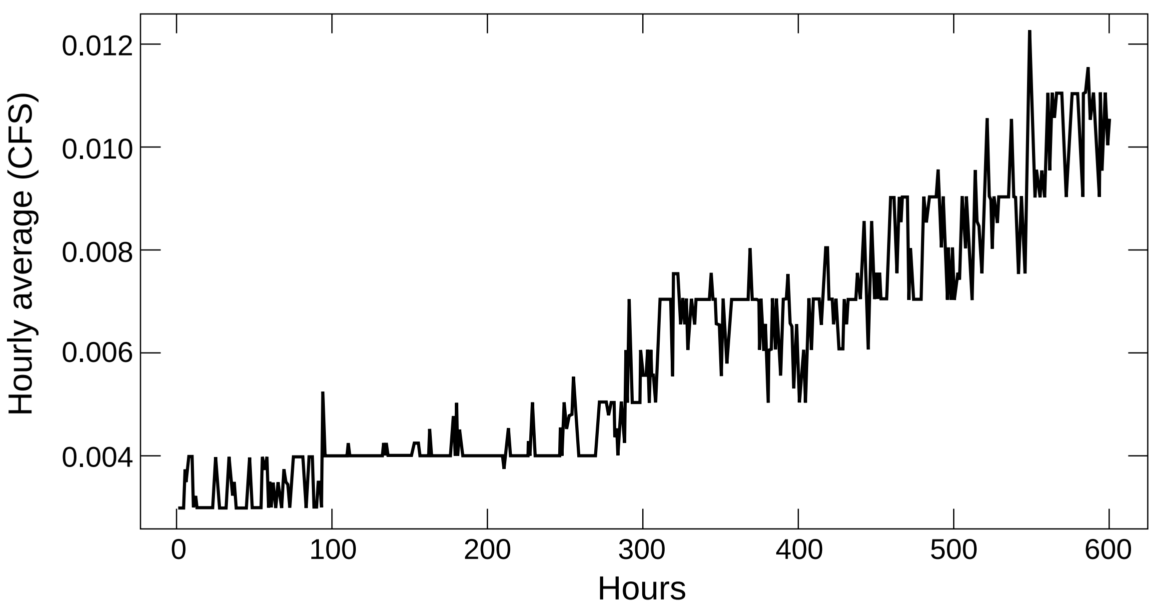


Figure 6.3-2. **(a) Cumulative rainfall plot for summer 1997 monsoon season; (b) hydrographic record for SWSC Spring, summer 1997 monsoon season.**

precipitation. Large shifts in $\delta^{18}O$ and δD in precipitation are associated with changes in atmospheric temperatures. Annually recurring transition periods are fairly predictable and frequently abrupt, including the monsoon onset and spring and autumn temperature shifts. Precipitation recharges the system, and these shifts in isotope ratios can be detected in the springs and seep after transport-related lag periods. The lag period for each spring and the seep provides an estimate of the associated transport residence time in the hydrologic system.

The stable isotope approach has been used with success at the ponderosa pine hillslope near TA-16 (Newman 1998, 54399) and for springs at the Nevada Test Site (Ingraham et al. 1991, 59171). To the extent that samples from Peter Seep represent emergence of alluvial groundwaters that may have been in the alluvial system for some time (see the discussion in Section 6.3 below), this technique may not be as useful for this location as for the springs.

Because the atmospheric signal does not vary significantly over spatial scales on the order of kilometers, a single precipitation sampling station located at TA-16 will be sufficient for this investigation. However, wide variations in the arrival times of the isotopic signals at the various springs and seeps can be anticipated, and quite a large number of analyses may be required to estimate the associated lag times. Because the isotopic ratio will not alter in a properly stored, archived sample, a sequential approach to the selection of samples for analysis is proposed.

Comparison of stable isotope data from individual precipitation events to the timing of change points in ratios measured in samples from the springs will be used to estimate the apparent age (or possibly, a range of apparent ages, if multiple breakthroughs of an identifiable signature are observed) of waters emerging at each of the sampled springs and seeps. This in turn will provide a lower bound for the time between source removal and changes in contaminant signatures at these points.

If the residence times of the springs are too long (i.e., longer than the three-year period allocated for the Phase III investigations), the stable isotope approach will not provide the resolution in ages that is anticipated. However, even this result would provide a lower bound for when we might expect changes in contaminant signatures at the springs following the IM source removal. Based on the response time data discussed above, it is more likely that the springs have a fairly short residence time that can be estimated based on a sampling period of one to two years.

6.3.2.3 Sampling Activities

Samples for stable isotope analysis will be collected every-other day with auto-samplers at three springs and at Peter Seep for a period of three years as unfiltered aliquots of the samples collected for the bromide tracer under the ongoing Phase II program. Concurrently during the Phase III sampling period (nominally two to three years), precipitation samples will be collected for isotope analysis at a station located near the TA-16 field trailers (Figure 6.3-3). Precipitation sampling will be event driven. Initially, the spring and seep samples will be submitted for $\delta^{18}O$ analysis at the rate of 1 in 10 samples collected from the autosamplers (one every three weeks) during atmospherically stable periods. During seasonal transition (e.g., snowmelt, monsoon, and early fall post-monsoon), one in four samples (one a week) will be submitted for $\delta^{18}O$ analysis. A total of approximately 25 samples per spring per year will be submitted for $\delta^{18}O$ analysis. The remaining samples will be archived. Additional samples will be extracted from the archives to pinpoint more precisely the timing of shifts in the results, once these have been bracketed, so the total number of samples analyzed may rise to as many as 50 per spring. Every fifth laboratory sample will also be analyzed for δD so that the impact of evaporation can be assessed. δN, which is more of an indicator of contamination than of atmospheric changes, will be requested for every tenth sample. All precipitation samples will be analyzed for the stable isotopes, δ^{18}O and δD (Table 6.3-2). Nitrogen isotopes (δN) will also be analyzed for a subset of these samples, two per season; although these are more relevant to the investigations described in Section 6.3 below. The precipitation data will be used to establish isotope signatures of storms and the timing of atmospheric transitions.

Table 6.3-2
Summary of Annual Sampling and Analysis for the Residence Times Investigation at the TA-16 Springs and Seeps

Sample or Survey Measurement	Number collected	Number analyzed	Field Measurements and Analytical Suites
Precipitation samples collected at a central TA-16 station	25–50	25–50 8	δ^{18}O, δD δN
Burning Ground Spring, unfiltered water grab samples	180	25–50 5–10 2–5	δ^{18}O δD δN
SWSC Spring, unfiltered water grab samples	180	25–50 5–10 2–5	δ^{18}O δD δN
Martin Spring, unfiltered water grab samples	180	25–50 5–10 2–5	δ^{18}O δD δN
Peter Seep, unfiltered water grab samples	180	25–50 5–10 2–5	δ^{18}O δD δN

6.3.3 Spring and Seep Dynamics

6.3.3.1 Overview

Elevated levels of barium, HE, and other contaminants associated with PRS 16-021(c), as well as with a number of other TA-16 PRSs, are observed in all TA-16 springs and seeps (Figure 6.3-3) Data from quarterly grab samples indicate that contaminant concentrations vary with changes in discharge for these springs. More relevant for the establishment of baselines for long-term monitoring would be estimates of contaminant fluxes, which also can be expected to change as a function of discharge, season, and (in the case of Peter Seep) possibly location. Existing data from grab samples cannot provide reliable estimates of contaminant fluxes and are completely inadequate for estimating the dynamic baseline (that is, a function that relates contaminant flux to discharge, season, and seep location) that will be required for long-term modeling and monitoring.

The location of Peter Seep fluctuates within a reach of Cañon de Valle that is approximately 600-ft long (Figure 6.3-4. While the lower end of this reach (the "foot" of Peter Seep) is east of the TA-16-260 outfall, the upper end (the "head") is upgradient from the outfall. Understanding the mechanism that controls the migration of Peter Seep is important to understanding the source of contaminants observed at the seep, as well as for establishing a baseline for future monitoring. One conceptual model is that the seep location changes simply reflect changes in head in the alluvial aquifer; when the water table in the alluvium is higher, then the seep emerges higher up the canyon reach than when the water table is lower.

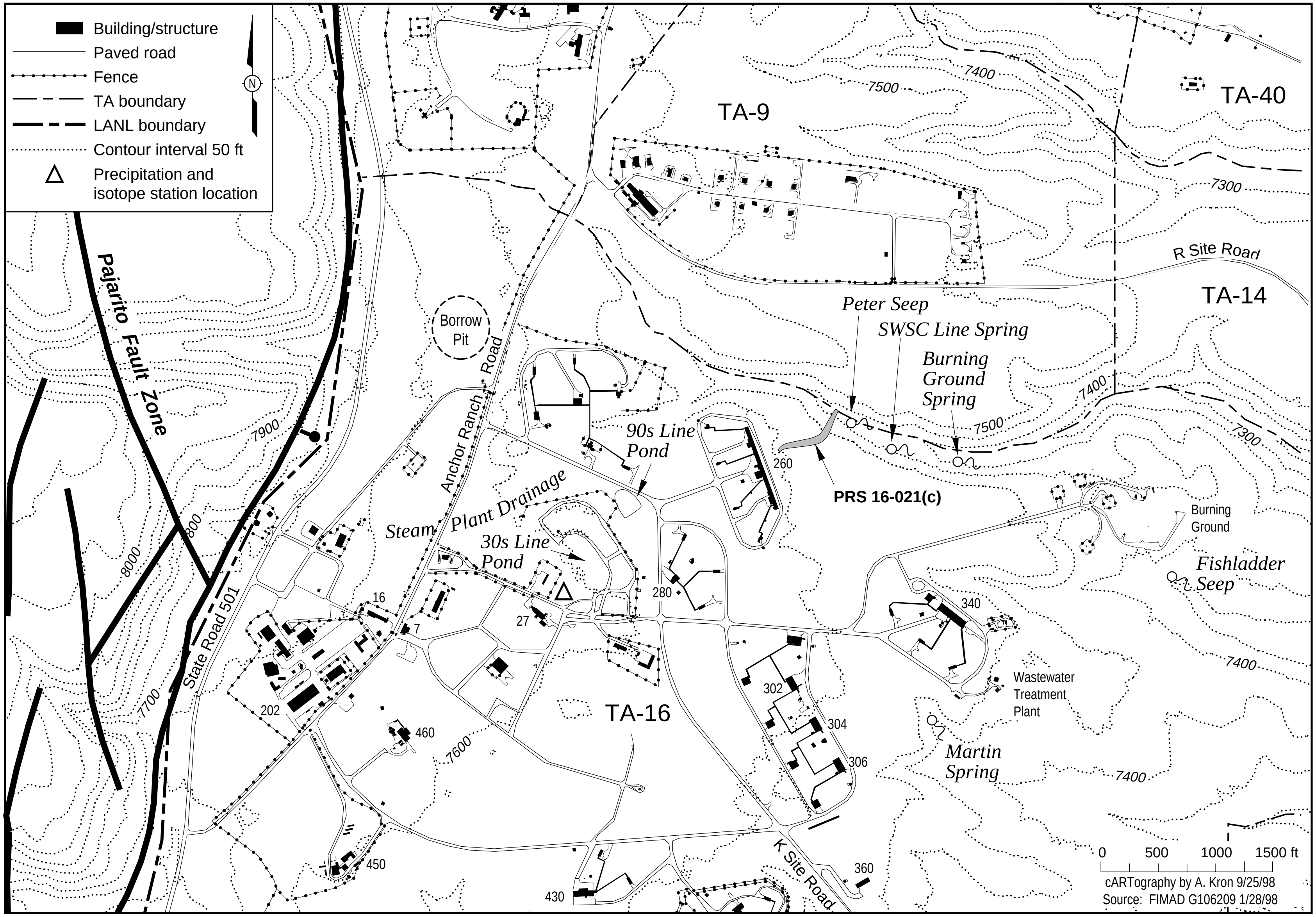


Figure 6.3-3. Precipitation station location and isotope sampling locations (Cañon de Valle springs).

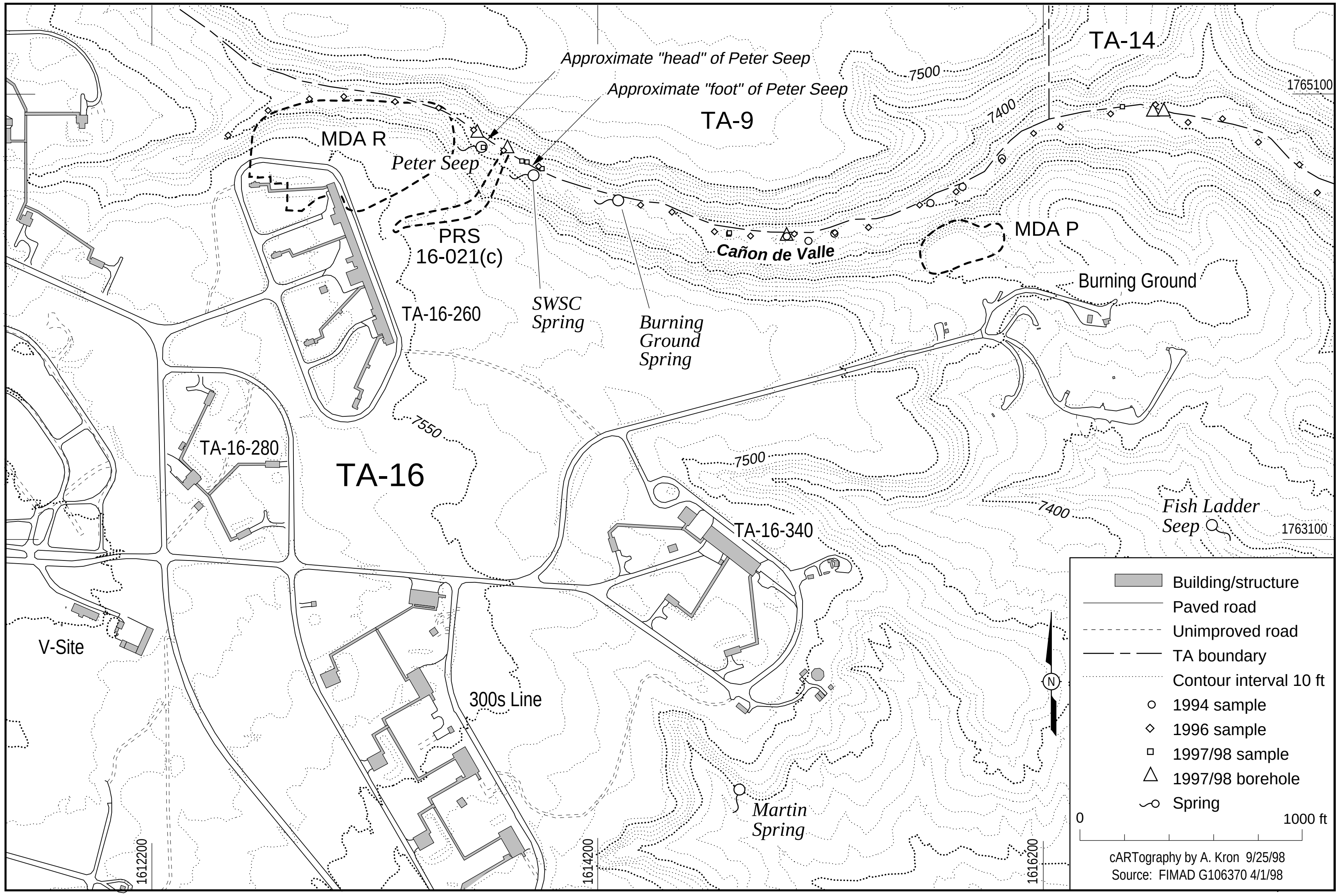


Figure 6.3-4 Extent of Peter Seep.

Alternatively, Peter Seep may be fed by discharges from the adjacent mesas. In this case, its location could be controlled by fractures and the seep may emerge only at discrete locations, or its head might not be well correlated with head in the alluvial aquifer.

The interactions of the subsurface hydrologic system with the PRS 16-021(c) source area, secondary contaminant sources related to PRS 16-021(c), and additional TA-16 PRSs, as well as the timing of those interactions, are unknown. Several sources of recharge for the springs, seeps, and the canyon alluvial systems have been suggested. These include: (1) diffuse recharge, (2) surface flow into the Cañon alluvial system, (3) interflow along the soil-tuff interface into Cañon de Valle or the spring systems; (4) localized recharge into the alluvial fans and borrow pit near Route 501, and (5) fracture-controlled recharge along the Pajarito Fault. Significant former and current sources of process water include the steam plant drainage, the 90s line pond, and former 30s line lagoons in the World War II area, the former wastewater treatment plant through which TA-16 sanitary wastes are still routed to the new SWSC line, and, of course, the TA-16-260 outfall (see Figure 6.3-3).

Because of the complexity of the TA-16 hydrogeologic system, it is likely that these sources combine in different proportions to generate the discharge at any given spring. For example, flow and chemistry data for Martin Spring suggest that recharge and contaminant sources for this spring may be different than those for the Cañon de Valle springs [see Section 2 and also Chapter 4 of the Phase II RFI report for PRS 16-021(c), (LANL 1998, in preparation). These relationships can never be perfectly modeled, but some of the information collected during the Phase III investigations may provide preliminary answers to such questions as:

- Do discharges at the SWSC Line Spring and the Burning Ground Spring represent essentially the same sources, although possibly with different transport times? Is the TA-16-260 outfall the dominant source of contamination in these springs? The water chemistries of these two springs are very similar.
- Is Peter Seep connected to this same system? Or do discharges at Peter Seep represent predominantly an alluvial groundwater component, and does its contaminant signature more closely resemble that observed in the nearby alluvial wells? Is the TA-16-260 outfall the dominant source of contamination at this seep, or are there significant contributions from other upgradient sources?
- Does the TA-16-260 outfall area contribute to the discharge at Martin Spring? Or are contaminants in this spring derived predominantly from other sources at TA-16?
- The investigations described in Subsections 6.1 and 6.2 are also relevant to these questions, while investigations of the alluvial groundwater system are described in Subsection 6.4 below. Complete answers to these questions also require information from other source investigations at

  TA-16, not all of which have been completed. However, the analysis of contaminant fluxes at the springs and seeps that is described in this subsection, and is required in order to establish baselines for future monitoring of the effectiveness of remedial actions at PRS 16-021(c), also provides an essential piece of the answer. The data generated in the investigation presented in this subsection will directly support investigation objective IO5.

6.3.3.2 Investigation Design

Weekly and monthly flow-integrated samples from each of the three springs will be analyzed for the major PRS 16-021(c) contaminants (HE and inorganics) and water quality parameters (major cations and anions and bicarbonate in the laboratory, plus pH, temperature, and conductance in the field). Paired grab samples from Peter Seep (one being collected at the migrating location of the head of the seep, and the other at the foot of the seep) will be analyzed for the same constituents.

Data from quarterly grab samples indicate that contaminant concentrations vary with changes in discharge for these springs. Therefore, analyzing trends in the spring data will depend upon collecting samples that are comparable with one another, given these dynamics. That is, flow-integrated sampling is required. An appropriate integration time interval for trend estimation is approximately one week; integration over shorter durations will be influenced by individual events, while longer durations may mask the relationship being evaluated.

Eventual long-term monitoring may be conducted using flow-integrated sampling over longer periods. Therefore some one-month flow-integrated samples will also be collected. However, because of the short holding time for HE (seven days between collection and extraction), the monthly composite samples cannot be effectively analyzed for HE.

Spring sampling will cover the range of spring discharge, which varies on both short- and medium-term time scales as noted in Subsection 6.2. At least two years of data will be required to span the range of flow conditions that are observed at the springs and seeps, as well as potential seasonal variations. However, it is particularly important that as much data as possible be collected before the IM source removal, since one of the first goals of monitoring will be to measure the effectiveness of that action.

Sampling at Peter Seep will cover the range of locations of the head of the seep, and will attempt to provide information for estimates of the seasonal effect that are not confounded with estimates of the effect of location.

The concentration data contrasted with the discharge data for the one-week integrated samples will be plotted to evaluate the form of the relationships between concentration and flow data for significant contaminants, and to determine whether seasonal and location effects are significant. The parameters of the functions that describe these relationships should be estimated with sufficient precision so that changes in the contaminant flux/discharge relationship on the order of 50% can be detected with high probability. How much data this will require will depend in part on the complexity of the observed relationships (i.e., on the number of parameters required to describe them). The simplest function would be a constant (i.e., either concentration or flux is independent of discharge). Finding this level of simplicity is unlikely, but it is possible that the relationship may be reasonably linear, and also that the seasonal or location components may be relatively unimportant.

The behavior of Peter Seep will be observed by means of frequent measurements of location and of discharge at the foot of Peter Seep, together with concurrent measurements of water levels in the alluvial wells that were installed during RFI Phase II investigations. The resulting spatial patterns and correlations will be analyzed to determine whether the location of Peter Seep varies along a continuum or is confined to discrete locations, and whether or not it is correlated with water elevation in the alluvial wells.

Based on the contaminant data, as well as tracer and stable isotope data, mixing models that attempt to explain the observations in terms of contributions from identifiable sources (e.g., uncontaminated groundwater, HE production process water, leakage from sanitary discharges) will be proposed for each spring. The parameters of such models may also depend on season or discharge. While it is unlikely that such models can be estimated with a high degree of accuracy, they may be useful in optimizing a monitoring plan specific to PRS 16-021(c).

6.3.3.3 Sampling Activities

One-week flow-integrated filtered samples will be collected from each spring for trend analysis (Table 6.3-3). Samples will be collected weekly and field measurements of pH, temperature, and conductance will be reported for all samples daily using a logger connected to the Isco autosampler. A subset of 8–15 samples per year representing the flow range of the springs, as determined using historic hydrographs and the range of field measurements, will be submitted for laboratory analysis for trend estimation. (Fifteen samples should be collected during the first year of the Phase III investigation. Thereafter 8–10 per year should be adequate.) The remaining samples will be used to create additional flow-weighted monthly composites.

Table 6.3-3
Summary of Annual Sampling and Analysis for the Investigation of Spring and Seep Dynamics[a]

Sample or Survey Measurement	Number Collected	Number Analyzed	Field Measurements and Analytical Suites
Burning Ground Spring, filtered one-week flow-integrated samples	50	50 50 8–15	Discharge record Field temperature, pH, conductance HE, metals, major anions/cations, HCO_3
Burning Ground Spring, filtered one-month flow-weighted composite samples	6	6	Metals, major anions/cations, HCO_3
SWSC Spring, filtered one-week flow-integrated samples	50	50 50 8–15	Discharge record Field temperature, pH, conductance HE, metals, major anions/cations, HCO_3
SWSC Spring, filtered one-month flow-weighted composite samples	6	6	Metals, major anions/cations, HCO_3
Martin Spring, filtered one-week flow-integrated samples	50	50 50 8–15	Discharge record Field temperature, pH, conductance HE, metals, major anions/cations, HCO_3
Martin Spring, filtered one-month flow-weighted composite samples	6	6	Metals, major anions/cations, HCO_3
Record Peter Seep location	50	NA	Discharge record
Record alluvial water elevations	50	NA	NA
Filtered grab samples from head of Peter Seep	50	50 8–15	Field temperature, pH, conductance HE, metals, anions, HCO_3
Filtered grab samples from foot of Peter Seep	50	50 8–15	Field temperature, pH, conductance HE, metals, anions, HCO_3

[a]Where a range of sample sizes is reported, the upper end corresponds to the first year of the Phase III investigations, the lower end to subsequent years.

The one-week flow-integrated laboratory samples will be analyzed for HE, metals, and water quality parameters (including anions and HCO_3). The flow-weighted monthly composites will be analyzed for the same suites, except HE.

Peter Seep reach will be staked at 75 ft (22 m) intervals and the elevations of these markers will be surveyed to provide measurement control (Figure 6.3-4). The location of Peter Seep will be measured relative to the nearest stake +/- 2 in. (5 cm). Measurement frequency will be at least biweekly. Up to three measurements per week will be made during hydrologic transition times (snowmelt, monsoon onset, and post-monsoon) and at least weekly measurements will be reported throughout the summer monsoon season.

Concurrently with Peter Seep location measurements, water levels will be measured in the alluvial wells and discharge at the foot of the seep will be recorded. These locations will be instrumented with automatic data recorders that provide ongoing measurements of pH, conductivity, pressure, and temperature.Filtered grab water samples at the head and foot of the seep extent will be also collected at the above-indicated frequencies, and the standard field measurements (pH, temperature, and conductance) will be performed on each of these samples. Approximately 15 pairs of these samples, representing the range of Peter Seep locations, as well as seasonal variations, will be submitted for laboratory analysis of HE, metals, and water quality parameters during the first year of the Phase III investigation; thereafter eight pairs per year will be submitted for laboratory analysis.

6.3.4 Alluvial Water Dynamics

The perennial reach of Cañon de Valle extends from Peter Seep to a point approximately 4500 ft downgradient from MDA-P (Figure 6.3-5. The extent of the saturated alluvium, however, has not been determined. The surface and alluvial groundwater systems are thought to be connected, but insufficient data have been collected to establish this connection. As mentioned in the previous section, Peter Seep may simply be the westernmost expression of the alluvial groundwater system, or it may be fed by one or more sources from the adjacent mesas. SWSC Spring and Burning Ground Spring contribute substantial amounts of water to the system. At one time the TA-16-260 outfall also contributed a significant fraction of the water in the system (up to 50% in the earlier decades of its operations), but this decreased to about 15% of the total before flow from the outfall was shut off completely in 1996. (No other discrete sources of water to this system have been identified. Cañon de Valle also receives runoff from the adjacent slopes and mesa tops during snowmelt and precipitation events.

At its eastern end, the surface water system terminates near the point where the canyon floor intersects the stratigraphic contact between units Qbt3 and Qbt2 of the Tshirege Member of the Bandelier Tuff. The fate of waters leaving the alluvial system at this point is unknown. No other regions where losses to the subsurface occur have been identified along the perennial reach of Cañon de Valle, but neither can it be demonstrated with current information that no such regions exist. Even less is known about Martin Spring Canyon, in which no alluvial investigations have been conducted. Perennial surface water is observed for only about 100 ft below Martin Spring. Below that point, flow is ephemeral until a relatively wet area near K-Site (Figure 6.3-5).

The springs and seeps that feed the alluvial systems of Cañon de Valle and Martin Spring Canyon are known to be contaminated with HE, barium, and other contaminants released at PRS 16-021(c). Martin

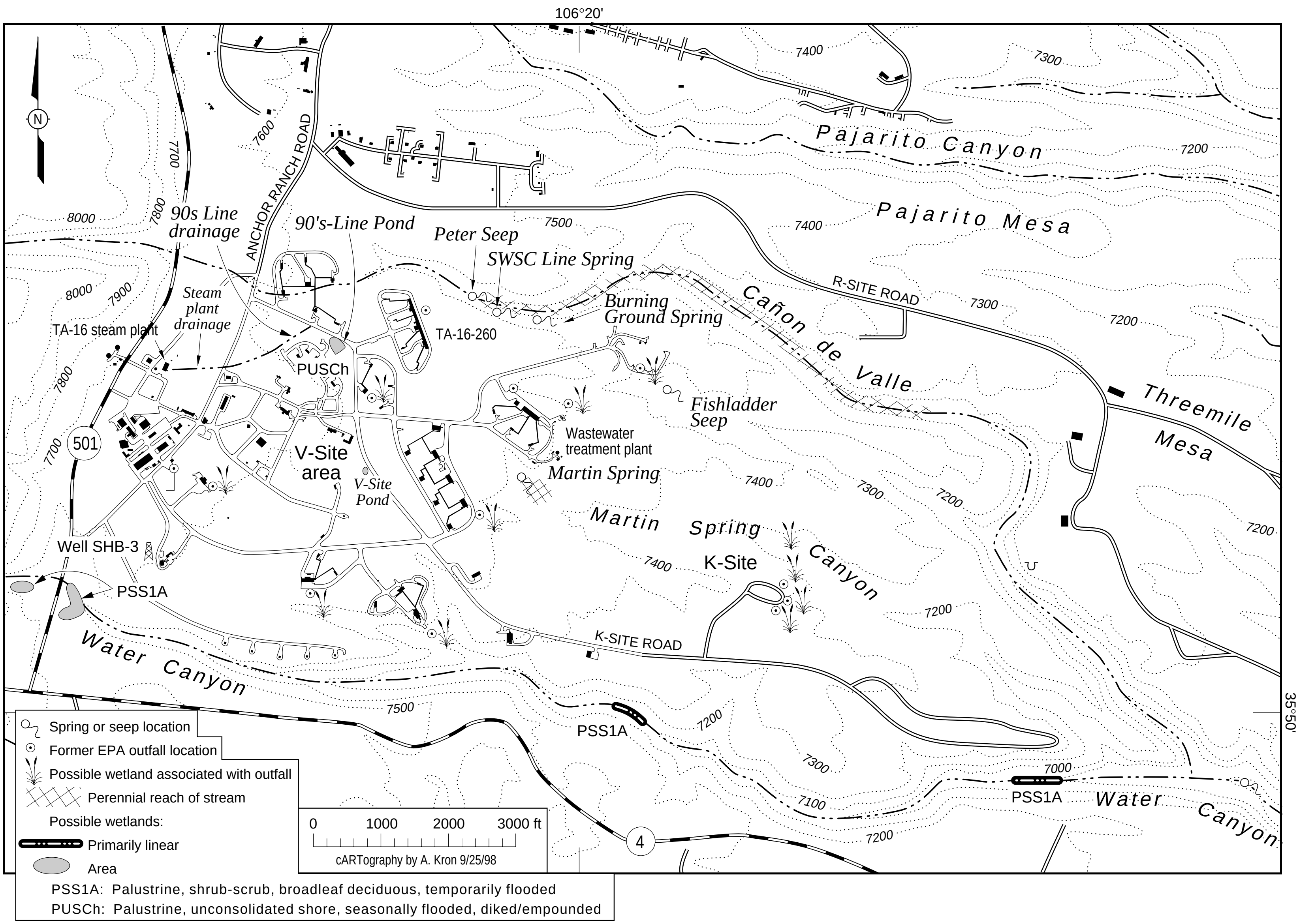


Figure 6.3-5 Perennial reach of Cañon de Valle and Martin Spring Canyon and location of wetlands.

Spring waters also contain a significant number of contaminants that are not associated with PRS 16-021(c), including boron.

In Cañon de Valle, anomalies have been observed in the concentration patterns of these contaminants which are not easily explained in terms of these known sources. One such anomaly is the jump in barium concentrations at a point about 4000 ft below the TA-16-260 outfall and 500 ft below MDA-P. Jumps, both upward and downward, are found in the concentrations of other chemicals as well—potassium shifts upward, and RDX downward. It is not known whether this effect is the result of the surfacing of part of the alluvial system at this point, an unobserved contribution from the adjacent mesas, or a change in water chemistry.

Only a handful of samples have been collected to date from the alluvial wells installed in Cañon de Valle, but they suggest unexpected levels of heterogeneity between wells. No information about levels or patterns of contamination in the surface and alluvial waters of Martin Spring Canyon has been collected. The data generated in the investigation presented in this subsection will directly support investigation objectives IO7 and IO8.

6.3.4.1 Investigation Design

Water and contaminant mass balance studies will be performed in both Cañon de Valle and Martin Spring Canyon. Surface water discharges will be measured at several locations in order to construct discharge profiles representing both low-flow and high-flow conditions. Alluvial discharge will also be estimated at the same times and locations. Filtered grab samples will be collected from surface water, alluvial groundwater, springs, and Peter Seep at the same times and, in the case of surface water, from the same locations. Spring discharge will also be reported when the spring samples are collected, as all contaminant measurements will be converted to fluxes. Field measurements for all samples will include pH, temperature, conductance, and RDX. Two sets of samples, one from high baseflow and one from low baseflow conditions, will be submitted for laboratory analysis for the usual contaminant and water quality suites (HE, inorganics, major anions and cations, HCO_3). A total of five shallow piezometers will be installed in Cañon de Valle near the Qbt 3/2 contact using a pneumatic hammer to determine the extent of saturated alluvium in the canyon. The shallow piezometers will be sited based on geophysical investigations.

Data will be used to determine the extent of saturation in the alluvium of Cañon de Valle and Martin Spring Canyon. Data will also be used to determine whether water and contaminant masses are conserved along the perennial reach of Cañon de Valle and in Martin Spring Canyon between Martin Spring and K-Site. Specific conservation questions include:

1. Does the surface water discharge in Cañon de Valle below Burning Ground Spring equal the summed discharges from Peter Seep, SWSC Spring, and Burning Ground Spring?

2. Does the surface water in Cañon de Valle have gaining reaches (other than those already identified) or losing reaches (upstream of the loss of flow at the Qbt3/Qbt2 contact)? If so, are such gains or losses accounted for by corresponding losses or gains in the alluvial groundwater system?

3. Are observed contaminant fluxes consistent with what would be predicted using a mixing model at points where springs enter or water is exchanged between the surface and alluvial groundwater systems?

4. Are the contaminant fluxes constant below Burning Ground Spring? Should answers to the second and third questions above be negative, one possible explanation might be that contaminants are being exchanged between water and alluvial sediments. Contaminants in alluvial sediments are discussed in Section 6.5 below.

6.3.4.2 Sampling Activities

Discharge profiles for surface water will be constructed from data collected using portable flumes. Precise locations will be specified by reconnaissance to include flow transition points (in particular, the points where the springs join the main channel). Six representative locations for Cañon de Valle are illustrated on Figure 6.3-6 Profiles will be constructed to represent the range of low baseflow and high baseflow conditions. Potential locations for Martin Spring Canyon are illustrated on Figure 6.3-7 , although it is possible that no surface water will be found in Martin Spring Canyon more than 100 ft below the spring at any time of year. Five discharge profiles are proposed per canyon per year, to be collected during recession after snowmelt, dry season, early monsoon, late monsoon, and mid-fall post monsoon (See Table 6.3-4).

Three alluvial wells will be installed in Martin Spring Canyon, one below the spring, one in the wet area below K-Site, and one down-drainage from the wet area (see Figure 6.3-7). These alluvial wells will be instrumented with automated data loggers for pH, conductivity, pressure, and temperature. They will be sampled quarterly for HE, inorganics, VOCs, SVOCs, and water quality parameters in both filtered and unfiltered samples.

Filtered surface water grab samples will be collected at the discharge measurement times and points. Filtered groundwater samples will be collected from the alluvial wells, and filtered grab samples will be collected from the springs, concurrent with the discharge profile measurements and surface water sampling. Field measurements for temperature, pH, conductance, and RDX will be made on all samples.

All samples from two of the five sampling times in each canyon, one representing low flow conditions (spring or fall dry seasons) and one representing high flow conditions (monsoon or snowmelt), will be analyzed for HE, metals, major cations and anions, and HCO_3^-.

Five shallow piezometers will be installed using a pneumatic hammer in the Cañon de Valle alluvium. The locations in the perennial reach portion of the canyon will be determined after the geomorphic survey. Because it is believed much of the alluvial and surface water is lost at the Qbt3/Qbt2 contact, one hole will be drilled beyond the contact within unit Qbt2. The remaining locations in the “dry” stretch of Cañon de Valle will be set at approximately a 3 000 ft interval beyond the Qbt3/2 contact. As they are being drilled, they will be measured for moisture content and HE using field HE analyses.

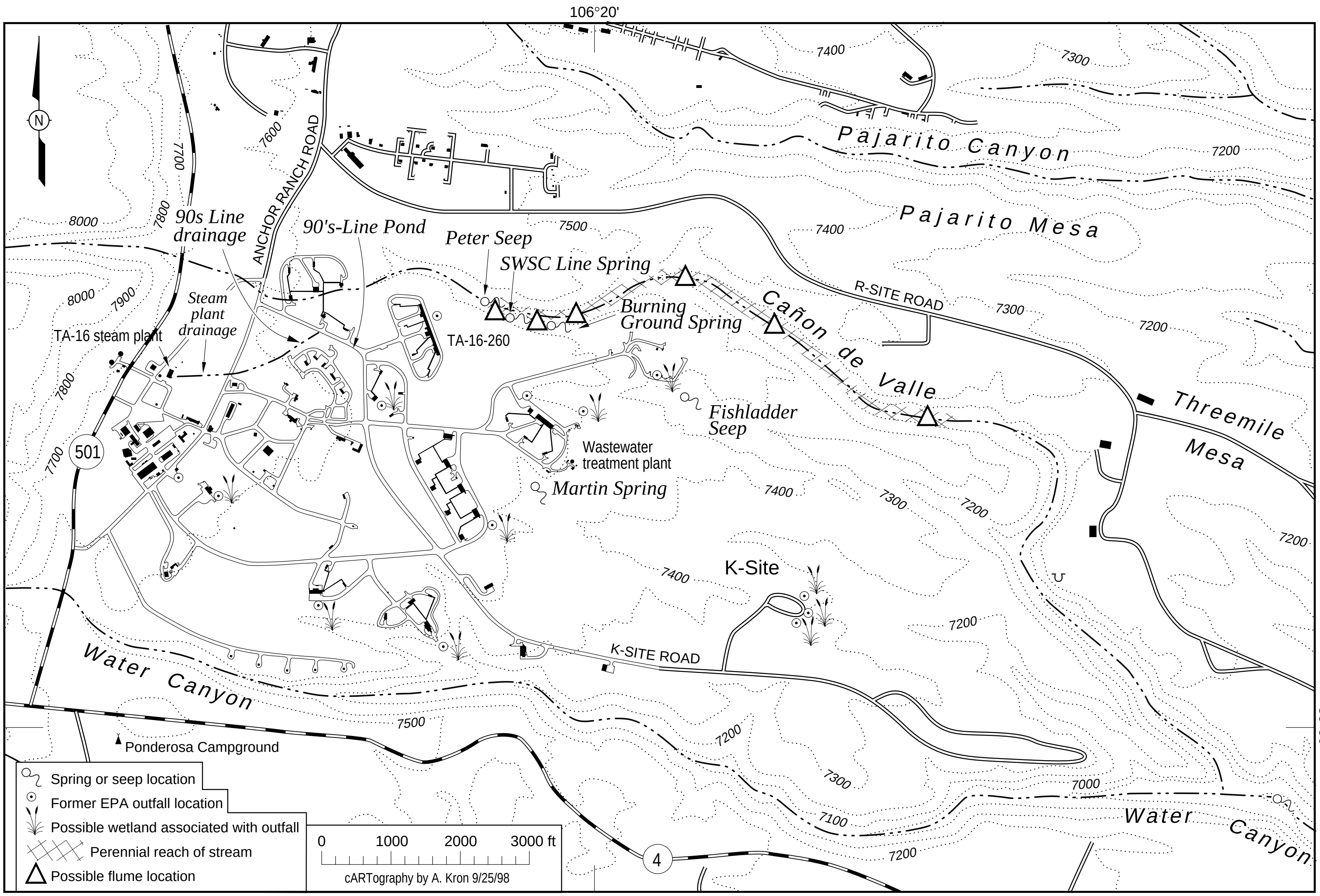


Figure 6.3-6 Temporary flume locations in Cañon de Valle.

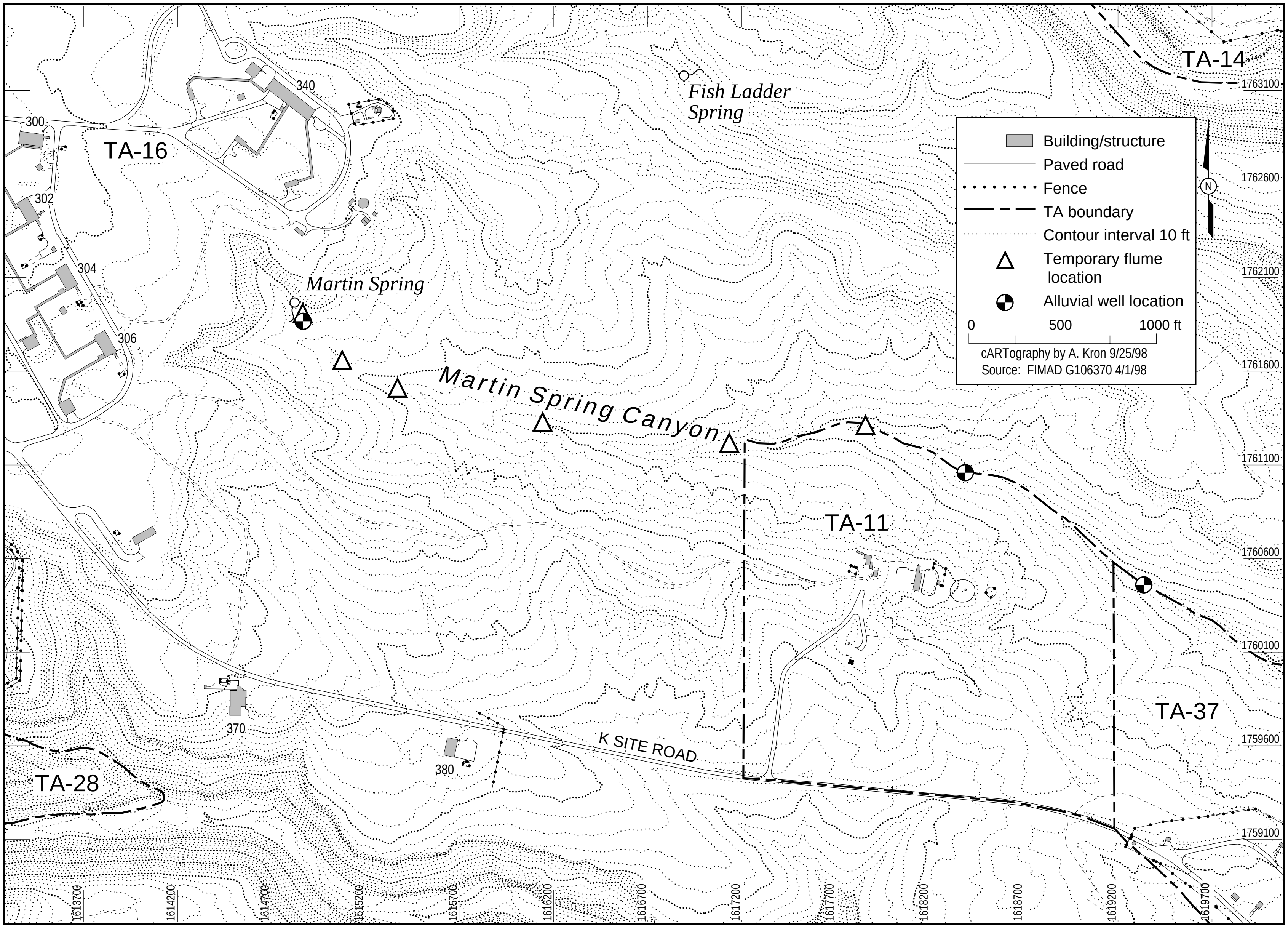


Figure 6.3-7 Temporary flume and proposed alluvial well locations in Martin Spring Canyon.

Table 6.3-4
Summary of Annual Sampling and Analysis for the Investigation of Alluvial Water Dynamics*

Sample or Survey Measurement	Number Collected	Number Analyzed	Field Measurements and Analytical Suites
Cañon de Valle surface water discharge profile	5	NA	NA
Cañon de Valle filtered surface water grab samples	30[a]	30 12	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3
Cañon de Valle alluvial groundwater discharge	5 profiles	NA	NA
Cañon de Valle filtered alluvial groundwater grab samples	25[b]	25 10	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3
Martin Spring Canyon surface water discharge profile	5	NA	NA
Martin Spring Canyon filtered surface water grab samples	15[c]	15 6	Field temperature, pH, conductance, RDX HE, metals, anions, $HCO3_3$
Martin Spring Canyon alluvial groundwater discharge	5 profiles	NA	NA
Martin Spring Canyon filtered alluvial groundwater grab samples	15	15 6	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3
SWSC Spring instantaneous discharge	5	NA	NA
SWSC Spring filtered grab water samples	5	5 2	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3
Burning Ground Spring instantaneous discharge	5	NA	NA
Burning Ground Spring filtered grab water samples	5	5 2	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3
Martin Spring instantaneous discharge	5	NA	NA
Martin Spring filtered grab water samples	5	5 2	Field temperature, pH, conductance, RDX HE, metals, anions, HCO_3

[a]Assuming that discharge is measured at six points for each profile.

[b]Assuming that five alluvial wells are sampled.

[c]Assuming that discharge is measured at three points for each profile.

6.3.5 Alluvial Sediment Dynamics

6.3.5.1 Overview

RFI Phase II sampling demonstrated that secondary sources of contaminants reside in both the active channels and in the overbank areas of Cañon de Valle. However, very few samples have been collected to date outside the active channel, so neither the distribution nor the total inventory of contamination in the alluvial sediments can be reliably estimated.

Alluvial sediments have not been sampled in Martin Spring Canyon.

The data generated in the investigation presented in this subsection will directly support data objectives IO9 and IO10.

6.3.5.2 Investigation Design

Geomorphic units will be mapped in Cañon de Valle and Martin Spring Canyon. In Cañon de Valle, this mapping will be conducted from the head of Peter Seep to below the barium anomaly at the bottom of MDA-P, approximately 4000 ft. In Martin Spring Canyon the mapping will cover a distance of approximately 2000 ft below Martin Spring. (The remainder of the canyons will be mapped as part of the Canyons focus area investigation.)

Geomorphic mapping will identify sediment packages of different age and different particle size characteristics. In particular, sediment packages less than 50 years old may contain contaminants released from PRS 16-021(c) and older TA-16 HE production facilities and finer-grained sediments may have higher concentrations of contaminants than coarse-grained sediments. Contaminant levels could be particularly high in relatively fine-grained sediment packages deposited by unusually high flood events during the period of greatest discharge from the TA-16-260 line outfall, if such packages can be identified.

Subsequent sediment sampling will be confined to areas found to include post-1940 sediment packages, and stratified within such areas according to the results of the geomorphic survey. In particular, as sediments in the active channel have already been extensively sampled, most of the Phase III sampling will be concentrated in floodplain sediments outside the active channel. These floodplain sediments may in turn be stratified into two or more subsets—at a minimum, sediments estimated as having been deposited before and after 1940, with more refined estimates of age if possible.

Within each stratum, the goal is to obtain unbiased estimators of volume and mean contamination for the purposes of estimating total inventory. Volume will be estimated during geomorphic mapping. Contamination will be estimated based on samples collected according to a statistical (ranked set sampling) design, where field ranking is performed using a field HE kit in combination with field descriptions of approximate sediment particle size. The final design of this sampling plan will depend on the results of the geomorphic mapping.

6.3.5.3 Sampling Activities

Geomorphic mapping will be performed in accordance with the methods provided in the Core Document for Canyons Investigations (LANL 1997, 55622).

A sufficient number of sediment samples will be collected to estimate contaminant inventories in the sediment deposits. The numbers provided in Table 6.3-5 are illustrative only. Ranked set sampling (Patil et al. 1994, 59113) will be used, given that a satisfactory field method for one of the contaminants of greatest interest (RDX) is available. Table 6.3-5 suggests a possible design based on the identification of two post-1940 floodplain strata. The first of the two strata is assumed to extend along most of the length of the mapped area and to be geomorphically heterogeneous; no discrete sediment packages can be identified within it. The second is confined to a relatively short reach, but appears to be a sediment package that was deposited in a single flood event during the period of high volume discharges from the TA-16-260 outfall. A larger number of samples would be allocated by this method to geomorphic units that are either larger or more heterogeneous illustrated in Table 6.3-5.

Table 6.3-5
Summary of Sampling and Analysis for the Inventory Estimation in Cañon de Valle (Example only)

Sample or Survey Measurement	Number collected	Number analyzed	Field Measurements and Analytical Suites
Sediment samples from first (large, inhomogeneous) floodplain stratum	36	36 12 6	Field HE HE, inorganics SVOCs
Sediment samples from second (small, homogeneous) floodplain stratum	9	9 3 1	Field HE HE, inorganics SVOCs

6.4 Data Collection Procedures

This section cites current ER Standard Operating Procedures (SOP)s. As these are revised during the coming year, the new, equivalent procedures will be used.

6.4.1 Field Activities

Fieldwork will be performed at TA-16 from 1999 through 2001. The following field activities will be completed:

- geomorphic survey,
- field sample analysis,
- field sampling activities, and
- land survey.

6.4.1.1 Geomorphic survey

The geomorphic survey will be conducted in Cañon de Valle and Martin Spring Canyon for the purpose of identifying sediment packages of different ages. The survey will be conducted in accordance with procedures presented in the Core Document for Canyons Investigations (LANL 1997, 55622)

6.4.1.2 Field Screening

Field screening will be conducted on soil/sediment/tuff and water samples. Soil/sediment/tuff samples will be screened for bromide, percent moisture, and HE as specified in Section 6.3. Water samples will be screened for temperature, pH, and specific conductance. Field screening of soil/sediment/tuff will be conducted at the field chemistry trailer. Field screening of water will be conducted at the time of sample collection. All field screening results will be documented in a LANL ER document-controlled logbook.

Bromide will be measured using a Tracor Northern Spectrace 9000™ energy dispersive XRF and ion-specific electrodes on extracted bromide solutions. These two field methods will be compared, and the more effective will be implemented. Percent moisture will be measured gravimetrically. RDX and TNT will be measured using a D-Tech™ and, or Ensys™ field analysis kit. Temperature, pH, and conductance will be measured using field portable probes. Screening will be carried out following the Laboratory's ER Project SOPs)and quality procedures (QPs) listed in Table 6.4-1.

Table 6.4-1
LANL ER SOPs

Method	LANL-ER-SOP or QP
XRF	LANL-ER-SOP-10.06
Percent moisture	ASTM, ER SOP is pending
Physical parameters in water	LANL-ER-SOP-06.02

6.4.1.3 Field Sampling Activities

All samples will be collected in accordance with the applicable ER Project SOPs for the collection, preservation, identification, storage, transport, and documentation of environmental samples, as described in the ER Project Quality Assurance Project Plan (QAPP) (LANL 1996, 55298). All samples will be identified in accordance with LANL-ER-SOP-01.04, Sample Control and Field Documentation. Sample media and sample locations will be described, photographed, and documented. Chain-of-custody requirements described in LANL-ER-SOP-01.04 will be implemented. The field support facility (FSF) will be consulted regarding the appropriate sample containers and preservation. Samples will be packaged and shipped in accordance with LANL-ER-SOP-01.03, "Handling, Packaging and Shipping of Samples." All analytical laboratory samples will be shipped from the FSF to off-site laboratories for analysis.

Boreholes will be drilled using hollow stem auger, air rotary, and/or wet rotary drilling methods. All drilling activities will conform to LANL-ER-SOP-04.01, Drilling Methods and Drill Site Management. Samples will be collected from the borehole using a stainless steel, split-spoon sampler according to LANL-ER-SOP-06.24, Sample Collection from Split-Spoon and Shelby Tube Samplers. Trench samples will be collected from the bucket of the backhoe. Collection will conform to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples. Surface soil and sediment samples will also be collected according to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples. Subsurface soil/sediment/tuff samples may also be collected using a manually operated hand auger.

Surface water samples will be collected as grab samples using LANL ER-SOP-06.13, "Surface Water Sampling." Filtered water samples will be collected by pumping the water through 0.45 µ filters using a Geotech™ peristaltic pump. Well-water samples will be collected in accordance with LANL-ER-SOP-6.01, Purging of Wells for Representative Sampling of Ground Water. Table 6.4-2 lists the SOPs that will be used for the collection of soil/sediment/tuff and water samples.

Table 6.4-2
Summary of Requirements for Soil and Water Sampling

Sampling Tools and Methods	LANL-ER-SOP
Spade and scoop	06.09
Hand auger	06.10
Trenching	03.10
Surface water sampling	06.13
Alluvial well sampling (look under well development	06.01, 06.02, 06.03
Drilling	04.01
Split spoon sampling	06.24
Well development	05.02

6.4.1.4 Land Survey

Following sample collection, the sample points will be staked, documented and surveyed. A Trimble™ global positioning system (GPS) total station will be used to perform the survey to an estimated accuracy of ± 2 ft. Each sample location will be marked or permanently monumented (where possible), photographed, and assigned a unique ER Project sample location identification number. The data will be recorded on the site base map. The surveying will be performed by licensed professionals working to minimum standards for land surveying in New Mexico, and with oversight by the field team leader (FTL).

6.4.2 Field Analytical Procedures

Section 6.4.1 presented the procedures that will be used to perform the field analyses. Above is a table of the analytical protocols for field screening analyses.

6.4.3 Sample Handling and Tracking

All samples will be managed and tracked in accordance with the applicable ER Project SOPs for the collection, preservation, identification, storage, transport, and documentation of environmental samples, as described in the ER Project QAPP (LANL 1996, 55298). Archived samples for potential stable isotope analysis will be stored in a glass vial with a polyseal cap and refrigerated. An investigation-specific archiving procedure will be developed and presented in the field implementation plan for the Phase III investigation.

6.4.4 Laboratory Analytical Procedures

Analytical methods

All laboratory samples will be analyzed by contract analytical laboratories using methods specified in ER Sample Management Office (SMO) analytical subcontracts (LANL 1995, 1278). Below is a table of the analytical protocols required for laboratory analyses.

Table 6.4-3
Analyte Suites, Methods, and Protocols for Analysis of Soil and Water Samples

Analyte Suite	Analytical Method	Analytical Protocol
HE	HPLC	SW-846, Method 8330
Metals	Inductively coupled plasma emission spectroscopy (ICPES)_	SW-846, Method 6010
Anions (nitrate, sulfate)	Ion Chromatography	EPA Method 300
Fluoride	Ion Chromatography	EPA WW 340 series
Chloride	Ion Chromatography	EPA WW 325 series
Bromide	Ion Chromatography	EPA Method 300EPA Method 320.1
HCO_3 (bicarbonate)	Titration	SW-846, Method 4500-CO_2

Data verification and routine validation procedures are used to determine whether analytical data packages have been generated according to specifications and contain the information necessary to determine data sufficiency for decision-making. Data verification includes ascertaining that data packages are complete, including results for all requested analyses and all supporting information such as chromatograms. It also includes the comparison of results reported in the hard-copy data package with those delivered electronically and uploaded into the Facility for Information Management, Analysis, and Display (FIMAD). All field data and QC results will be verified in FIMAD by comparing electronic data with hard copy reports. Discrepancies will be resolved in favor of the hard copy reports. For analytical data that will be used for decisions, routine data validation will be performed under the auspices of the SMO as described in the ER Project QAPP Requirements for Sampling and Analysis (LANL 1996, 55298). The product of this process is a validation report, including data qualifiers that designate potential deficiencies for affected results. Each data qualifier will be accompanied by a reason code that provides information about how the deficiency might impact data use. Data qualifiers assigned by routine validation, together with their reason codes, will also be recorded in FIMAD. The validation report is used in the decision-making process, and it may also be used to direct a focused validation for evaluating the usability of the data of interest.

7.0 MONITORING PLAN APPROACH

The focus of the IM, CMS, and CMI for the TA-16-260 Outfall and Cañon de Valle is to reduce HE, barium and other constituents in active transport pathways to acceptable levels. As described in Section 6, Additional Data Needs, the hydrologic system defined by the administrative boundary is dynamic, complex, and responds to changes at different time scales. Consequently, assessing the longer-term impacts of the interim measure and determining that contaminant signatures are persistently at or below performance criteria will require a monitoring program.

Monitoring is an activity that involves making periodic measurements over time for the purpose of assessing status and trends. Developing an effective monitoring program depends upon understanding the system to be monitored sufficiently to anticipate what data will be useful in the analysis and when they should be collected. The information collected in Phase III, as specified in Section 6, will characterize the system sufficiently to support the design of the monitoring plan. The monitoring plan developed in the CMS will be integrated with LANL's Watershed Management Plan.

The monitoring plan cannot be specified at this time because the Phase III information has yet to be collected and analyzed. LANL anticipates that monitoring locations are likely to be selected to coincide with locales that are included in the quarterly sampling described in the Phase I RFI report or in the Phase III sampling plan presented in Chapter 6. These locales might include the springs, the seep, and the further downgradient expression of the alluvial systems in Cañon de Valle and Martin Spring Canyon. Monitoring design criteria can be identified. The following elements should be considered when the plan is developed.

- Identify the specific goals of the monitoring plan. This step is especially important for hydrologic system components, like the springs, where contaminant concentrations change with discharge and the system has several time scales of response to storm events. The measured concentration values will be influenced by the period of integration for the samples. This also means that performance criteria for contaminant concentrations need to be associated with time integration periods.

- Measure both quantity and quality of water. Dynamic nonlinear hydrologic systems often require estimates of contaminant flux before it is possible to assess trends. Discharge measurements of all surface water and springs are necessary for these calculations.

- Monitor at multiple geographic scales. The administrative boundary, as described in Section 3, is designed to include all the fate and transport processes for the Cañon de Valle basin. The monitoring program should be designed to make empirical estimates of the net contaminant export from the basin as a whole. These estimates can then be compared with the individual pathways monitoring data from the springs and seep to check for congruence. If the signatures do not balance, then either another source or an unknown sink may be operating in the system.

- Coordinate surface water and groundwater monitoring in the Cañon de Valle basin. The separation of surface water and groundwater is more a convenience than a system reality, especially for the alluvial aquifer. Sampling of groundwater should correspond to surface water monitoring events to support comparisons of the data.

- Collect water quality parameters. Several sources of water will be sampled and analyzed, including Peter Seep, the three springs, and alluvial groundwater. Having information on parameters such as pH, temperature, and charge balance is important to inferring how these waters combine as a basin output.

- Include biological monitoring as part of the program. Cost efficiencies for monitoring programs often take the form of restricted analyte lists to reduce analytical costs. One way to assess the overall quality of the monitored waters is to conduct toxicity testing with well-documented test organisms. If persistent toxic effects occur without changes in the monitored contaminants, then the waters should be evaluated for additional toxicants.

- Establish a monitoring baseline, then evaluate the program for effectiveness and relevance. Monitoring programs are often susceptible to inertia. Once a program is initiated, the design is rarely revisited. A periodic review should be scheduled as part of the plan implementation. Criteria should also be established that allow reduced monitoring after a stated duration of results without exceeding performance criteria. For example, if the RDX signatures at Burning Ground Spring are below acceptable criteria under the conditions most likely to exceed the criteria, then the monitoring effort could be reduced.

- Integrate the monitoring design with other monitoring programs. Organizations other than the ER Project are conducting monitoring programs at LANL. Coordination of these programs can reduce costs and enhance data usability.

- Commit to a reporting schedule and decision framework. Each measurement in the monitoring program should have an intended use. Periodic reports of data and data interpretations are necessary in order to get information out to the stakeholders. Part of the design of the program should be documenting the decision options that the data and interpretations are likely to support. The lag between sample collection and reporting should be carefully considered. Information should be timely, but the schedule cannot move faster than the infrastructure that returns the data to the investigators.

8.0 REFERENCES

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9.0 APPENDIX A

Acronyms & Glossary

MASTER LIST OF ACRONYMS AND ABBREVIATIONS FOR ER PROGRAM AT LOS ALAMOS

AA	Administrative Authority
AEA	Atomic Energy Act
AEC	US Atomic Energy Commission
ALARA	As low as reasonably achievable
AOP	Advanced oxidation processes
ARAR	Applicable or relevant and appropriate requirement
ASTM	American Society for Testing and Materials
BMP	best management practices
BOD	biological oxygen demand
BV	Background value
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMI	Corrective measures implementation
CMS	Corrective measures study
COPC	Contaminant of potential concern
CWA	Clean Water Act
DNAPL	Dense nonaqueous phase liquid
DNT	Dinitrotoluene
DoD	US Department of Defense
DOE	US Department of Energy
DOE/LAAO	US Department of Energy /Los Alamos Area Office
DQO	Data quality objective
EA	Environmental assessment (NEPA)
EES	Earth and Environmental Sciences (Division)
EIS	Environmental impact statement
EM	Environmental Management (Division)
EPA	US Environmental Protection Agency
ER	Environmental restoration
ESH	environmental safety and health
FIMAD	Facility for Information Management, Analysis, and Display
FSF	field support facility
FTL	Field team leader
FY	Fiscal year
FWS	US Fish and Wildlife Service
GAC	granular activated carbon
GC	Gas chromatograph(y), Garratt-Callahan
GFAA	Graphite furnace atomic absorption
HE	High explosive
HMX	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclooctane (Cyclotetramethylenetetranitramine)
HPLC	High-performance liquid chromatography

HRMB	Hazardous and Radioactive Materials Board
HSWA	Hazardous and Solid Waste Amendments of 1984
ICPES	Inductively coupled plasma emission spectroscopy
IM	Interim measure
IO	investigation objective
ITRD	Innovative Treatment Remediation Demonstration
LAAO	Los Alamos Area Office (a branch of the Department of Energy)
LANL	Los Alamos National Laboratory
LDR	Land disposal restrictions
MCS	Media cleanup standard
MDA	Material disposal area
MDL	Minimum/method detection limit
MS	Mass spectrometer (spectrometry)
NEPA	National Environmental Policy Act
NFA	No further action
NMED	New Mexico Environment Department (New Mexico Environmental Improvement Division before 1991)
NMWQCC	New Mexico Water Quality Control Commission
NOD	Notice of deficiency
NPDES	National pollutant discharge elimination system
NPL	National Priorities List
ORNL	Oak Ridge National Laboratory
OU	Operable unit
PAH	Polyaromatic hydrocarbon
PCB	Polychlorinated biphenyl
PCE	Perchloroethane
POC	points of compliance
PRG	Preliminary remediation goal
PRS	Potential release site
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
QP	Quality procedure
RCRA	Resource Conservation and Recovery Act
RDX	1,3,5-trinitro-1,3,5-triazacyclohexane (Cyclotrimethylenetrinitramine)
RFA	RCRA facility assessment, request for analysis
RFI	RCRA facility investigation
RFP	Request for proposal
RI	Remedial investigation
RI/FS	Remedial investigation/feasibility study
ROD	Record of decision
RSD	Relative standard deviation
RSS	Ranked set sampling
SADA	Spatial analysis and decision assistance
SAL	Screening action level
SAP	Sampling and analysis plan

SARA	Superfund Amendments and Reauthorization Act
SMO	Sample Management Office (formerly Sample Management Facility)
SOP	Standard operating procedure
SSAL	Site-specific action levels
SSRA	Site-specific risk assessment
SVOC	Semivolatile organic compound
SW	Solid waste
SWSC	Sanitary wastewater system consolidation
SWMU	Solid waste management unit
TA	Technical area
TCE	Trichloroethylene
TCLP	Toxicity characteristic leaching procedure
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TRD	Treatment remediation demonstration
TSD	Treatment, storage, disposal
TSDF	Treatment, storage, and disposal facility
TSCA	Toxic Substances Control Act
UTL	Upper tolerance limits
VOC	Volatile organic compound
WES	Waterways Environmental Station
XRF	X-ray fluorescence
ZVI	Zero-valent iron

GLOSSARY

Alluvial Said of materials or features deposited by running water.

Alluvial fan A fan-shaped piedmont accumulation of sediment deposited by a stream.

Applicable, relevant, or appropriate requirement (ARARs) Those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, or that address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

Aquifer A permeable body of geologic material capable of yielding groundwater to wells or springs.

Background value (BV) Background values exist for inorganic chemicals and radionuclides. The background values are the upper tolerance limits (UTLs) of background sample results, calculated as the upper 95% confidence limit for the 95^{th} percentile. In cases where a UTL cannot be calculated, either the detection limit or maximum reported value is used as a BV. Background values are used as simple threshold numbers to identify potentially contaminated site sample results as greater than background levels.

Baseline risk assessment (Also known as ***risk assessment***) A site-specific analysis of the potential adverse effects caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these releases. There are four steps in baseline risk assessment: data collection and analysis, exposure assessment, toxicity assessment, and risk characterization.

Chemical of concern A chemical that is identified as a potential risk as the result of performing a site-specific human health or ecological risk assessment.

Chemical of potential concern (COPC) A chemical detected at a site that has the potential to adversely affect human and or ecological receptors due to its concentration, distribution and mechanism of toxicity. The chemical remains a concern until exposure pathways and receptors are evaluated in a site-specific risk assessment.

Cleanup levels Media-specific target concentration levels for contaminants that must be met by a selected corrective action. Cleanup levels are established using criteria such as protection of human health and the environment; compliance with regulatory requirements; reduction of toxicity, mobility, or volume through treatment; long- and short- term effectiveness; implementability; cost; and public acceptance.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. Amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. The acts created a special tax that goes into a trust fund, commonly known as Superfund, whose mandate is to investigate and clean up abandoned or uncontrolled hazardous waste sites that may endanger health or the environment. The EPA is responsible for managing Superfund.

Conceptual model See also ***Site conceptual model****.*

Conceptual hydrogeologic model Perception of the occurrence, movement and quality of groundwater in an area and the relationship of groundwater to the surface water, soil water and geologic framework there.

Constituent Any compound or element present in environmental media, including both naturally occurring and anthropogenic elements.

Contaminant Any chemical (including radionuclides) present in environmental media or on structural debris at a concentration that may present a risk to human health or the environment.

Controlled area Any Laboratory area to which access is controlled to protect individuals from exposure to radiation and/or hazardous materials.

Corrective Action A measure taken to rectify conditions adverse to human health or the environment.

Corrective measures study If a RCRA facility investigation indicates that further action is required, a "corrective measures study" is performed to identify and evaluate cleanup alternatives for the release. This study assesses risks to human health and the environment, costs, and other factors such as disposal methods.

Corrective measures implementation (CMI) This third step of the corrective action process includes design, construction, maintenance, and monitoring of the chosen remedy.

Data quality objectives (DQOs) The qualitative and quantitative goals that are developed before sampling begins that clarify the investigation objectives and identify the type, quantity and quality of data needed to support decisions.

Discharge or Hazardous Waste Discharge (As defined under RCRA, 40 CFR 260.10) The accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

Ecological Screening Level (ESL) An organism's exposure-response threshold for a given chemical constituent. It is the concentration of a substance in a particular medium that corresponds to a hazard quotient (HQ) of 1.0 for a given organism and below which no risk is indicated.

Effluent A liquid discharged as a waste, such as contaminated water from a factory or the outflow from a sewage works; water discharged from a storm sewer or from land after irrigation.

Ephemeral stream Said of a stream or spring that flows only during and immediately after periods of rainfall or snowmelt.

Grab sample A specimen collected by a single application of a field sampling procedure to a target population, e.g. the surface soil from a single hole collected following the spade and scoop sampling procedure, or a single air filter left in the field for three months.

Groundwater Water in a subsurface saturated zone.

Hazardous and Solid Waste Amendments (HSWA) Amendments to the Resource Conservation and Recovery Act, 1984. HSWA added land disposal restrictions, minimum technology requirements, and expanded corrective action authorities to the RCRA statue.

Hazardous substance (As defined by 40 CFR 302.3) Any substance designated pursuant to 40 CFR 302. 40 CFR 302.4 – Designation of Hazardous Substances:

(a) ***Listed hazardous substances.*** The elements, compounds and hazardous wastes appearing in Table 302.4 are designated as hazardous substances under section 102(a) of the CERCLA.

(b) ***Unlisted hazardous substances.*** A solid waste, defined in 40 CFR 261.2, which is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b), is a hazardous substance under section 101(14) of the CERCLA if it exhibits any of the characteristics identified in 40 CFR 261.20 through

261.24. See Hazardous Waste. **Note**: This definition incorporates by reference, substances listed in CWA sections 311 and 307(a); CAA section 112; RCRA section 3001; and TSCA section 7.

Hazardous waste (As defined by RCRA 40 CFR 261.3) Any solid waste is generally a hazardous waste if it is not excluded from regulation as a hazardous waste, is listed in the regulations as a hazardous waste, exhibits any of the defined characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity), or is a mixture of solid waste and hazardous waste.

Holding time The maximum elapse of time that one can expect to store a sample without unacceptable changes in analyte concentrations. Holding times apply under prescribed storage conditions and deviations in storage conditions may affect the holding time. Extraction Holding Time refers to the time lapse from sample collection to sample preparation; Analytical Holding Time refers to the time lapse between sample preparation and analysis.

HSWA module A portion of the Laboratory's permit to operate under RCRA that contains requirements specific to Los Alamos National Laboratory. It is this portion of the permit that contains the list of solid waste management units that must be cleaned up in accordance with RCRA procedures.

Industrial use scenario Industrial use is the future use scenario in which current Laboratory operations continue. Any necessary remediation involves cleanup to standards designed to ensure a safe and healthy work environment for Laboratory workers.

Interflow A runoff process that involves lateral subsurface flow in the soil zone.

Interim measure The actions used to achieve the goal of stabilization at contaminated sites that present serious and immediate health hazards.

Intermittent stream Said of a stream that flows only in certain reaches due to losing and gaining characteristics of the channel bed.

Institutional controls Controls prohibiting or limiting access to contaminated media; may consist of deed restrictions, use restrictions, permitting requirements, etc.

Leachate A liquid that has percolated through waste, soil or rock material and mobilized chemical species in the process.

Materials disposal area An area used any time between the beginning of Laboratory operations in the early 1940s and the present for disposing of chemically and/or radioactively contaminated materials.

Maximum contaminant level Under the Safe Drinking Water Act, the maximum permissible level of a contaminant in water that is delivered to any user of a public water system that serves 15 or more connections and 25 or more people. The standards set take into account the feasibility and cost of attaining the standard.

Medium (environmental) Any material capable of absorbing or transporting constituents including tuffs, soils and sediments derived from these tuffs, surface water, groundwater, air, structural surfaces, and debris.

Migration The movement of inorganic and organic species through unsaturated or saturated materials.

Migration pathway A route (e.g., a stream or subsurface flow path that controls the potential movement of contaminants to environmental receptors (plants, animals, humans).

Monitoring well A well drilled at a specific location on or off a hazardous waste site for the purpose of sampling groundwater or measuring water levels. Typically constructed with a moderate screen interval placed so as to straddle the water table or potentiometric surface associated with the saturated zone of interest.

National Pollutant Discharge Elimination System (NPDES) A federal regulation under the Clean Water Act requiring permits for discharge into surface waterways.

Outfall The vent or end of a drain, pipe, sewer, ditch, or other conduit that carries waste water, sewage, storm runoff or other effluent into a stream.

Perched groundwater Groundwater that lies above the regional water table and is separated from it by an unsaturated zone.

Perennial Stream Said of a stream or reach that flows continuously throughout the year.

Piezometer A well drilled for the purpose of measuring hydraulic head or water level; ideally only open at the bottom but usually constructed with a very short screen interval.

Piezometric Surface Also called potentiometric surface. The level to which water will rise in a well tightly cased into an aquifer.

Potential release site (PRS) A site suspected of releasing contaminants into the environment. PRS is a generic term that includes SWMUs, hazardous waste sites listed in Module VII of the Laboratory's Hazardous Waste Facility Permit, and sites that have been identified as potentially contaminated by radioactivity.

RCRA facility assessment (RFA) Usually the first step in the RCRA corrective action process, to identify potential and actual releases from SWMUs and make preliminary determinations about releases, the need for corrective action, and interim measures. The RFA is generally equivalent to the preliminary assessment/site investigation taken under Superfund.

RCRA facility investigation (RFI) The second step of a RCRA corrective action, to gather enough data to fully characterize the nature, extent, and rate of migration of contaminants to determine the appropriate response action. The RFI is generally equivalent to the RI portion of the Superfund process.

Receptor A person, plant, animal, or geographical location that is exposed to a chemical or physical agent released to the environment by human activities**.**

Recharge The process by which water is added to the zone of saturation, either directly from the overlying unsaturated zone or indirectly by way of another material in the saturated zone.

Recreational use scenario Recreational use refers to current and future use scenarios in which cleanup of a PRS is completed to a level that permits the public to safely use it on an intermittent basis for activities such as hiking and camping. The standards are more stringent than they are for the industrial use scenario but not as stringent as those for residential use.

Relevant and appropriate requirements Those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate. **(DOE 1991)**

Remediation The process of reducing the concentration of a contaminant (or contaminants) in air, water, or soil media to a level that poses an acceptable risk to human health; the act of restoring a contaminated area to a usable condition based on specified standards.

Remedy or remedial action Those actions consistent with permanent remedy instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and run-off, on-site treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. **[CERCLA 101(24)]** Activities conducted at DOE facilities to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination. **(DOE Order 5820.2A)**

Removal action An immediate action taken over the short term to address a release or threatened release of hazardous substances. **(DOE 1991)**

Residential use scenario The standards for residential use are the most stringent of the three current and future use scenarios being considered by the ER Project and is the level of cleanup EPA is currently specifying for SWMUs located off the Laboratory site and for those released for non-Laboratory use.

Resource Conservation and Recovery Act (RCRA) The RCRA regulations establish a comprehensive hazardous waste management system under the authority of RCRA Subtitle C. RCRA regulates hazardous waste from its point of generation through its point of final disposal. RCRA also regulates solid waste under Subtitle D.

Restricted Area Any area access to which is controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials. “Restricted area” shall not include areas used as residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area. **(10 CFR 60.2)**

Risk A measure of a negative or undesirable impact associated with an event.

Risk assessment see also *Baseline Risk Assessment*

Risk assessment, preliminary A risk assessment conducted using conservative assumptions and scenarios and assuming no mitigating or corrective measures beyond those already in place.

Risk characterization The summarization and integration of the results of toxicity and exposure assessments into quantitative and qualitative expressions of risk. The major assumptions, scientific judgments, and sources of uncertainty related to the assessment are also presented.

Risk management Risk management is the integration of risk characterization with other nonscientific considerations specified in applicable statutes to make and justify regulatory decisions. ***(RCRA/CERCLA Update*, June 1992)**

Sample A portion of a material (e.g., rock, soil, water, air), which, alone or in combination with other samples, is expected to be representative of the material or area from which it is taken. Samples are typically sent to a laboratory for analysis or inspection or are analyzed in the field. When referring to samples of environmental media, the term *field sample* may be used.

Screening Action Level (SAL) Medium-specific concentration level for a chemical derived using conservative criteria below which it is generally assumed that there is no potential for unacceptable risk to human health. The derivation of a SAL is based on conservative exposure and land use assumptions. However, if an applicable regulatory standard exists that is less than the value derived by risk-based computations, it will be used for the SAL.

Screening Assessment A process designed to determine whether contamination detected in a particular medium at a site may present a potential unacceptable human health and /or ecological risk. The assessment utilizes screening levels that are either human-health or ecologically-based concentrations derived using chemical specific toxicity information and standardized exposure assumptions below which no additional actions are generally warranted.

Site characterization The program of exploration and research, both in the laboratory and in the field, undertaken to establish the geological, hydrological, and chemical conditions at a site. Site characterization includes borings, surface excavations, excavation of exploratory shafts, limited subsurface lateral excavations and borings and geophysical testing. **(10 CFR 60.2)**

Site conceptual model A qualitative or quantitative description of sources of contamination, environmental transport pathways for contamination, and biota that may be impacted by contamination (called receptors) and whose relationships describe qualitatively or quantitatively the release of contamination from the sources, the movement of contamination along the pathways to the exposure points, and the uptake of contaminant by the receptors.

Solid waste management unit (SWMU) Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste.

Split sample A sample that has been subdivided into two or more portions expected to be of the same composition. Used to characterize within-sample heterogeneity, sample handling, and measurement variability.

Standard operating procedure (SOP) A written document that details the method for an operation, analysis, or action with thoroughly prescribed techniques and steps, and is officially approved as the method for performing certain routine or repetitive tasks.

Stratigraphy The science dealing with the succession, age, composition and history of strata.

Technical area (TA) The Laboratory established technical areas as administrative units for all its operations. There are currently 49 active TAs spread over 43 square miles.

Topography The physical features of a place or region.

Treatment Any method, technique, or process, including elementary neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

Treatment, storage, and disposal facility (TSDF) Any building, structure, or installation where a hazardous waste has been treated, stored, or disposed. TSD facilities are regulated by EPA and states under RCRA.

Tuff A compacted deposit of volcanic ash and dust that contains rock and mineral fragments accumulated during an eruption.

Unsaturated zone The zone between the land surface and the regional water table. Generally, fluid pressure in this zone is less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure. Alternatively, the unsaturated zone generally has moisture contents less than saturation.

Water balance The relationship between water input (precipitation) and output (runoff, evapotranspiration, and recharge) in a hydrological system; the portioning of precipitation into these components of the hydrological cycle.

Water content (also gravimetric moisture content) The amount of water in an unsaturated medium, expressed as the ratio of the weight of water in a sample to the weight of the oven-dried sample; often expressed as a percent.

Water table The top of the saturated zone; the water level associated with an unconfined aquifer.

Welded Tuff A volcanic deposit hardened by the action of heat, pressures from overlying material, and hot gases.

10.0 APPENDIX B

Schedule for CMS/CMI at PRS 16-021(c)

Early Start	Early Finish	Activity
INTERIM MEASURE		
01SEP98*		Need for Interim Measure in CMS Workplan
01SEP98	07JUN99	Prepare Final Design-Prepare for Fieldwork
09APR99*	30JUL99	Prepare Interim Measure Workplan
09APR99	06AUG99	AA Involvement and Review of Draft IM Workplan
09AUG99	20AUG99	Address AA Comments
23AUG99		Submit Final IM Workplan
23AUG99	30AUG99	AA Review and Approval of Final IM Workplan
31AUG99	01 FEB00	Mobilize and Perform Interim Measure
31AUG99	01FEB00	Progress Reports to AA
02FEB00	30JUN00	Prepare Draft Interim Measure Report
03JUL00	28JUL00	AA Review of Draft IM Report
31JUL00	25AUG00	Address AA Comments
28AUG00		Submit Final IM Report
28AUG00	22SEP00	AA Review and Approval of Final IM Report
PHASE III RFI		
15SEP98		Data Needs Identified in Ph III SAP (part of Draft CMS Workplan)
15SEP98	14SEP01	Phase III Sampling
20AUG01	09NOV01	Prepare Phase III Report
12NOV01	18JAN02	AA Review of Phase III Report
21JAN02	15FEB02	Address AA Comments
18FEB02		Submit Final Phase III Report
18FEB02	15MAR02	AA Reviews and Approves Final Phase III Report
CMS PHASE		
19MAY98*	14SEP98	Prepare Draft CMS Workplan
01OCT98*	03OCT00	Preliminary Public Involvement
19MAY98	17NOV98	AA Involvement and Review of Draft CMS Workplan
18NOV98	03DEC98	Address AA Comments
04DEC98		Submit Final CMS Workplan
04DEC98	17DEC98	AA Reviews and Approves Final CMS Workplan
18DEC98	23AUG00	Perform Pilot, Lab or Bench Scale Study
18DEC98	23AUG00	CMS Development of Remedial Action Objectives
18DEC98	23AUG00	CMS Evaluation of Alternatives
18DEC98	23AUG00	Status Reports to AA / Ongoing AA Involvement
CMS REPORT PHASE		
24AUG00	23OCT00	Prepare Draft CMS Rpt w/ Public Involvement Plan
24OCT00		Submit Draft CMS Report to AA
24OCT00	25DEC00	AA Review of CMS Report
26DEC00	22JAN0I	Address AA Comments
23JAN01		Submit Final CMS Report
23JAN01	19FEB01	AA Development of Draft Permit Modification
20FEB01	19MAR01	AA Development of Statement of Basis
20MAR01	04JUL01	Public Comment Period / Public Hearing
06JUL01	02AUG01	AA Response to Public Comments
03AUG01	17AUG01	AA Revises and Issues Permit Modification

Timeline: FY98 – FY02 (A J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M U)

* Dates not driven by preceeding activities

Project Start	02MAR98
Project Finish	15MAR02
Data Date	09MAR98
Run Date	29SEP98

Early Bar
Progress Bar

PRS 16-021(c) CMS Schedule
Los Alamos National Laboratory
Environmental Restoration Project

Sheet 1 of 1

11.0 APPENDIX C

CMS Report Outline

Corrective Measures Study Report Outline

A. Executive Summary

B. Introduction/Purpose/Applicability

C. Site History

D. Description of Current Conditions

E. Media Cleanup Standards/Points of Compliance/Remedial Action Objectives

F. Selection of Corrective Measure Alternatives

1. Process and Criteria Used to Evaluate Alternatives
2. Identification
3. Development (Threshold Criteria Screening)

a) Protection of Human Health and the Environment
b) Ability to Meet Media Cleanup Standards
c) Ability to Control Releases
d) Compliance with Applicable Standards for Management of Wastes Feasibility Given Existing Waste- and Site-Specific Conditions

G. Evaluation of Selected Corrective Measure Alternatives

1. Long-Term Reliability and Effectiveness
2. Reduction of Toxicity, Mobility, and/or Volume of Wastes
3. Short-Term Effectiveness
4. Potential Impacts
5. Implementability
6. Cost

H. Justification and Recommendation of the Corrective Measure or Measures

1. Summary of the Corrective Measure or Measures and Rationale
2. Design and Implementation Criteria/Precautions
3. Operation and Maintenance Requirements
4. Remedy-Specific Performance Standards and Expectations
5. Cost Estimates and Schedules (Compliance Time Frame)

I. Public Involvement Plan

12.0 APPENDIX D

Roles and Responsibilities for CMS/CMI

The following table outlines key Los Alamos National Laboratory (LANL) and US Department of Energy (DOE) personnel currently involved in the Corrective Measures Study/Corrective Measures Implementation (CMS/CMI) process for PRS 16-021(c), the TA-16-260 outfall. Many other resources from LANL's contractors, particularly ICF Kaiser Engineers and Neptune and Company, have also been intimately involved in the CMS/CMI activities during past years.

Table D-1

Roles & Responsibilities of Key LANL and DOE Personnel Involved in CMS/CMI Activities at PRS 16-021(c)

Name	Affiliation	Role/Responsibility
W. Scott Baldridge	EES-1	Geology
Kathy Campbell	EES-5	Statistics
Julie Canepa	EM/ER	ER Project Leader
Alison Dorries	EES-13	Analysis & Assessment Focus Area Leader
Victoria George	EM/ER	Regulatory Compliance Focus Area Leader
Donald Hickmott	EES-1	Team Leader – HE Production Sites Team, Geology
Elizabeth Kelly	TSA-1	Ecological Risk Assessment
John McCann	CST-7	Team Leader – Firing Sites Team, Risk Assessment
Roy Michelotti	CST-7	Remedial Actions Focus Area Leader
Joe Mose	DOE/LAAO	DOE Contact
Brent Newman	EES-15	Hydrogeology
Karen Schultz-Paige	CST-7	Chemistry

13.0 APPENDIX E

Cost/benefit and risk/benefit considerations

that will be applied in the CMS Report

APPENDIX E COST/BENEFIT AND RISK/BENEFIT CONSIDERATIONS THAT WILL BE APPLIED IN THE CMS REPORT

Cost/benefit and risk benefit methodologies to support the CMS Process

LANL will evaluate remedial alternatives based on risk-benefit, cost-benefit, and applicability selection criteria during the CMS process. In order to meet this objective, LANL will use a proven methodology such as the Laboratory Integration and Prioritization (LIPS) cost/benefit/prioritization model developed by LANL, a modified Kepner-Tregoe Formalism process, or other similar methodology. For example, the modified Kepner-Tregoe process would include the following five steps:

- Step 1 Develop remedial objectives
- Step 2 Quantify remedial objectives
- Step 3 Develop list of potential remedial approaches
- Step 4 Evaluate and rank potential remedial approach
- Step 5 Choose best scoring technology as tentative decision

E.1 Step 1 Develop Remedial Objectives

The remedial objectives developed during the CMS will be based primarily on cost-benefit and risk-benefit criteria, applicability, and related factors relevant to the site, media, or environment. In developing remedial objectives the following factors, described in more detail in Chapter 5, will be evaluated:

- performance and reliability,
- reduction of toxicity, mobility, or volume of contaminants or wastes,
- effectiveness of remedy in achieving target concentrations,
- timing of the potential remedy,
- ease of implementation,
- long-term reliability,
- impacts of institutional requirements on remedy implementation,
- mitigation of human health and environmental exposures, and
- costs.

E.2 Step 2 Quantify Remedial Objectives

The purpose of Step 2 is to address the qualitative remedial objectives and assign a value of low priority to high priority (e.g., a 1ñ10 scale). This quantity (W for illustrative purposes) will be a weighting factor used in subsequent calculations.

E.3 Step 3 Develop List of Potential Remedial Approaches

Step 3 is intended to identify potential remedial approaches that might apply based on Step 1 objectives and site-specific conditions. Potential remedial approaches are identified in Section 5.2.

E.4 Step 4 Evaluation and Ranking of Potential Remedial Approaches

Each potential remedial approach will be assigned a numerical score (rating) based on how it performs in each of the objectives (e.g. a 1Ñ10 scale). The number assigned to the remedial approach will be called S for illustrative purposes.

This score will be multiplied by the weighting factor for the objective (i.e., S*W).

The sum of the scores is calculated.

Rating of the remedial approaches will focus on facility conditions and pathways of contamination actually addressed by each remedial approach.

To evaluate all the criteria (based on remedial approaches), LANL will graphically depict data pertaining to costs/risk, costs/benefits, and risk/benefit for each recommended approach using the Spatial Analysis and Decision Assistance (SADA) software (or similar software). SADA was developed for DOE in 1998, and can graphically reproduce site cost/benefit curves that demonstrate the specific relationship between a given remedial cleanup goal and the corresponding cost. This cleanup goal can be a concentration value or a particular human-health risk scenario. SADA also incorporates a variety of summarization, visualization, and modeling tools to aid in making remedial decisions. We will use such software tools combined with published remedial cost tables and other guidance documents to help evaluate specific approaches.

E.5 Step 5 Recommend Best Remedial Alternatives

In Step 5 the remedial approaches scoring the highest scores will be used as tentative selections. A sensitivity analysis will then be run on the results to verify the scoring elections.

14.0 APPENDIX F

Excerpts from LANL's HSWA module to the RCRA permit Relevant to the CMS Plan and Crosswalk between Permit Requirements and this Document

Table F-1 HSWA Permit Requirements Crosswalk

HSWA Permit Requirements	Where Addressed
L. CORRECTIVE ACTION MEASURE STUDY PLAN	
2a. General approach to investigate and study potential remedies	CMS Plan Secs. 3, 4
2b. Define overall objectives of study	CMS Plan Sec. 3
2c. Plans for evaluating remedies to ensure compliance w/remediation standards	CMS Plan Sec. 5
2d. Schedule for conducting study	CMS Plan App. B
2e. Proposed format	CMS Plan Sec. 1, App. C
2f. Pilot- or bench-scale studies necessary	CMS Plan Sec. 4
R. SCOPE OF WORK FOR A RCRA CORRECTIVE MEASURES STUDY AT LOS ALAMOS NATIONAL LABORATORY	
VI. IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVES	
A. Description of current situation	RFI Reports CMS Plan Sec.2
B. Establishment of Corrective Action Objective	CMS Plan Sec. 3
C. Laboratory and Bench-scale Study	CMS Plan Sec. 4
D. Screening of Corrective Measure Technologies	CMS Plan Sec. 4
E. Identification of Corrective Measure Alternatives	CMS Plan Sec. 5
VIII. EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE OR ALTERNATIVES	
A. Technical/Environmental/Human Health/Institutional	
1. Technical	CMS Plan Sec. 5, CMS Report
2. Environmental perform EA for each alternative	CMS Plan Sec. 5, CMS Report
3. Human Health mitigation of short-and long-term potential exposure both during and after implementation.	CMS Plan Sec. 5, CMS Report
4. Institutional effect of federal, state, and local environmental and public health standards, regulations, guidance advisories, ordinances, or community relations on the design, operation, and timing of alternatives.	CMS Plan Sec. 5, CMS Report
B. Cost Estimate	CMS Plan Sec. 5, CMS Report
1. Capital costs	CMS Report
2. Operation and maintenance costs, after construction	CMS Report
JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES	
A. Technical	CMS Plan Sec. 5, CMS Report
1. Performance	
2. Reliability	
3. Implementability	
4. Safety	
B. Human Health	CMS Plan Sec. 5, CMS Report
C. Environmental	CMS Plan Sec. 5, CMS Report

The following is extracted from the CMS section of the HSWA permit. Any inconsistencies are inadvertent and not intended as modifications.

L. Corrective Action Measures Study Plan

1. If the Administrative Authority has reason to believe that a SWMU has released concentrations of hazardous constituents, or if the Administrative Authority determines that contaminants present a threat to human health and the environment given site-specific exposure conditions, or may present a threat over the lifetime of wastes, the Administrative Authority may require a Corrective Measures Study (CMS) and shall notify the Permittee in writing. The notification may also specify remedial alternatives and pilot or bench scale studies to be evaluated by the Permittee during the CMS.

2. The Permittee shall submit a draft CMS Plan to the Administrative Authority within ninety (90) calendar days from notification of the requirement to conduct a CMS. The Scope of Work for a Corrective Measure study (CMS) is in Section R.

   The CMS Plan shall provide the following information:

   a. A description of the general approach to investigation and potential remedies;

   b. A definition of the overall objectives of the study;

   c. The specific plans for evaluating remedies to ensure compliance with remedy standards;

   d. The schedules for conducting the study;

   e. The proposed format for the presentation of information; and

   f. Any pilot or bench scale studies necessary.

3. After the Permittee submits the draft CMS plan, the Administrative Authority will either approve or disapprove the plan. If the plan is not approved, the Administrative Authority will notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of the, revised plan. If this plan is not approved, the Administrative Authority will revise the Plan and notify the Permittee of the revisions. This Administrative Authority revised Plan becomes the approved Plan.

M. CORRECTIVE MEASURES STUDY IMPLEMENTATION

No later than fifteen (15) calendar days after the Permittee has received written approval from the Regional Administrator for the CMS Plan, the Permittee shall begin to implement the Corrective

Measures Study according to the schedules specified in the CMS Plan. The CMS shall be conducted in accordance with the approved Plan.

N. CORRECTIVE MEASURES STUDY FINAL REPORT

1. Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Final Report. The CMS Final Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. The CMS Report shall present all information gathered under the approved CMS Plan. The final report must contain adequate information to support the Regional Administrator in the remedy selection decision making process.
2. If the Regional Administrator determines that the CMS Final Report does not fully satisfy the information requirements specified under Permit condition N.1., the Regional Administrator may disapprove the CMS Final Report. If the Regional Administrator disapproves the Final Report, the Regional Administrator will notify the Permittee in writing of deficiencies in the Report and specify a due date for submittal of a revised Final Report (e.g., thirty (30) days after notification).
3. Based on preliminary results and the final CMS report, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

P. FACILITY SUBMISSION SUMMARY – RELEVANT SECTION ONLY

Interim Measures Plan for interim measures required after permit issuance	thirty (30) calendar days after notification
Revised Interim Measure Plan	as determined
CMS Plan	ninety (90) calendar days after notification of the requirement to perform a CMS
Revised CMS Plan	as determined
CMS Report	sixty (60) calendar days after completion of CMS
Revised CMS Report	thirty (30) calendar days after notification of deficiency

R. SCOPE OF WORK FOR A RCRA CORRECTIVE MEASURE STUDY (CMS) AT LOS ALAMOS NATIONAL LABORATORY

PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate the corrective action alternative or alternatives and to recommend the corrective measure or measures to be taken at Los Alamos National Laboratory. The Permittee will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified.

If the Permittee believes that certain requirements of the scope of work are not applicable, the specific requirements shall be identified and the rationale for inapplicability shall be provided. This scope of work should be modified as necessary to require only that information necessary to complete the RCRA CMS.

SCOPE

The CMS consists of four tasks. Those tasks, and the ER Program documents/activities that are equivalent to the CMS documents/, activities are listed on the following page. The permittee shall prepare a single installation-wide work plan, which shall be updated annually, and task specific RI/FS documents for each task. The installation wide work plan shall contain programmatic operating procedures, tabular summaries of the potential release sites, prioritization of the site/tasks, and a work schedule by task (including a current year work plan). The task specific RI/FS documents/activities shall be prepared as tasks are implemented. The detailed outlines for the task specific RI/FS documents shall be provided in the installation-wide work plan.

<u>TASK VI: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVE(S)</u>

Based on the results of the RCRA Facility Investigation (RFI) and consideration of the identified Preliminary Corrective Measure Technologies (Task I) the Permittee shall identify, screen, and develop the alternative(s) for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

The Permittee shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RFI report. The Permittee shall provide an update to information presented in Task I of the RFI to the Administrative Authority regarding previous response activities and any interim measures which have or are being implemented at the facility. The Permittee shall also make a facility-specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

The Permittee, in conjunction with the Administrative Authority, shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance and the requirements of any applicable Federal statutes. At a minimum, all corrective actions concerning groundwater releases from solid waste management units must be consistent with, and as stringent as, those required under 40 CFR 264.100.

C. Laboratory and Bench-Scale Study

When a new technology is being proposed or similar waste streams have not routinely been treated or disposed using the technology the Permittee shall conduct laboratory and/or bench-scale studies to determine the applicability of a corrective measure technology or technologies to the facility conditions. The Permittee shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

The Permittee shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of testing, the Permittee shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Permittee shall prepare a report summarizing the testing program and its results, both positive and negative.

D. Screening of Corrective Measure Technologies

The Permittee shall review the results of the RFI and reassess the technologies specified in Task II and identify any additional technologies which are applicable to the facility. The Permittee shall screen the preliminary corrective measure technologies identified in Task II of the RFI and any supplemental technologies to eliminate those that may prove not feasible to implement, that rely on technologies unlikely to part form satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics
   Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics
   Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations
   The level of technology development, performance record, and inherent construction, operation and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

E. Identification of the Corrective Measure Alternatives

The permitting shall develop the corrective measure alternatives based on the corrective measure objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task I of the RFI as supplemented following the preparation of the RFI report. The Permittee shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of options that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding technologies, identified in Task I, as supplemented in the development of the alternative.

TASK VIII EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE(S)

The Permittee shall describe each corrective measure alternative that passed the initial screening in Task VI and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates for each corrective measure.

A. Technical Environmental/Human Health/Institutional

The Permittee shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Permittee shall evaluate each alternative in the four following areas:

1. Technical

The Permittee shall evaluate each corrective measure alternative based on performance. reliability, implementability and safety.

a. The Permittee shall evaluate performance based on the effectiveness and useful life of the corrective measure:

i) Effectiveness shall be evaluated in terms of the ability to perform intended functions such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

ii) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

b. The Permittee shall provide information on the reliability of each corrective measure including their. operation and maintenance requirements and their demonstrated reliability:

i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and

ii) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Permittee should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

c. The Permittee shall describe the implementability of each corrective measure including the relative ease of installation (constructibility) and the total time required to achieve a given level of response:

i) Constructibility is determined by conditions both internal and external to the facility conditions and include. such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (e.g., remote location vs. a congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities;

ii) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre—established level.

d. The Permittee shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider include fire, explosion, and exposure to hazardous substances.

2. <u>Environmental</u>

The Permittee shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment f or each alternative will include, at a minimum, an evaluation of: the short— and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse impacts.

3. Human Health

The Permittee shall assess each alternative in terms of the extent which it mitigates short and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on—site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or regulations acceptable to the Administrative Authority.

4. Institutional

The Permittee shall access relevant institutional needs for each alternative specifically the effects of Federal state, and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. Cost Estimate

The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include capital, and operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.
   a. Direct capital costs include:
      i) Construction costs: Cost of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure alternative.
      ii) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is completed;
      iii) Land and site development costs: Expenses associated with purchase of land and development of existing property; and
      iv) Building and services coats: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.

   b. Indirect capital costs include:
      i) Engineering expenses: Costs of administration, design construction supervision, drafting and testing of corrective measure alternatives;
      ii) Legal fees and license or permit costs:
      Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
      iii) Start-up and shakedown Costa: Cost incurred during corrective measure start-up; and
      iv) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components:

   a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operation;
   b. Maintenance materials and labor casts: Costa for labor, parts, and other resources required for routine maintenance of facilities and equipment;
   c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
   d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
   e. Disposal and treatment: Costs of transporting, treating, and disposing of waste materials, such a. treatment plant residues generated during operation;
   f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
   g. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
   h. Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
   i. Other costs: Items that do not fit any of the above categories.

TASK VIII. JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

The Permitting shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade off among health risks, environmental effects, and other pertinent factors shall be highlighted. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

A. Technical

   1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
   2. Reliability — corrective measure or measures which do not require frequent or complex operation and maintenance activities and have proven effective under waste and facility conditions similar to those anticipated will be given preference;
   3. Implementability — corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
   4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

B. Human Health

The corrective measure or measures must comply with existing U.S. EPA criteria, standards, or regulations for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

C. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) on the environment over the shortcut period of time will be favored.

TASK IX: REPORTS

The Permittee shall prepare a Corrective Measure Study Report presenting the results of Tasks VII through IX recommending a corrective measure alternative. Two (2) copies and one compatible disk copy of the draft and final reports shall be provided to the Administrative Authority by the Permittee.

A. Progress

The Permittee shall at a minimum provide the Administrative Authority with signed monthly management status reports containing:

1. A description and estimate of the percentage of the 018 completed;
2. Summaries of contacts relevant to corrective action with representatives of the local community, public interest groups or State government during the reporting period;
3. Summaries of problems or potential problems relevant to corrective action encountered during the reporting period;
4. Actions being taken to rectify problems;
5. changes in key project personnel during the, reporting period; and
6. Projected work for the next reporting period.

B. Draft

The Report shall at a minimum include:

1. A summary of the corrective measure or measures and rationale:
    a. Description of the corrective measure or measures and rationale for selection;
    b. Performance expectations;
    c. Preliminary design criteria and rationale;
    d. General operation and maintenance requirements; and
    e. Long-term monitoring requirements.

2. Design and implementation precautions:
    a. Special technical problems;
    b. Additional engineering data required;
    c. Permits and regulatory requirements;
    d. Access, easements, right-of-way;
    e. Health and safety requirements; and
    f. Community relations activities.

3. Cost Estimates and Schedules:
    a. Capital cost estimate;
    b. Operation and maintenance cost estimate; and
    c. Project schedule (design, construction, operation).

C. Technical Quarterly Process Reports

The Permittee shall submit quarterly progress reports which summarize environmental data collected during the previous quarter.

A. Final

The Permittee shall finalize the Corrective Measure Study Report incorporating comments received from the Administrative Authority on the Draft Corrective Measure Study Report.

15.0 APPENDIX G

Relevant Documents

G-1.0 DOCUMENTATION OF REGULATORY HISTORY

G-1.1 Corrective Action History

The history of regulatory interaction concerning the TA-16-260 outfall site is extensive and has involved a close working relationship with EPA and NMED. This working relationship has included numerous site tours and briefings on the progress of investigations. A summary of the key corrective action interactions with the regulators is provided in Table G-1.1-1.

Table G-1.1-1
Corrective Action History Summary TA-16 260 Outfall, PRS 16-021(c)

Date	Description of Corrective Action Activity
July 1993	RFI Work Plan for OU 1082 submitted to EPA
7/18/94	DOE received letter from EPA describing NODs on the Work Plan (letter dated 7/13/94)
8/11/94	LANL sent letter to DOE responding to NODs received on the Work Plan, Part 1 – 30 day
8/17/94	DOE sent letter to EPA responding to NODs received on the Work Plan, Part 1
11/21/94	LANL sent letter to DOE responding to NODs received on the Work Plan, Part 2
11/30/94	DOE sent letter to EPA responding to NODs received on the Work Plan, Part 2
12/22/94	DOE received letter from EPA approving the Work Plan, Part 1
1/9/95	LANL received letter from DOE on approval of the Work Plan, Part 1
1/12/95	DOE received letter from EPA approving the Work Plan, Part 2
1/18/95	LANL received letter from DOE on approval of the Work Plan, Part 2
2/12/96	Interim Action Report for SWMU 16-021(c) submitted to NMED
2/16/96	IA Report re-submitted to NMED
9/17/96	DOE received letter from NMED recommending CMS for this site and requesting a CMS Plan submittal by October 1, 1996 (letter dated 4/3/96)
9/23/96	RFI Report for PRSs in TA-16, 16-003(k) and 16-021(c), submitted to NMED (included Phase II SAP)
9/26/96	LANL/DOE sent letter to NMED requesting permission to submit the CMS Plan following completion of the Phase II RFI Report for the site.
12/5/96	LANL/DOE received letter from NMED describing comments on RFI Report for Potential Release Sites in TA-16
1/9/97	LANL/DOE sent letter to NMED acknowledging 12/5/96 letter above
2/26/97	LANL/DOE sent letter responding to NMED comments on RFI Report for Potential Release Sites in TA-16
8/6/97	LANL/DOE received letter from NMED requesting supplemental information (RSI) on RFI Report for Potential Release Sites in TA-16 (letter dated 8/4/97)
8/26/97	LANL/DOE sent letter requesting extension for submittal of response to RSI on RFI Report for Potential Release Sites in TA-16
9/15/97	LANL/DOE received letter from NMED approving request for extension for submittal of response to RSI on RFI Report for Potential Release Sites in TA-16 (letter dated 9/11/97)
11/14/97	Response to RSI on RFI Report for Potential Release Sites in TA-16 submitted to NMED

Table G-1.1-1 (concluded)

Date	Description of Corrective Action Activity
1/26/98	LANL/DOE received letter from NMED approving RFI Report for Potential Release Sites in TA-16 upon modification (letter dated 1/20/98)
2/26/98	Response to Approval upon Modification RFI Report for Potential Release Sites in TA-16 submitted to NMED
3/31/98	LANL/DOE received letter from NMED approving RFI Report for Potential Release Sites in TA-16 (letter dated 3/26/98)

G-1.2 Other Regulatory Documents

None.

G-2.0 Referenced Documents

All referenced documents specific to this CMS Plan may be found in the TA-16 reference set, which is being submitted with the Phase II RFI Report for PRS 16-021(c). All other documents referenced in this report can be found in the ER Project Reference Library.

CERTIFICATION

CERTIFICATION BY THE ENVIRONMENTAL STEWARDSHIP– ENVIRONMENTAL REMEDIATION & SURVEILLANCE PROGRAM TECHNICAL REPRESENTATIVES

Document Title: **RESPONSE TO NOTICE OF DEFICIENCY FOR THE CORRECTIVE MEASURES STUDY REPORT FOR SOLID WASTE MANAGEMENT UNIT 16-021(C)-99**

I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Name: ______________________ Date: 6/14/05

David McInroy, Deputy Project Director
Environmental Remediation & Surveillance Program
Los Alamos National Laboratory

or

______________________ Date: ____________

Ken Hargis, Division Leader
Environmental Stewardship Division
Los Alamos National Laboratory

______________________ Date: 6/14/05

David Gregory, Federal Project Director
Environmental Restoration Program
Department of Energy/Los Alamos Site Office

or

______________________ Date: ____________

John Ordaz,
Assistant Area Manager of Environmental Projects
Department of Energy/Los Alamos Site Office

Response to the "Notice of Deficiency, Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99, Los Alamos National Laboratory (LANL), NM0890010515, HWB-LANL-03-021"
Dated May 12, 2005

INTRODUCTION

This submittal is the response by Los Alamos National Laboratory (LANL or the Laboratory) to the "Notice of Deficiency, Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99, Los Alamos National Laboratory (LANL), NM0890010515 HWB-LANL-03-021", issued by the New Mexico Environment Department (NMED) Hazardous Waste Bureau on May 12, 2005. "Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99a' (LA-UR-03-7627, ER 2003-0709) was submitted by LANL to NMED in November 2003.

To facilitate the review of these responses, NMED's comments are included verbatim. LANL's responses follow each NMED comment.

NMED Comment

1. *Section 3.2, Development of CMS COPCs, p. 21*

   The text indicates that the Phase III RFI risk assessment showed acceptable risks outside of the source area soils. However, the Phase III risk assessment limited the evaluation of risk to a trail user in the areas outside of the source area (Cañon de Valle alluvial area and Martin Springs Canyon). As an environmental worker and construction worker were not evaluated for areas outside of the source area, all future land use for the Cañon de Valle alluvial area and Martin Springs Canyon must be limited to trail use. If the Permittees anticipate that any construction of new buildings or other structures may occur in these areas at some time in the future, additional risk analyses are warranted, and additional corrective action may be required. The Permittees must clarify Section 3.1, Current and Reasonably Foreseeable Future Land Use, to indicate that construction of new buildings and other structures will be limited to the source area only and that the Cañon de Valle alluvial area and Martin Springs Canyon will be limited to trail use only.

LANL Response

1. A sentence has been added in Section 3.1, p. 21, stating that there will be no construction of new facilities or buildings in the canyon, so that future potential exposure will be limited to trail use only.

NMED Comment

2. *Section 4.1, Identification of ARARs, p. 60*

   The proposed ARAR for alluvial sediment is "the requirement that alluvial sediment contaminant concentrations not cause shallow site water contaminant concentrations above the shallow site water ARAR cited above." Another ARAR identified by NMED for alluvial sediment is the requirement to not pose unacceptable risk to the ecological environment. Previous sampling by the Permittees has identified silver concentrations that pose unacceptable ecological risk. Even though subsequent sampling has not duplicated the results, NMED believes the elevated silver concentrations and *unacceptable risk still exist. The Permittees must remediate the silver concentrations to meet this ARAR.*

LANL Response

2. The protection of the population rather than the individual (except for threatened and endangered species) is the EPA guidance for ecological risk assessment. It is important to note that the toxicity observed at SWSC cut was transient and does not affect the population and therefore does not require remediation of the area. However, additional sampling is warranted to better define the toxicity in SWSC cut (location of ecorisk sample location 16-06709 dated 9/21/01). In addition, silver has been added as a CMS COPC for Cañon de Valle surface water. For the additional investigation, LANL proposes a phased approach involving a focused investigation of the SWSC area by collecting five surface sediment samples (one sample at location 16-06709, two samples located 5 m equidistant on either side of 16-06709 on the same bank, and two located 5 m apart on the opposite bank) and analyzing them for silver. If concentrations exceed the background value for silver, Chironomus testing will be performed on sediment from the location with the highest silver concentration above background. If Chironomus test results show unacceptable toxicity, additional sediment sampling and analysis for silver will be performed to identify the volume of silver sediment that requires cleanup. This volume of sediment will be excavated. This alternative of investigation, followed by possible limited excavation, has been added throughout the document (see Sections 6.5.4 and 6.6.4, pp. 113 and 114).

NMED Comment

3. *Section 4.2.1, Identification of Risk-Based MCSs for Soil and Tuff in the Outfall Source Area, p. 62.*

   In the source area, a MCS of 10,000 mg/kg was estimated for barium. It appears that a backwards risk calculation was conducted. The three COPCs in the source area are TNT, RDX, and barium. If confirmation sampling determined that the average residual concentrations of TNT and RDX were right at the MCS, the Permittees calculated what allowable average concentration of barium could be present and still result in acceptable risks. The CMS Report presented this average barium concentration as 10,000 mg/kg. The proposed MCS for barium appears reasonable for the environmental worker; however, the MCS may be high if a construction worker scenario is evaluated. In addition, risk assessments are not based upon an average concentration but rather the 95% upper confidence level (UCL) of the mean, which is greater than the average. Therefore, it appears the MCS may have been overestimated for barium. The Permittees must demonstrate how an MCS of 10,000 mg/kg for barium will be protective of a construction worker.

LANL Response

3. The text has been modified in Section 4.2.1, p. 63, to more clearly state that the calculation of the barium MCS uses the construction worker HI. Using the construction worker HI, and assuming that RDX and TNT are remediated to at least their carcinogenic site-specific screening action levels (SSALs), the calculated MCS for barium would be approximately 10,000 mg/kg. The calculation of the barium MCS was used to provide an estimate of what the barium concentration should be to comply with the requirement that the HI of the construction worker be one or less. In the calculation, the assumed RDX and TNT concentrations leave barium concentration as a single unknown which was solved to yield a barium MCS of approximately 10,000 mg/kg for the construction worker.

The final calculation of the barium MCS will use the 95% UCL of the mean of post-remediation sample results for the constituents of the HI, namely RDX, TNT, and barium. Both RDX and TNT concentrations must be below their respective SSALs for cancer risk. If the HI for the construction worker is less than one, and RDX and TNT concentrations do not exceed their carcinogenic SSALs, site cleanup will have been achieved.

NMED Comment

4. *Section 4.2.2, Outfall Source Area Surge Bed MCSs, p. 62*

   The Permittees propose isolation or removal for the 17-foot surge bed. The Permittees must explain how the 45-ft surge bed, where RDX was detected at 4 ppm, and the other identified contaminated tuff discontinuities will be handled to prevent unacceptable risk to the regional groundwater. According to WQCC regulations (20.6.2 NMAC Section 4103.A), the vadose zone must be abated to be protective of ground water.

LANL Response

4. The borings that were completed in the former settling pond area as part of the RFI Phase II generally identify an upper surge bed (a 17-ft surge bed found 17-ft below grade in boring BH 16-2700), a powder unit (at approximately 30-40 ft below grade), and a lower surge bed (approximately 90 ft below grade in BH 16-2735). Text has been added in Section 3.4 (p. 30) to better describe these tuff units.

   The HE found in the subsurface in these locations resulted from the overlying settling pond located in the outfall channel. When the settling pond was operating, both a hydraulic driving force and high solute concentrations of RDX were present in the settling pond; these likely caused fracture flow of HE-bearing water within the underlying tuff. Under the proposed preferred remedial alternative, the existing low-permeability cap in the former settling pond, which was installed during the interim measure to hydraulically isolate lower units, will be maintained so that future vertical infiltration to underlying surge beds and other discontinuities is prevented. As an additional remedial measure, pressure grouting of the upper surge bed (at 17-ft), where approximately 9700 mg/kg of HE was detected, is proposed to isolate it from potential horizontal groundwater flow within the surge bed.

   In contrast to the upper surge bed, HE concentrations do not exceed 4 mg/kg in the tuff units below the upper surge bed. An HE concentration of 4 mg/kg poses less potential for adverse effects to regional groundwater than an HE concentration of 9700 mg/kg. On this basis, evaluation of the deeper vadose zone units such as powder beds and surge beds is deferred to the regional groundwater RFI, where modeling will be conducted to determine whether remediation of HE in these areas is necessary. The regional groundwater RFI report is due in August 2006. Explanatory text has been added to Section 4.2.2, Outfall Source Area Surge Bed MCSs, p. 65.

NMED Comment

5. Section 4.3, Proposed MCSs for Springs, Groundwater and Surface Water, p. 62

The Permittees must explain how they will determine naturally occurring manganese, given NMED's prohibition to use the geochemical evaluation for this site presented in the Phase III RFI Report on 3.2 Subsurface Conditions, p. 6.

LANL Response

5. Since the early 1990s, the geochemical ratio or normalization method has been used as a tool for inorganic trends analysis in academic research. Numerous references and citations are available in peer-reviewed journals. Moreover, the method has been used at Walker Air Force Base, Kirtland Air Force Base and Deming Army Airfield, sites which are also regulated by the Hazardous Waste Bureau. EPA Region 4 is currently developing guidance for its use at Region 4 sites. LANL looks forward to further discussions with the NMED on this method as it becomes more widely accepted by the regulatory community.

   It is not known whether the manganese at this site is the result of naturally occurring reducing conditions present in the saturated alluvium or man-made reducing conditions caused by the presence of anthropogenic organic HE. If anthropogenic, once HE concentrations are reduced through remediation, manganese concentrations should decrease. If it is natural, decreasing HE concentrations will have no effect on manganese concentrations. A statement has been added to Section 4.3, p. 65.

NMED Comment

6. Section 4.4, Proposed MCSs for Alluvial Sediment, p. 63

The Permittees must provide more information on how compliance with ARARs will be determined. See comment #2.

LANL Response

6. For alluvial sediments contaminated with silver, a statement has been added to Section 4.4, p. 66 that sediments should not cause unacceptable risk to the ecological environment and resident biotic populations as determined from sediment analysis and chironomus testing.

NMED Comment

7. Section 4.5, POCs, p. 64

The Permittees must ensure that all the monitoring wells used for compliance monitoring are located within the contaminated groundwater plume in both Cañon de Valle and Martin Spring Canyon. The Permittees must install additional alluvial wells downgradient of existing monitoring wells, if needed, to achieve this objective. The Permittees must provide information on the actions that will be taken if contaminated groundwater is encountered in the new groundwater well proposed for the surge bed. The Permittees must ensure that all springs are sampled at the same location for eight quarters, regardless of where they emerge seasonally.

LANL Response

7. Currently, compliance monitoring wells are located within the alluvial groundwater plume. The Consent Order (Section IV.B.3.b.ii) requires the installation of three additional groundwater alluvial wells in Cañon de Valle. These wells, to be installed according to the time frame set by the Order, will serve as additional monitoring points for assessing the position of the plume. Additional text regarding this issue has been added in Section 4.5, p. 67.

   The grouting alternative for the surge bed includes the installation of three borings with which LANL can better characterize the horizon to be grouted so that a grouting plan and design can be developed. If detected, groundwater will be characterized with regard to extent and direction of flow using these borings. If necessary, additional borings will be installed to better define the upgradient edge of groundwater so that an appropriate grouting design can be developed. Additional text has been added to the description of the grouting alternative (Section 6.4.2, p. 99)

   After implementation and during monitoring, if groundwater is detected inside the grouted area, the corrective step of additional grouting will be taken. Additional text reflecting this has been added to Section 4.5, p. 66.

   A statement has been added that springs will be sampled in the same locations to demonstrate eight quarters of compliance (Section 4.5, p. 67).

NMED Comment

8. Section 4.6, CTF, p. 64

NMED agrees with the Permittees' assertion that the magnitude and extent of contamination and potential risks do not warrant the imposition of an urgent, set time frame. However, NMED's position would change if future monitoring reveals increasing contaminant levels in groundwater.

LANL Response

8. Noted.

NMED Comment

9. Section 5.3.3.2, In Situ Treatment of Soils, p. 79

The Permittees discuss grouting of the 17-foot source area surge bed as a means to isolate it from groundwater. The relatively higher permeability (compared to the surrounding tuff) of the surge bed is a key component to the performance and reliability of this remedial alternative to achieve its goal. However, the Permittees have not provided to NMED information on the permeability of the surge bed and, thus, NMED is unable to determine its effectiveness. The Permittees must provide this information.

LANL Response

9. An estimate of the relative permeability between intact tuff and the surge beds is provided in the RFI Phase III report (LANL 2003 77965) (Table 4.4-21, p. 4-64), where a surge bed and intact tuff

hydraulic conductivities of 3.8 x 10^{-3} and 1.7 x 10^{-8} cm/sec, respectively, are reported for intermediate-depth borings. The permeability of the surge bed is roughly a factor of 10^{5} higher. Respective porosities were 51 and 20%. These data have been added to Section 5.3.3.2(d), p. 82.

NMED Comment

10. Section 6.4.4.4, Time Required for Implementation, p. 95

The Permittees estimate the installation of three borings to define the extent of the surge bed will take up to six months or more. NMED believes this is a gross overestimation for completion of the investigation. The Permittees must explain what factors were considered to derive this estimation.

LANL Response

10. The estimate of 6 months was a conservative estimate. The estimated time has been reduced to three months (see Section 6.4.4.4, p. 101).

NMED Comment

11. Section 6.4.4.7, Institutional Constraints, p. 96

The Permittees state that the institutional constraints for excavation of the surge bed may include a prohibition on blasting, in which case the excavation alternative would not be feasible. NMED cannot select a remedy based on constraints that may or may not exist. The Permittees must obtain and provide an adequate and realistic evaluation of the constraints that will be in place for this alternative.

LANL Response

11. According to a recent e-mail from Roger Goldie (TA-16 Health and Safety Officer), blasting at TA-16 would be extremely difficult to implement and would require revising the site's authorization basis. Text in Section 6.4.4.7, p. 101, has been modified to reflect that blasting would face very difficult institutional resistance.

NMED Comment

12. Section 7.4, Monitoring Plan, p. 115

The Permittees propose sampling the POC wells and the new wells installed with each PRB quarterly for the first three years and twice a year thereafter. The Permittees are reminded that, according to the WQCC standards and section 4.3 of this report, the MCS must be attained at each POC well for at least eight consecutive quarters. If this has not occurred after the proposed three-year period, NMED will require quarterly sampling to continue.

LANL Response

12. During twice-per-year sampling, if concentrations come close to attaining the MCS, quarterly sampling will resume with the goal of demonstrating eight consecutive quarters of compliance. Text in Section 7.4, p. 123, has been modified to reflect this.

NMED Comment

13a. Table 7.5-1, Schedule of CMS/CMI Activities

The following changes should be noted in the table.

- *Final SOB Issued by NMED – 90 days after end of public comment period*
- *NMED Approves CMI Plan – 120 days after submittal of CMI plan to NMED*

LANL Response

13a. The requested changes have been made to Table 7.5-1, p. 124.

NMED Comment

13b. Appendix B, all tables

The Permittees shall update the tables to reflect the revised COPCs submitted as part of the response to the Phase III RFI Report.

LANL Response

13b. The tables have been revised (see Appendix B) to be consistent with the RFI Phase III report.

NMED Comment

14. Appendix B, Section B1.1, Cañon de Valle Surface Water, p. 1

The Permittees must update the text to reflect the revised COPCs submitted as part of the response to the Phase III RFI Report notice of disapproval (NOD). The Permittees must provide and evaluate perchlorate data collected from March 2002 until present to determine if it should be included as a CMS COPC.

Even though thallium was detected infrequently above the CMS screening criteria in surface water, thallium is also detected, albeit infrequently, in Cañon de Valle alluvial groundwater. Thallium was also detected above the screening limit in a sample from R-25. Given that the goal of this corrective measures is to abate those COPCs that potentially pose unacceptable risk to regional groundwater, it appears thallium should have been considered a CMS COPC. This is particularly important because the intermediate and regional groundwater risk assessments have not been completed. The Permittees must include thallium as a CMS COPC or provide further justification for its exclusion.

LANL Response

14. The relevant text and tables associated with Appendix B have been modified. The following perchlorate and thallium discussions have been excerpted from the revised Appendix B. In the following discussion, standards refer to MCLs and NMWQCC groundwater standards (20 NMAC 6.2.3103 Parts A and B), and screening limits refer to EPA Region 6 Tap Water Screening Levels and Region 9 Tap Water Preliminary Remediation Goals. All data for R-25 are available from http//wqdbworld.lanl.gov/ and cover the period from November 2000 to September 2004 approximately. Recent thallium data are presented on the attached CD.

    Perchlorate was detected in 8% of Cañon de Valle surface water samples. For the RFI Phase III data set for perchlorate (March 2000-August 2002), four samples showed detectable perchlorate, all above the screening limits (3.60 and 3.70 µg/L) and all from 2000; all other RFI Phase III sample results (through August 2002) did not detect perchlorate (method detection limit was 4 µg/L). More recent results from September 2002 to March 2003 also do not show detectable perchlorate concentrations above a detection limit of 4 µg/L. Results from September 2003 to January 2005, using a detection limit as low as 0.05 µg/L, show that perchlorate was detected in 90% of samples, but all sample results were below screening limits. In summary, the only results above the screening limits are from 2000. In R-25 results (2000-2004), perchlorate was detected in two of 59 sampling events, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle surface water.

    Thallium was detected in approximately 18% of Cañon de Valle surface water samples in the RFI Phase III data set (March 1998-August 2002), but it exceeded the MCL in only 3 unfiltered samples out of 29 detections. No filtered samples exceeded the screening limits (Region 6 level is 2.90 µg/L and Region 9 level is 2.40 µg/L) or standard (MCL of 2 µg/L). In more recent data (September 2002–February 2005), thallium was detected in approximately 70% of samples, but did not exceed a screening limit or standard (in approximately 150 samples, including QA duplicates). In regional groundwater (R-25), two sets of analytical methods were used: SW-846-6010 and SW-846-6020 (ICP-MS). The latter is more sensitive. Using the former method, both screening limits and the MCL were exceeded several times (the range was 2.2 µg/L to 5.2 µg/L); however, all of these results were J-flagged as estimated values. Using the more sensitive analytical method, neither screening limits nor the MCL were exceeded over the period from November 2000 to September 2004. For these reasons, thallium is not a CMS COPC.

NMED Comment

15. Appendix B, Section B1.2, Cañon de Valle Alluvial Groundwater, p. 6

The Permittees must update the text to reflect the revised COPCs submitted as part of the response to the Phase III RFI Report NOD. The Permittees must provide and evaluate perchlorate data collected from March 2002 until present to determine if it should be included as a CMS COPC.

LANL Response

15. The relevant text and tables associated with Appendix B have been modified. The following perchlorate discussion has been excerpted from the revised Appendix B. In the following discussion, standards refer to MCLs and NMWQCC groundwater standards (20 NMAC 6.2.3103, Parts A and B),

and screening limits refer to EPA Region 6 Tap Water Screening Levels and EPA Region 9 Tap Water Preliminary Remediation Goals. All data for R-25 are available from http//wqdbworld.lanl.gov/ and cover the period from September 2000 to November 2004 approximately. Recent perchlorate data are presented on the attached CD.

Perchlorate was detected in approximately 10% of Cañon de Valle alluvial groundwater samples from the RFI Phase III data set (March 2000-June 2002), with all detections occurring in 2000. In 2000 all detections (four in number) were above the screening limits (Region 6 level is 3.70 µg/L and Region 9 level is 3.60 µg/L). All other samples (45 in number) taken during this timeframe were below the detection limit. In results from September 2002 to March 2003, perchlorate was not detected above the detection limit of 4 µg/L. The Consent Order concentration for perchlorate is 4 µg/L. In subsequent data (up to January 2005), perchlorate was detected above the detection limit (as low as 0.05 µg/L), but all results were below screening limits. In R-25 results (2000-2004), perchlorate was detected in 2 of 59 sampling events, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle alluvial groundwater.

NMED Comment

16. Appendix B, Section B2.1, Martin Spring Canyon Surface Water, p. 13

Arsenic is detected above the CMS screening level (which is the EPA MCL of 10 ppb) in the regional groundwater and is a COPC in the sediment. Manganese is also detected above the CMS screening level (highest detection is 66,800 ppb) and is detected in the regional groundwater. The Permittees must show how eliminating arsenic and manganese as COPCs in surface water (e.g., not remediating arsenic) is protective of the regional groundwater aquifer.

LANL Response

16. The relevant text and tables associated with Appendix B have been modified. The following arsenic and manganese discussions have been excerpted from the revised Appendix B. In the following discussion, standards refer to MCLs and NMWQCC groundwater standards (20 NMAC 6.2.3103 Parts A and B, and screening limits refer to EPA Region 6 Tap Water Screening Levels and EPA Region 9 Tap Water Preliminary Remediation Goals. All data for R-25 are available from http//wqdbworld.lanl.gov/ and cover the period from September 2000 to November 2004 approximately.

In Martin Spring Canyon surface water, arsenic was detected in approximately 27% of samples, of which 1 unfiltered sample in 7 samples showed results above the MCL (10 µg/L). Arsenic in Martin Spring Canyon surface water filtered samples did not exceed the MCL. Arsenic is listed as a Martin Spring Canyon sediment RFI Phase III COPC, where 7 samples exceeded the sediment background concentration of 3.98 mg/kg, and the maximum detected arsenic concentration was 10 mg/kg. There are no known anthropogenic sources for arsenic in this canyon. In Cañon de Valle alluvial groundwater, of eight results greater than the MCL, six results were detected in an alluvial well (16-02655) upgradient from the 260 outfall, MDAR and the 90s Line, indicating that arsenic in groundwater is likely to be naturally elevated. In R-25 data (2000-2004), arsenic was not detected above the MCL. Arsenic has been detected above standards in other regional groundwater wells such as R-19, but not in R-25. For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon surface water.

Manganese was detected in all surface water samples and exceeded standards in 13 of 24 samples from Martin Spring Canyon surface water. The presence of manganese in surface water at levels above standards is likely related to the dissolution of manganese as a result of the reducing conditions caused by organic material, either naturally occurring or from HE. The situation is similar to that found for Cañon de Valle alluvial groundwater, but the percentage of samples showing detectable manganese that exceeded the screening limit was much higher for Cañon de Valle alluvial groundwater. Results from R-25 regional groundwater samples (2000-2004) show 33 (including filtered and unfiltered) samples with manganese levels greater than the MCL, of which 16 exceeded the NMWQCC standard. For these reasons, manganese is retained as a CMS COPC for Martin Spring Canyon surface water.

NMED Comment

17. *Appendix B, Section B2.2, Martin Spring Alluvial Groundwater, p. 17*

Arsenic is detected above the CMS screening level (which is the MCL of 10 ppb) in the regional groundwater and is a COPC in the sediment. The Permittees must show how eliminating arsenic as a COPC in surface water (e.g., not remediating arsenic) is protective of the regional groundwater aquifer.

Even though thallium was not detected above the CMS screening limit in surface water, thallium is detected, albeit infrequently, in Martin Spring Canyon alluvial groundwater and spring water above the CMS screening level. Thallium was also detected above the screening limit in a sample from R-25. Given that the goal of this corrective measures is to abate those COPCs which potentially pose an unacceptable risk to regional groundwater, it appears thallium should have been considered a CMS COPC. This is particularly important because the intermediate and regional groundwater risk assessments have not been completed. The Permittees must include thallium as a CMS COPC or provide further justification for its exclusion.

LANL Response

17. The relevant text and tables associated with Appendix B have been modified. The following arsenic and thallium discussions have been excerpted from the revised Appendix B. In the following discussion, standards refer to MCLs and NMWQCC groundwater standards (20 NMAC 6.2.3103, Parts A and B), and screening limits refer to EPA Region 6 Tap Water Screening Levels and EPA Region 9 Tap Water Preliminary Remediation Goals. All data for R-25 are available from http//wqdbworld.lanl.gov/ and cover the period from September 2000 to November 2004 approximately.

Arsenic was detected in approximately 32% of Martin Spring Canyon alluvial groundwater samples. Of 22 samples showing detectable arsenic, five samples results exceeded the EPA MCL, and two samples exceeded the NMWQCC standard. In Cañon de Valle alluvial groundwater, of eight results greater than the MCL, six results were detected in an alluvial well (16-02655) upgradient of the 260 outfall, MDA-R and the 90s Line, indicating that arsenic in groundwater is likely to be naturally elevated. Based on R-25 data collected from November 2000 to November 2004, arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon alluvial groundwater.

Thallium was detected in approximately 23% of Martin Spring Canyon alluvial groundwater samples from the RFI Phase III data set (March 2000–July 2001). Three of seven sample results from this period exceeded the MCL; however, no filtered sample results exceeded the MCL. In results dating from October 2002 to January 2005, thallium was detected in approximately 77% of more than 30 samples, but all results were below the MCL. In regional groundwater (R-25), two sets of analytical methods were used: SW-846-6010 and SW 846-6020 (ICP-MS). The latter is more sensitive. Using the former method, both screening limits and the MCL were exceeded several times (the range was 2.2 µg/L to 5.2 µg/L); however, all of these results were J-flagged as estimated values. Using the more sensitive analytical method, neither screening limits nor the MCL were exceeded over the period from November 2000 to September 2004. For these reasons, thallium is not included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

NMED Comment

18. Appendix B, Section B.3, Springs, p. 24

The Permittees must update the text to reflect the revised COPCs submitted as part of the response to the Phase III RFI Report NOD. The Permittees must provide and evaluate perchlorate data collected from March 2002 until present to determine if it should be included as a CMS COPC.

LANL Response

18. The relevant text and tables associated with Appendix B have been modified. The following perchlorate discussion has been excerpted from the revised Appendix B. In the following discussion, standards refer to MCLs and NMWQCC groundwater standards (20 NMAC 6.2.3103, Parts A and B), and screening limits refer to EPA Region 6 Tap Water Screening Levels and EPA Region 9 Tap Water Preliminary Remediation Goals. All data for R-25 are available from http//wqdbworld.lanl.gov/ and cover the period from approximately September 2000 to November 2004. Recent perchlorate data are presented on the attached CD.

Perchlorate was detected in approximately 11% of spring samples collected from March 2000 to August 2002. All detections in this period come from 2000-2001, and all detections exceeded the screening limits (Region 6 3.70 µg/L and Region 9 3.60 µg/L). From September 2002 to March 2003, nine samples were collected, and two results were above the detection limit of 4 µg/L. All subsequent sample analyses used a lower detection limit, as low as 0.05. All subsequent samples (December 2003 – January 2005) showed detectable perchlorate; however, all results were below screening limits. In R-25 results (2000-2004), perchlorate was detected in 2 of 59 samples, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for springs.

References

LANL (Los Alamos National Laboratory), 2003. "Phase III RFI for Solid Waste Management Unit 16-021(c)-99," Los Alamos National Laboratory document LA-UR-03-5248, Los Alamos, New Mexico. (LANL 2003, 77965)

LA-UR-05-4379 (NOD response)
LA-UR-05-4381 (revision 1)
June 2005
ER2005-0374 (NOD response)
ER2005-0369 (revision 1

Corrective Measures Study Report for Solid Waste Management Unit 16-021(c)-99, Notice of Deficiency Response and Revision 1

Los Alamos
NATIONAL LABORATORY
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EXECUTIVE SUMMARY

This report describes the results of the Resource Conservation and Recovery Act (RCRA) corrective measures study (CMS) conducted at consolidated Solid Waste Management Unit (SWMU) 16-021(c)-99, located within Technical Area 16 (TA-16) at the Los Alamos National Laboratory (the Laboratory or LANL). This SWMU is associated with a former outfall located adjacent to Building 260, a building formerly used to process high explosives (HE). The former outfall and immediate area are also known as the TA-16-260 outfall, or the outfall source area (see Figure 1.2-1). The CMS was conducted according to the CMS plan for SWMU 16-021(c)-99, which was approved by the New Mexico Environment Department (NMED) in September 1999. The regulatory status of SWMU 16-021(c)-99 is shown in Table ES-1.

This CMS report proposes media cleanup standards (MCSs), evaluates remediation technologies, proposes corrective measure alternatives, and proposes a monitoring program to measure remedial progress for SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon. The CMS addresses surface and subsurface soils within the outfall source area and an underlying surge bed, as well as alluvial sediment, springs, surface water, and groundwater located within Cañon de Valle and Martin Spring Canyon. The identification and evaluation of alternatives for the site's deep vadose zone components (e.g., regional groundwater) was not conducted. A second CMS that will focus on regional groundwater will address these areas.

The CMS used the following process to develop MCSs: review of the Phase III RCRA Facility Investigation (RFI) (LANL 2003, 77965) list of chemicals of potential concern (COPCs) to identify CMS COPCs; review of the Phase III RFI risk assessment results; identification of applicable or relevant and appropriate requirements (ARARs); and identification or calculation of MCSs for each COPC.

The CMS COPCs identified include barium; manganese; silver; hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX); hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine (DNX); hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine (MNX); and trinitrotoluene[2,4,6-] (TNT). CMS COPCs were identified for each area of the site.

The proposed ARARs for groundwater, surface water, and springs are the currently enforceable New Mexico Water Quality Control Commission (NMWQCC) human health standards for groundwater, 20 New Mexico Administrative Code (NMAC) 6.2.3103, Parts A and B. In applying these ARARs, this CMS treats all site waters as groundwater because of their interchangeability in the site hydrology. For alluvial sediment, the ARARs consist of NMAC 6.2.4103, Parts A and B. These ARARs contain both risk-based and standards-based (numerical standards) provisions from which the MCSs were derived. For the outfall source area, MCSs were derived from the Phase III RFI risk assessment results.

The risk-based provisions in the ARARs are dependent on the point of withdrawal of site waters and the human exposure scenario. Because of the future industrial use of the site and the presence of regional groundwater, this CMS identified two potential points of withdrawal for site waters: incidental water ingestion associated with industrial use and drinking water ingestion associated with residential use of the nearest municipal well. The latter point of withdrawal is applicable to shallow site groundwater because of the potential for shallow site groundwater to infiltrate to regional groundwater.

Risks associated with the industrial exposure scenario to shallow site water were calculated during the Phase III RFI and the results showed acceptable risk; according to the risk-based provisions of the ARARs, these results imply that remediation of site waters is not required. A risk assessment for residential use of the municipal well is planned for the regional groundwater CMS and will result in the development of risk-based MCSs for the CMS COPCs, including RDX and TNT, that existing numerical standards of the ARARs do not cover.

Proposed points of compliance (POCs) for the MCSs consist of five existing alluvial wells in Cañon de Valle, three existing alluvial wells in Martin Spring Canyon, two surface water sampling points along the perennial surface water reach of Cañon de Valle, one surface water sampling point in Martin Spring Canyon, and waters emanating from flowing springs. For alluvial sediment, the POCs are a set of statistically representative sediment sampling points at which leaching tests would be conducted. For the purposes of this CMS, compliance is defined as the attainment of the MCS for eight consecutive quarters of sampling results at a POC.

Several of the standard and innovative remediation technologies screened and identified as capable of attaining the MCSs were tested at the site. Technologies that rated favorably as a result of testing were assembled into corrective measures alternatives. These alternatives were evaluated using criteria consistent with the CMS Plan and RCRA.

For the outfall source area residual soils, the proposed alternative is soil removal and off-site disposal. For the outfall source area settling pond and surge bed, the proposed alternative is grouting of the surge bed to isolate residual HE and barium and maintenance of the cap that was installed in the settling pond area as part of the outfall source area interim measure.

For the Cañon de Valle and Martin Spring Canyon alluvial systems, the alternative is natural flushing of alluvial sediments and permeable reactive barrier (PRB) treatment of groundwater and surface water. The PRB is proposed to be composed of either zero valent iron or granulated activated carbon for HE treatment and calcium sulfate for the immobilization of barium. Final design of the PRB will be completed as part of the corrective measure implementation phase. Three PRBs for Cañon de Valle and one PRB for Martin Spring Canyon are proposed. The proposed alternative for springs is the installation of stormwater filters for the treatment of HE. For possible silver contamination in the vicinity of SWSC cut, an alternative is proposed consisting of a focused investigation of that area followed by limited excavation, if the results indicate excavation is required.

The proposed alternatives discussed above collectively constitute the proposed final remedy for 16-021(c)-99, with the exception of regional groundwater, which is deferred to the regional groundwater CMS.

Table ES-1
Summary of Proposed Action

SWMU Number	SWMU Description	HSWA	Radionuclide Component	Proposed Action	Rationale for Recommendation
16-021(c)-99	Outfall and drainage channel	Yes	No	Remediation	Contamination exceeds MCSs and poses the potential to adversely affect regional groundwater.

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1.0 INTRODUCTION

The purpose of this corrective measures study (CMS) report is to summarize all CMS activities and results to date; evaluate alternatives for remediation; and propose corrective measures, media cleanup standards (MCSs), and an associated monitoring program for Los Alamos National Laboratory (the Laboratory, or LANL) solid waste management unit (SWMU) 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon.

The Laboratory is a multidisciplinary research facility owned by the US Department of Energy (DOE) and managed by the University of California. The Laboratory is located in north-central New Mexico, approximately 60 mi northeast of Albuquerque and 20 mi northwest of Santa Fe. The Laboratory site covers 43 mi^2 of the Pajarito Plateau, which consists of a series of fingerlike mesas separated by deep canyons that contain perennial, ephemeral, and intermittent streams that run from west to east. Mesa tops range in elevation from approximately 6200 to 7800 ft. The eastern portion of the plateau stands 300 to 900 ft above the Rio Grande.

The Laboratory's Risk Reduction and Environmental Stewardship–Remediation Services (RRES-RS) project is involved in a national effort by the DOE to clean up facilities that were formerly involved in weapons production. The goal of the RRES-RS project is to ensure that the DOE's past operations do not threaten human or environmental health and safety in and around Los Alamos County, New Mexico.

RRES-RS, in coordination with the New Mexico Environment Department (NMED), has been actively investigating and assessing the contamination present in SWMU 16-021(c)-99 and adjacent Cañon de Valle and Martin Spring Canyon since 1990. Thus, the corrective measures and MCSs proposed in this CMS are the results of a series of extensive site-characterization and investigation efforts conducted by RRES-RS under the ongoing facility-wide investigation and the Resource Conservation and Recovery Act (RCRA) corrective action (CA) process.

1.1 Purpose and Regulatory Context

Under the RCRA CA Program (55 FR 30798; 61 FR 19432), the two main objectives of corrective action at a hazardous waste management facility are (1) to evaluate facility characteristics in relation to the nature and extent of the contaminant releases; and (2) to identify, develop, and implement appropriate corrective measure(s) to protect human health and/or the environment. At the Laboratory, the University of California and the DOE have instituted a CA program to protect human health and the environment from any potential releases of Laboratory-related hazardous waste or hazardous constituents.

For SWMU 16-021(c)-99, the CA investigation is taking place in accordance with both RCRA/HSWA requirements, as specified in Module VIII of the Laboratory's Hazardous Waste Facility Permit (EPA 1990, 01585). Module VIII was issued to the Laboratory by the EPA on May 23, 1990, and modified on May 19, 1994 (EPA 1994, 44146).

For contaminants released from SWMU 16-021(c)-99 into adjacent Cañon de Valle and Martin Spring Canyon, CA is being implemented in phases. These phases—preliminary RCRA facility assessment (RFA), RCRA facility investigation (RFI), interim measures (IMs), corrective measures study (CMS), and corrective measures implementation (CMI)—are outlined in EPA RCRA CA guidance and are consistent with the EPA's traditional approach to executing RCRA CA (55 FR 30798, 61 FR 19432).

Now actively in the CMS phase of RCRA CA, SWMU 16-021(c)-99 is a high-priority site for the RRES-RS project's CA program. SWMU 16-021(c)-99's pervasive contamination and complex hydrogeology have drawn out site remediation and characterization efforts into an extensive process. Table 1.1-1 presents all scheduled, ongoing, or completed RCRA-driven corrective actions for SWMU 16-021(c)-99 to date.

1.2 Facility Location and Background

Technical Area-16 (TA-16) is located in the southwest corner of the Laboratory (Figure 1.2-1). It covers 2410 acres, or 3.8 mi^2. The land is a portion of that acquired by the Department of Army for the Manhattan Project in 1943. TA-16 is bordered by the Bandelier National Monument along State Highway 4 to the south and the Santa Fe National Forest along State Highway 501 to the west. To the north and east, it is bordered by TA-8, -9, -11, -14, -15, -37, and -49. TA-16 is fenced and posted along State Highway 4. Water Canyon, a 200-ft-deep ravine with steep walls, separates State Highway 4 from active sites at TA-16. Cañon de Valle forms the northern border of TA-16.

The administrative boundary or focus area for the CMS is shown in Figure 1.2-2. The boundary runs along State Highway 501, follows the basin drainage divide between Water Canyon and Cañon de Valle to the south, and incorporates Martin Spring Canyon, Fishladder Seep Canyon, and Cañon de Valle to the north. The administrative boundary includes all the surface and subsurface terrain within the boundary except (1) other SWMUs, and (2) Fishladder Seep and its sub-basin. These potential contaminant sources are being addressed within the scope of other RRES-RS activities.

The administrative boundary is designed to incorporate the major source of contaminants in the basin, the former TA-16-260 outfall, and associated fate and transport pathways within Cañon de Valle and Martin Spring basins. Monitoring and data analysis within the administrative boundary will support decisions for conducting remedial activities at other potential contaminant source locations as well.

1.3 CMS Report Overview

This CMS report proposes corrective measures and associated monitoring programs for remediating SWMU 16-021(c)-99 surface and shallow subsurface soils within the outfall source area, as well as alluvial sediments, surface water, alluvial groundwater, and springs located within Cañon de Valle and Martin Spring Canyon. Regional groundwater and the associated deep vadose zone are not addressed in this report, but will be addressed by a second CMS focusing on these areas. The scope of the CMS with respect to the shallow system components of the site is presented in Table 1.3-1.

The CMS uses the following process to develop MCSs: review of the Phase III RFI (LANL 2003, 77965) chemicals of potential concern (COPCs) to identify CMS COPCs, review of Phase III RFI risk assessment results, identification of applicable or relevant and appropriate requirements (ARARs), and identification or calculation of MCSs for each COPC. According to EPA guidance, use of ARARs is a CERCLA requirement that is also suited to the development of MCSs under RCRA (EPA 1998, 80120).

The proposed ARARs for groundwater, surface water and springs consist of New Mexico Water Quality Control Commission (NMWQCC) human health standards for groundwater, 20 New Mexico Administrative Code (NMAC) 6.2.3103, Parts A and B. Under this ARAR, all site waters are treated as groundwater because of their interchangeability in the site hydrology. For alluvial sediment, the ARARs consist of NMAC 6.2.4103 A and B. These ARARs contain both risk-based and standards-based

Table 1.1-1
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
1990	RCRA facility assessment (RFA) (LANL 1990, 07512)	RFA initial site assessment is completed. Prior studies are summarized, and document extensive contamination in TA-16-260 sump water.
July 1993	Phase I RFI work plan—site characterization plan (LANL 1993, 20948)	“RFI Work Plan for Operable Unit 1082” is issued. Plan addresses Phase I sampling at SWMU 16-021(c).
May 1994	First addendum to Phase I RFI work plan (LANL 1994, 52910)	“RFI Work Plan for Operable Unit 1082, Addendum 1” is issued. Plan is approved by NMED in January 1995.
April 1995–November 1995	Phase I RFI site characterization	Phase I RFI is implemented, including Phase I investigation of SWMU 16-021(c)-99.
1995–1996	Interim action (IA)—best management practices (BMPs) (LANL 1996, 53838)	Sandbag dam and diversion pipe are installed upgradient from the former high explosives (HE) pond; sandbag dam is located east of the parking lot behind TA-16-260; geotextile fabric matting is placed in former HE pond area; eight hay bale check dams are placed within the SWMU drainage between the rock dam and the 15-ft-high cliff.
September 1996	Phase I RFI report (LANL 1996, 55077)	Phase I RFI report is issued. Data show widespread HE contamination at SWMU 16-021(c)-99, extending from the 260 outfall discharge point down to the sediment and waters of Cañon de Valle. Report is approved by NMED in March 1998.
September 1996	Phase II RFI work plan (part of LANL 1996, 55077)	Phase II RFI work plan is included in Phase I RFI report. Report is approved by NMED in March 1998.
November 1, 1996–December 23, 1996; May 1997–November 9, 1997	Phase II RFI site characterization	Phase II RFI is implemented at SWMU 16-021(c)-99.
September 1998	Phase II RFI report (LANL 1998, 59891)	Phase II RFI report is issued. Data confirm widespread HE contamination extending from the 260 outfall discharge point down to the sediment and waters of Cañon de Valle and show deeper subsurface contamination. Up to 1% total HE is detected in surge bed at a depth of 17 ft. Report documents risk to human health and the environment. Report is approved by NMED in September 1999.
September 30, 1998	CMS plan (LANL 1998, 62413.3)	CMS plan is issued. Alternatives are evaluated. Report includes Phase III RFI sampling plan and describes ongoing hydrogeologic investigations for the site. Report is approved by NMED in September 1999.
October 1998–present	Phase III RFI site characterization	Continued monitoring and sampling are used to characterize the temporal and spatial variability of site contamination; components of the site hydrogeologic system are undergoing continued evaluation.
October 1998–present	CMS—ongoing evaluation of alternatives	CMS is initiated. Series of soil and water corrective measures technologies are evaluated. Investigation of components of the site hydrogeologic system continues.

Table 1.1-1 (continued)
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
September 30, 1999	Addendum to CMS plan (LANL 1999, 64873.3)	Addendum to CMS plan is issued. Addendum expands investigations to include deeper perched and regional groundwater potentially impacted by releases from SWMU 16-021(c)-99.
November 1999	Interim measure (IM) plan—abatement of potential risks at the source area (LANL 2000, 64355.4)	IM plan is issued. Plan specifies removal of the highly contaminated soil and tuff identified in the 260 outfall drainage channel. Plan is approved by NMED in April 2002.
November 12, 1999–November 18, 2000	Abatement of ongoing risks is initiated	TA-16-260 IM begins. Activities are interrupted by Cerro Grande fire. Initial stage of project is completed in November 2000.
January 7, 2000	Contained-in determination (NMED 2000, 64730)	NMED memo of contained-in determination is sent to the Laboratory (J. Brown) and DOE-ER (T. Taylor).
April 4, 2000	Designation of area of contamination (NMED 2000, 70649)	NMED designates SWMU 16-021(c)-99 an area of contamination. Purpose of designation is to allow material from entire drainage area to be excavated, processed, and segregated without invoking RCRA land disposal restrictions. Excavated material considered potentially hazardous waste is staged in covered piles within area-of-contamination boundary.
June 5, 2000	In situ blending authorization (NMED 2000, 67094)	NMED authorizes in situ blending in memo sent to the Laboratory and DOE. To ensure worker health and safety during the IM and after, settling pond soil is robotically blended in situ with clean or low HE concentration material to reduce maximum concentration of settling pond sediment to below-reactive limit.
August 4, 2001–October 13, 2001	Abatement of ongoing risks is completed	Remobilization and removal of isolated areas containing more than 100 mg/kg of RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine) is completed. Waste disposal stage of project is completed.
July 2002	260 outfall IM report (LANL 2002, 73706)	IM results are presented in IM report. Report is approved by NMED in January 2003.
March 2003	Revision 1 to CMS plan addendum—evaluation of alternatives (LANL 2003, 75986.2)	Addendum to CMS plan is updated. Investigation into deeper perched and regional groundwater and deeper vadose zone potentially impacted by releases from SWMU 16-021(c)-99 is expanded further. Plan is approved by NMED in March 2003.

Table 1.1-1 (continued)
Chronology of RRES-RS Activities at SWMU 16-021(c)-99

Date	Activity (Reference)	Synopsis of Activity
September 2003	Phase III RFI report (LANL 2003, 77965)	Report focuses on investigations into the surface water, alluvial groundwater, canyon sediment, and springs in Cañon de Valle and Martin Spring Canyon. Report includes analysis of data generated since Phase II RFI report (post-1998) and baseline risk assessments using a comprehensive database of both pre- and post-1998 data and emphasizes greater understanding of site hydrogeology and contaminant behavior. Report presents human health baseline risk assessments, one for source area, one for a selected reach of Cañon de Valle. In addition, a baseline ecological risk assessment is performed for that reach of Cañon de Valle.
November 2003	CMS report for alluvial system corrective measures evaluated/selected (this report)	CMS report for SWMU 16-021(c)-99 alluvial system. Report is a companion document to Phase III RFI report and relies heavily on the understanding of site hydrogeology and contaminant behavior outlined in that document. Report evaluates potential remedial technologies for each media and proposes appropriate technologies.
March 2006	CMS report issued for regional groundwater system—corrective measures evaluated/selected	CMS report for SWMU 16-021(c)-99 deep perched and regional groundwater system will be issued. Data will be used to support risk assessments that include the deep perched saturated zone and the regional aquifers as pathways.
Pending	Corrective measures implementation (CMI)	Final evaluation, selection, and design of selected treatment technology for impacted site media will be presented. CMI will include refinements to long-term monitoring program and criteria for establishing the attainment of media cleanup standards.
Pending	Long-term monitoring	Verification that remedies are/were effective.

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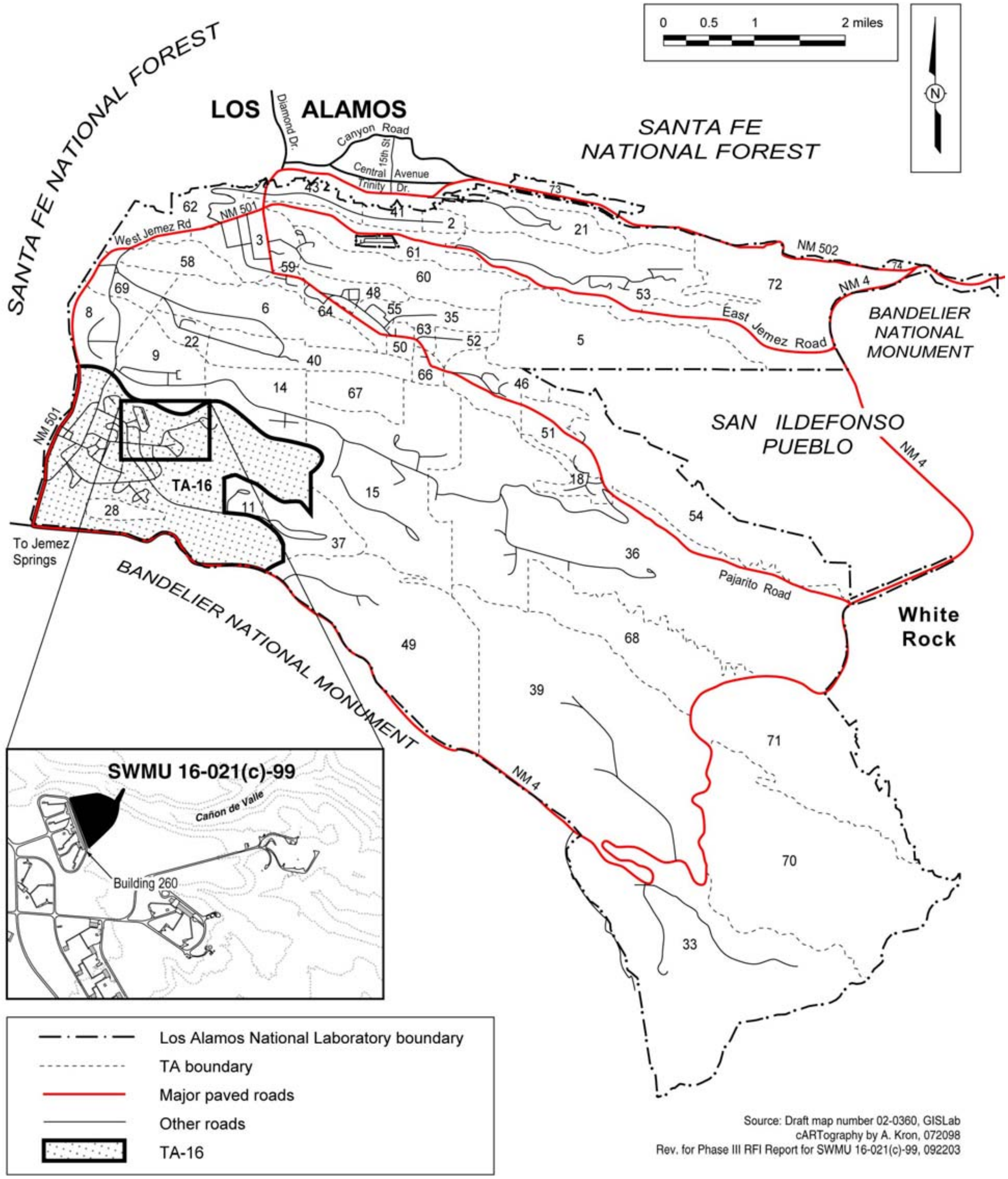

Figure 1.2-1. Location of TA-16 with respect to Laboratory technical areas and surrounding landholdings; Building 260 is also shown

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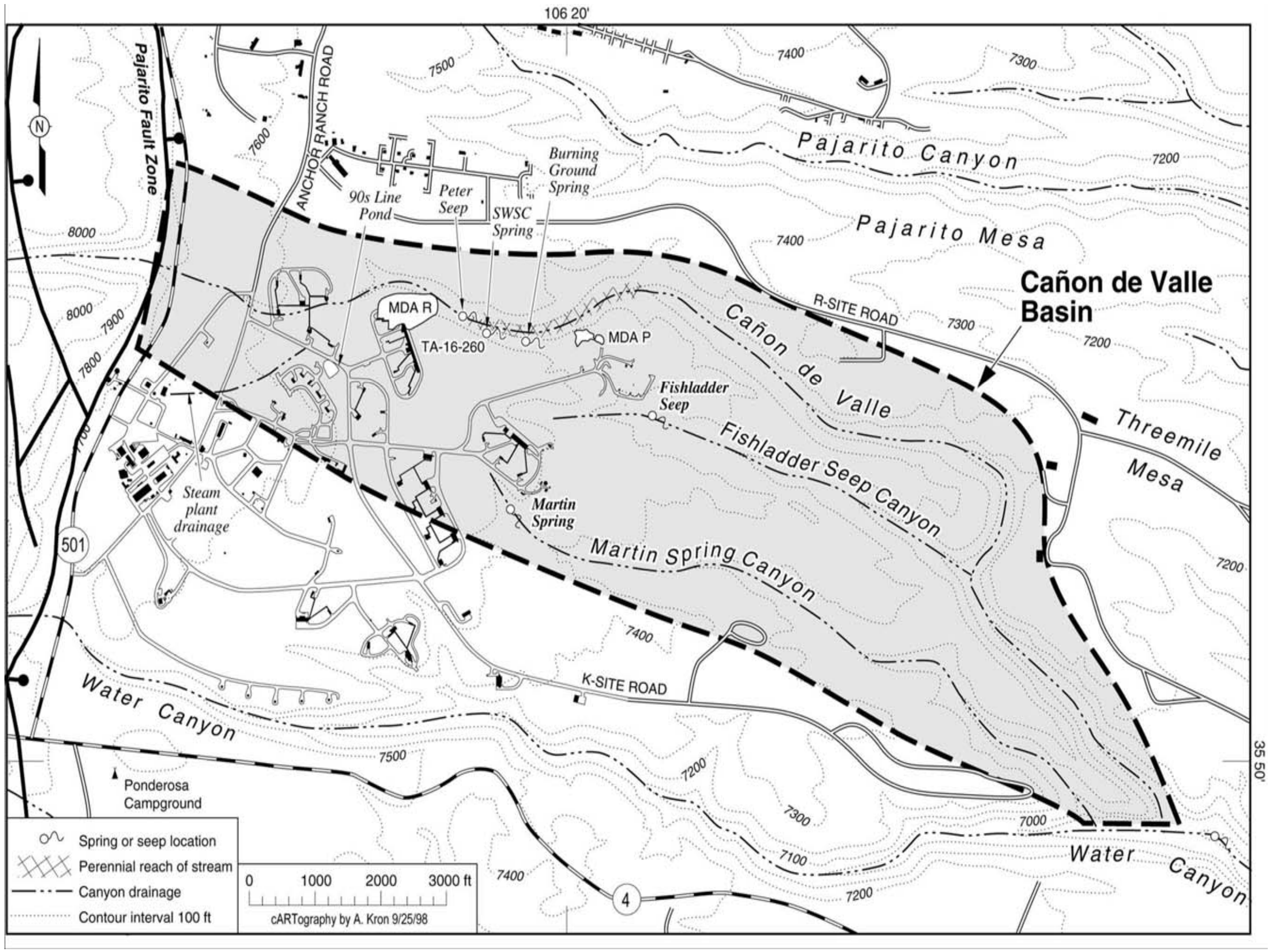

Figure 1.2-2. Administrative boundary for the SWMU 16-021(c)-99 CMS

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Table 1.3-1
Scope of CMS Report and Components of SWMU 16-021(c)-99

Conceptual Model Component	CMS Scope
Outfall and pond surge beds	SWMU 16-021(c)-99 outfall area and settling pond 17-ft surge bed addressed in this report
Mesa vadose zone	Inaccessible to direct human and ecological exposure, though important in overall contaminant transport; addressed as part of springs component.
Alluvial sediments	Both Cañon de Valle and Martin Spring Canyon alluvial sediments addressed in this CMS
Springs	Springs in Cañon de Valle and Martin Spring Canyon addressed in this CMS
Surface water	Perennial surface water addressed in this CMS
Alluvial groundwater	Addressed in this CMS for Cañon de Valle (within approximately 7000 ft east of outfall) and Martin Spring Canyon
Deep vadose zone with perched groundwater table	Not addressed in this CMS; will be addressed by regional aquifer CMS
Regional aquifer	Not addressed in this CMS; will be addressed by regional aquifer CMS

(numerical standards) provisions from which the MCSs were derived. For the outfall source area, MCSs were derived from the Phase III RFI risk assessment results.

The risk-based provisions in the ARARs are dependent on the point of withdrawal of site waters and the human exposure scenario. Based on the future industrial use of the site and the presence of regional groundwater, two potential points of withdrawal for site waters were identified: incidental water ingestion associated with industrial use, and residential drinking water use at the nearest municipal well. The latter point of withdrawal is applicable to shallow site groundwater because of its potential to infiltrate to regional groundwater.

Risks associated with to shallow site water were calculated during the Phase III RFI and showed acceptable risk for a trail user; under the risk-based provisions of the ARARs, these results imply that remediation of site waters is not required. However, a risk assessment for the municipal well scenario has not been completed to date, but is planned for the regional groundwater CMS. This will result in a risk-based MCSs for those CMS COPCs not previously covered under existing numerical standards, including RDX and trinitrotoluene[2,4,6-] (TNT).

Although regional groundwater is addressed in a second CMS, the relationship between the shallow and deep systems and the contamination effects on the site's deeper systems are considered in the evaluation of alternatives for the shallow system.

The preferred alternative identified in this CMS meets the following criteria:

- be protective of human health and the environment,
- attain the MCS for each media within a compliance time frame (CTF),
- provide source control to reduce or eliminate further releases of COPCs that are potentially threatening to human health and the environment, and
- comply with the standards for management of wastes generated as part of the CMI.

This CMS is organized into 8 sections. Section 1 provides an introduction and regulatory overview. Section 2 provides a site history. Section 3 presents a summary of current site conditions and the site conceptual model (SCM). Section 4 presents the MCSs proposed for the site. Section 5 presents the preliminary screening of remedial technologies to be used at the site. Section 6 presents the assembly and evaluation of corrective measures alternatives. Section 7 provides a summary of the preferred alternatives, their associated monitoring plans, and the uncertainties in the SCM that may require further definition as part of the CMI. Section 8 provides references. Appendix A is a list of acronyms and a glossary. Appendix B provides summary tables of Phase III RFI COPCs. Appendix C provides life cycle cost estimates for the corrective measures alternatives. Appendix D presents the public involvement plan (PIP).

2.0 SITE HISTORY

2.1 History of TA-16 Operations

TA-16 was established to develop explosive formulations, to cast and machine explosive charges, and to assemble and test explosive components for the US nuclear weapons program. Present-day use of this site is essentially unchanged, although facilities have been upgraded and expanded as explosives and manufacturing technologies have advanced.

The TA-16-260 facility, which has operated since 1951, is an HE-machining building that processes large quantities of HE. Machine turnings and HE washwater are routed as waste to 13 sumps associated with the building. Historically, the sumps were routed to the TA-16-260 outfall, where, historically, discharges as high as several million gal. per year occurred (LANL 1994, 76858).

In the late 1970s, the TA-16-260 outfall was permitted to operate by the EPA as EPA Outfall No. 05A056 under the Laboratory's National Pollutant Discharge Elimination System (NPDES) permit (EPA 1994, 12454). The last NPDES permitting effort for this TA-16-260 outfall occurred in 1994. The NPDES TA-16-260 outfall was deactivated in November 1996; it was officially removed from the Laboratory's NPDES permit by the EPA in January 1998. This waste stream is currently managed by pumping the sumps and treating the water at the TA-16 HE wastewater plant, which was completed in 1997.

Both the outfall and the drainage channel below the outfall are contaminated with HE and barium. The sumps and drainlines of this facility are designated as SWMU 16-003(k), and the outfall and drainage are designated as SWMU 16-021(c) in Module VIII of the Laboratory's Hazardous Waste Facility Permit (EPA 1990, 01585). Following the Laboratory's SWMU-consolidation effort, the two SWMUs are now collectively referred to as SWMU 16-021(c)-99. Prior to the Phase I RFI and Phase II RFI at SWMU 16-003(k) and 16-021(c), known contaminants included barium, RDX; TNT; and cyclotetramethylenetetranitramine (HMX). Suspected contaminants included other HE compounds, additional inorganic chemicals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and uranium.

2.2 SWMU Description

SWMU 16-021(c)-99 is a consolidation of two SWMUs: SWMU 16-003(k) and SWMU 16-021(c).

The part of SWMU 16-021(c)-99 that is designated SWMU 16-003(k) comprises 13 sumps and approximately 1200 ft of associated drainlines or troughs that ran from the HE machining building (TA-16-260) to the outfall. HE-contaminated water flowed from the sumps into the concrete drainlines and ultimately to the TA-16-260 outfall, located approximately 200 ft east of Building 260. Building 260 is located on the north side of TA-16 (Figure 2.2-1). The structure was originally built in 1951, with minor modifications made to the structure at a later date. SWMU 16-003(k) is not addressed in this CMS. Limited characterization was conducted as part of the Phase I RFI (LANL 1996, 55077).

The part of SWMU 16-021(c)-99 that is designated SWMU 16-021(c) comprises a well-defined upper drainage channel fed directly by the TA-16-260 outfall, a settling pond, and a lower drainage channel leading to Cañon de Valle. The settling pond, excavated during the 2000 IM, is approximately 50 ft long and 20 ft wide and was located within the upper drainage channel, approximately 45 ft below the outfall.

The drainage channel runs approximately 600 ft northeast from the outfall to the bottom of Cañon de Valle. A 15-ft near-vertical cliff is located approximately 400 ft from the outfall and marks the break between the upper and lower drainage channels.

A settling pond approximately 55 ft long is also part of SWMU 16-021(c)-99. HE-contaminated water from the outfall entered the settling pond about 40 ft from the TA-16-260 outfall. The settling pond and outfall drainage channel area were the primary source for the contamination identified in downgradient components of the SWMU 16-021(c)-99 hydrogeologic system. An IM was conducted during 2000 and 2001, and more than 1300 yd^3 of contaminated soil were excavated from the settling pond and channel. Approximately 90% of the HE that existed in the SWMU 16-021(c)-99 source area was removed during the IM (LANL 2002, 73706). The residual contamination in the TA-16-260 outfall source area is addressed in this report.

2.3 Adjacent Land Use

The land adjacent to the outfall site is dedicated to continued Laboratory operations. Other SWMUs located in the vicinity of the outfall are shown on Figure 2.3-1 and described below.

- Material Disposal Area (MDA) R (SWMU 16-019)—This MDA is located northwest (upcanyon) of the TA-16-260 outfall area. MDA R was constructed in the mid-1940s and used as a burning ground and disposal area for waste explosives and possibly other debris. Potential contaminants at this MDA include HE, HE byproducts, and metals (particularly barium). Use of the site was discontinued in the early 1950s. Soil removal and site investigations were conducted at MDA R following the Cerro Grande fire (LANL 2001, 69971.2), but barium and HE residual contamination are still present.

- The Burning Ground SWMUs [16-010(b), (c), (d), (e), (f), (h)-99, 16-028(a), and 16-016(c)-99]—These SWMUs are located on a level portion of the mesa in the northeast corner of TA-16. The burning ground was constructed in 1951 for HE waste treatment and disposal. Over the years, hundreds of thousands of pounds of HE and HE-contaminated waste material have been burned at this location. The remaining noncombustible material was subsequently placed in MDA P (SWMU 16-018), north of the burning ground (through 1984), or taken to TA-54 for disposal (1984 to present). A barium nitrate pile was located at the TA-16 Burning Ground for many years. Site investigations have been conducted at several of these SWMUs (LANL 2003, 76876). Information was also obtained from investigations conducted between 1997 and 2002 at Flash Pad 387 and the consolidated SWMU 16-016(c)-99. Flash Pad 387 underwent clean closure and the sites representing consolidated SWMU 16-016(c)-99 underwent voluntary corrective action (VCA) concurrently with the MDA P clean closure.

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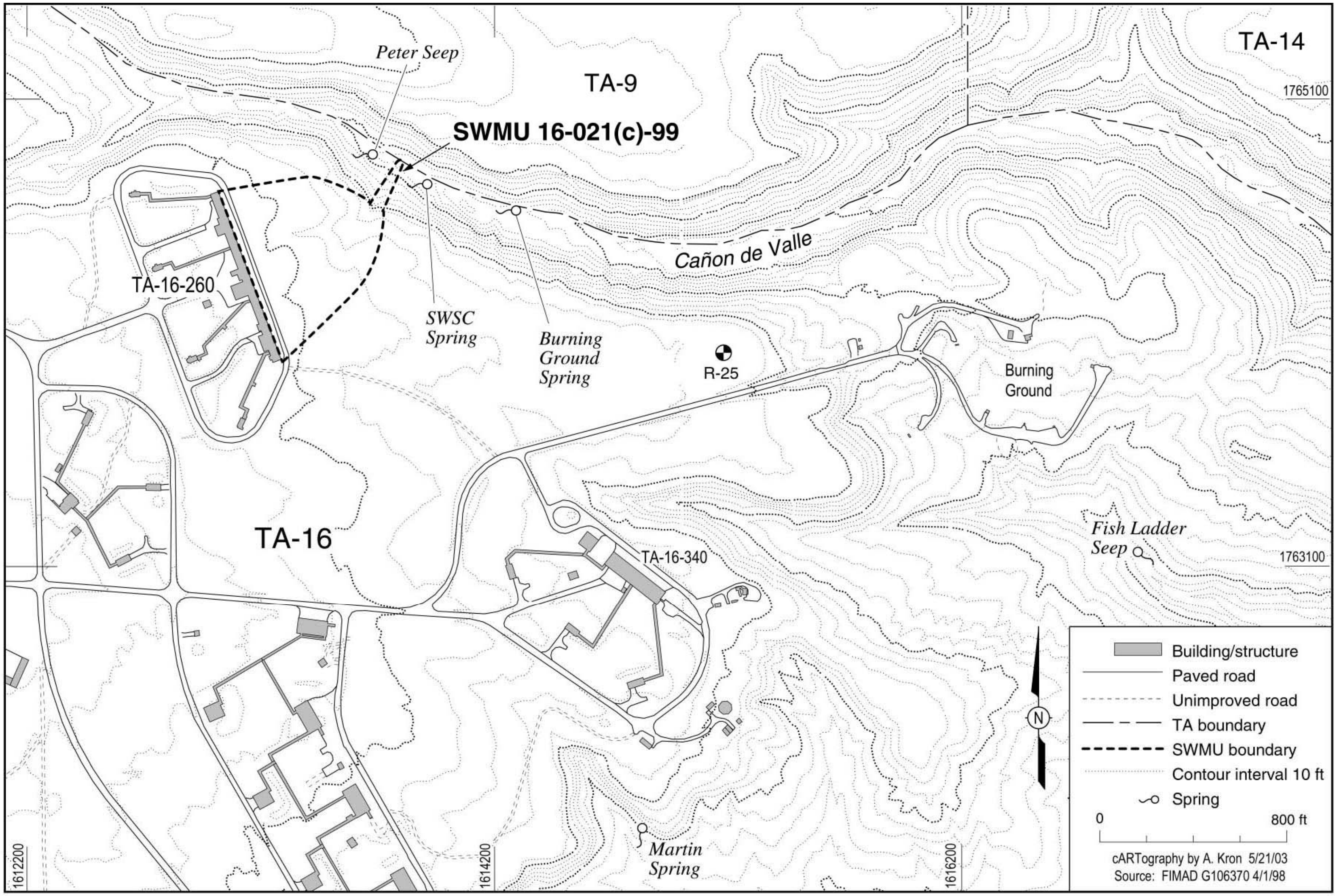

Figure 2.2-1. Location of SWMU 16-021(c)-99 and associated physical features

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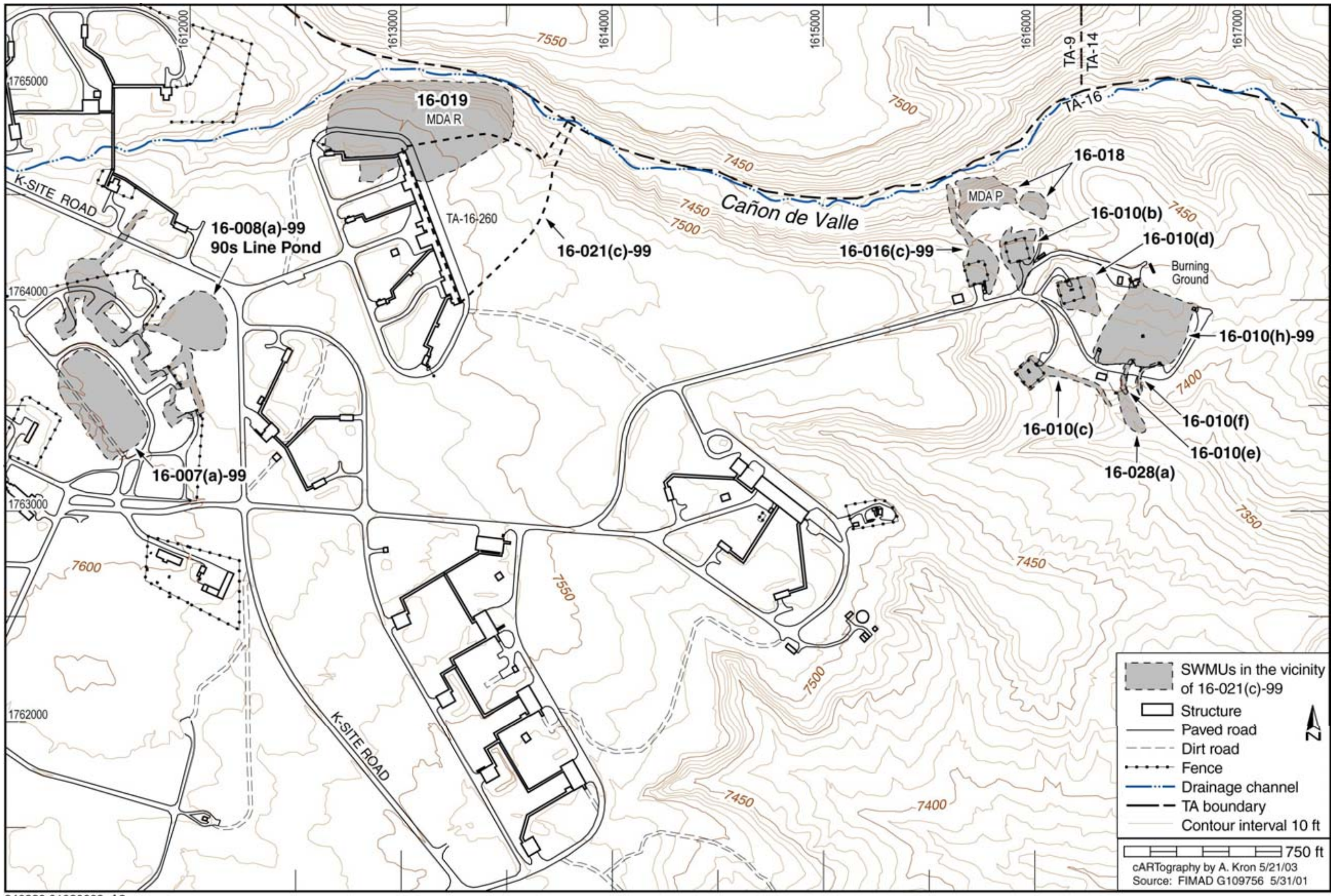

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Figure 2.3-1. SWMUs in the vicinity of SWMU 16-021(c)-99

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MDA P (SWMU 16-018)—This MDA contained wastes from the synthesis, processing, and testing of HE; residues from the burning of HE-contaminated equipment; and construction debris. HE waste-disposal activities at this site started in the early 1950s and ceased in 1984. The site is located on the south slope of Cañon de Valle. Removal of hazardous waste and hazardous waste residues was recently completed at MDA P to support closure and entailed the removal of approximately 55,000 yd^3 of soil and debris (LANL 2003, 76876).

The 90s Line Pond portion of consolidated SWMU 16-008(a)-99. The 90s Line Pond is an inactive unlined settling pond located a few hundred ft southwest of Building 260. The pond received HE, barium, and organic chemicals from machining operations discharge from TA-16-89, -90, -91, -92, and -93. Visible HE has been removed from a site east of the pond.

Historically, these SWMUs contained contaminants similar to those found in SWMU 16-021(c)-99. Moreover, these SWMUs are located within the Cañon de Valle drainage.

2.4 Previous Environmental Investigations

Sampling and analysis data have been collected for the outfall [SWMU 16-021(c)-99] since the early 1970s and have indicated substantially elevated HE contamination in the sediment, the outfall, the outfall settling pond and drainage channel water. Concentrations of up to 27 wt% of HMX and RDX have been documented in the area of the settling pond. The data showed HE contamination extending from the discharge point to Cañon de Valle (Baytos 1971, 05913; Baytos 1976, 05920). These historical data have been summarized in the Phase I and II RFI reports for SWMUs 16-003(k) and 16-021(c) (LANL 1996, 55077; LANL 1998, 59891).

This section summarizes the data from the Phase I and II RFIs and the IM. The Phase III RFI data are summarized in section 3, “Current Site Conditions.” All available data for the site were used to build an SCM to support CMS activities.

2.4.1 Source Area Investigation and IM

The Phase I RFI primarily consisted of surface sampling and sample analysis within the drainage area. The Phase II RFI (LANL 1998, 59891) included surface sampling and analysis of surface and near-surface material within the drainage and sampling 13 boreholes (BHs) drilled to depths between 17 and 115 ft in and near the drainage. The Phase II RFI also included extensive field-screening for RDX and TNT using immunoassay methods, and sampling and analysis for HE and other chemicals.

Elevated concentrations of HE and barium were reported within drainage channel soils from the surface to the soil/tuff interface. Soil thicknesses were approximately 5.5 ft in the settling pond area and drainage at a distance of about 40 to 95 ft downstream from the outfall, and they were approximately 1 ft at a distance of 300 to 400 ft downstream from the outfall. Phase I and Phase II surface sampling and analyses showed that surface contamination did not extend laterally beyond the reasonably well-defined drainage.

Subsurface sampling and analyses indicated HE concentrations decreased rapidly below the soil/tuff interface. However, up to 1000 mg/kg of HE were detected in tuff within the uppermost tuff unit (Unit 4 of the Tshirege Member of the Bandelier Tuff, Qbt4) beneath the settling pond area. Approximately 1% HE was reported under the settling pond at a depth of 17 ft within a surge bed of Unit 4 of the Tshirege Member of the Bandelier Tuff (LANL 1998, 59891). Below this surge bed, HE was detected sporadically and at much lower concentrations (less than 5 mg/kg). However, thin surge bed deposits were reported in a borehole drilled into the center of the settling pond during the IM, at depths of 40 ft and 46 ft below ground surface (bgs), indicating multiple potential transmissive zones at depth (LANL 2002, 73706).

HE and barium are the principal contaminants found at the outfall, although several other metals, including cadmium, chromium, copper, lead, nickel, vanadium, and zinc, are consistently detected above background in the drainage. Other organic compounds (SVOCs, VOCs, and polychlorinated biphenyls) were also detected in one to four samples each. Details and results from the Phase I and Phase II RFIs are presented in two RFI reports (LANL 1996, 55077; LANL 1998, 59891). Phase III RFI (LANL 2003, 77965) results for the source area, including post-IM sampling results, are summarized in section 3.

From the winter of 2000 through the summer of 2001, an IM was conducted to remove contaminated material from the TA-16-260 outfall drainage area. The IM successfully removed the bulk of contamination from the outfall drainage channel. More than 1300 yd^3 of contaminated soil were excavated and disposed of at off-site facilities. Of this amount, more than 200 yd^3 of characteristic hazardous waste for reactivity (D003), which contained HE in concentrations of approximately 2 wt%, were treated by the selected disposal facility prior to disposition. An IM report for SWMU 16-021(c)-99 details the IM activities and results (LANL 2002, 73706).

2.4.2 Alluvial System Investigations

The Phase II RFI sampling in the Cañon de Valle alluvial system included the collection of surface and subsurface sediment, three pairs of overbank sediment samples, filtered and unfiltered surface water, and one quarterly round of filtered and unfiltered alluvial groundwater from five alluvial groundwater wells. These samples were collected during three different investigations in 1994, 1996, and 1997/1998.

Barium was the most abundant inorganic contaminant in sediment. For the surface samples, barium ranged from 6.3 mg/kg to 40,300 mg/kg. Other inorganic chemicals that were consistently measured above background include cadmium, chromium, copper, lead, nickel, vanadium, and zinc. Several HE were detected: the amino-dinitrotoluenes (A-DNTs), HMX, nitrobenzene, 3-nitrotoluene, RDX, 1,3,5-trinitrobenzene (TNB), and TNT. The two HE compounds highest in abundance and concentration were HMX and RDX. Their maxima were 170 mg/kg and 42 mg/kg, respectively.

Surface water samples and alluvial groundwater samples from five alluvial wells and Peter Seep were collected in Cañon de Valle. Filtered/unfiltered sample pairs were collected in 1994 and 1997/98; primarily unfiltered samples were collected in 1996. The concentration differences between the filtered and unfiltered samples are small. The inorganic chemicals identified as COPCs in all water were antimony, barium, chromium, lead, manganese, mercury, nickel, vanadium, and zinc. Barium is the most abundant, with concentrations ranging from 99 to 16,000 µg/L. As in the sediment, HE appears to be the other major COPC in Cañon de Valle surface water and alluvial groundwater. The HE COPCs identified were A-DNTs, HMX, nitrobenzene, 2-nitrotoluene, RDX, TNB, and TNT. RDX has the highest concentration, with a maximum concentration of 818 µg/L in surface water. Contaminant concentrations in surface water and groundwater generally decrease downgradient from Peter Seep to the confluence of Cañon de Valle with Water Canyon (LANL 1998, 59891).

Phase III RFI alluvial system investigation results are discussed in section 3, “Current Site Conditions.”

2.4.3 Subsurface System Investigation

The intermediate-depth borehole investigation included drilling five BHs (126 to 207 ft) at locations on the mesa top that were likely to intersect the perched water-bearing zones. The local trend of subunit-subunit contacts is to the north and east. Two of these BHs intersected ephemeral perched water. In each case, the water dissipated in less than 1 month. Analysis of this perched water indicated low concentrations (generally ppb) of HE.

The springs investigation included quarterly sampling of SWSC, Burning Ground, and Martin Springs. Results indicate that all three springs are contaminated with RDX and other HE. Several major cations and anions, including calcium, magnesium, sodium, and boron, were detected. Boron is particularly elevated (1800 μg/L) in Martin Spring. Aluminum, iron, barium, phosphate, and nitrate were also elevated. Although low levels (ppb) of VOCs have been detected in all three springs, detections were sporadic and occurred primarily during the quarterly sampling round of June 1997.

A time-series analysis of the springs data indicates extreme variability in the concentration of constituents (up to a factor of 20 in RDX concentration at Martin Spring). Similarities in element variability and flow-rate changes over time indicate that SWSC Spring and Burning Ground Spring are hydrogeologically related, but that Martin Spring probably represents a different hydrogeological system.

A potassium bromide tracer was deployed at SWMU 16-021(c)-99 during April 1997. A breakthrough of bromide ions was observed in SWSC Spring during August 1997. Bromide breakthrough may also have occurred at Burning Ground Spring during August 1997, but the effects were more subtle, due to partial masking by variability in all the anions (LANL 1998, 59891). These bromide results indicate that the springs are hydrologically connected to the SWMU 16-021(c)-99 source area.

3.0 CURRENT SITE CONDITIONS

This section describes current site conditions with respect to current and future site usage and the current concentration and distribution of COPCs. The latter discussion uses the SCM as a framework. The COPCs identified during the Phase III RFI (LANL 2003, 77965) reflect Phase III RFI organic and inorganic data, and Phase II RFI (LANL 1998, 59891) radionuclide data. Consequently, these COPCs are termed RFI COPCs. Given the results of the Phase III RFI risk assessment, for the CMS, a more restrictive set of CMS COPCs screening rules are applied, including ubiquity of detection, association with known sources as opposed to naturally occurring, and potential adverse effects on regional groundwater. These new screening criteria are described in section 3.2

3.1 Current and Reasonably Foreseeable Future Land Use

According to the Laboratory's comprehensive site plan of 2000 and its 2001 update (LANL 2000, 76100; LANL 2001, 70210.1), future land use at TA-16 is designated as HE research and development and HE testing. Most areas within TA-16 are active sites for the Engineering Science and Application Division of the Laboratory, and construction of new buildings and other facilities in the area is possible. New buildings and facilities are not planned for construction within Cañon de Valle and Martin Spring Canyon.

Accordingly, the Phase III RFI risk assessment assumed an industrial scenario for the outfall source area that incorporated potential exposures for an on-site environmental worker, a trail user, and a construction worker (LANL 1998, 59173). For Cañon de Valle and Martin Spring Canyon, the baseline risk assessment was limited to potential exposures associated with a trail user. Potential exposures and risks associated with extracted regional groundwater will be evaluated and quantified in the groundwater CMS.

3.2 Development of CMS COPCs

For the development of RFI COPCs, the Phase III RFI (LANL 2003, 77965) used a screening process that included state and federal standards and guidelines for water and screening action levels (SALs) for soil, sediment, and tuff. This process yielded a representative list of COPCs that were used for the Phase III RFI risk assessments for alluvial groundwater, surface water, springs, alluvial sediment, and water. For site water, the screening standards and guidelines are presented in Table 3.2-1.

Table 3.2-1
Phase III RFI Screening Standards and Guidelines for Canyon Waters

EPA Region 6 Tap Water Screening Levels
EPA Region 9 Preliminary Remediation Goals
NMWQCC Surface Water Human Health Standards (20 NMAC 6.4.900)
NMWQCC Surface Water Standards for Livestock Watering (20 NMAC 6.4.900)
NMWQCC Surface Water Aquatic Life (Acute) Standards (20 NMAC 6.4.900)
NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103)
NMWQCC Groundwater Standards for Irrigation Use (20 NMAC 6.2.3103)
NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103)
US EPA MCLs

Sources: 20 NMAC 6.2.3103, “Standards for groundwater of 10,000 mg/l TDS concentration or less,” Parts A, B, and C; 20 NMAC 6.4.900, “Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC,” Parts K, L, and M; EPA 2002, 76871; and EPA 2003, 76867.

US EPA MCLs
EPA Region 6 Tap Water Screening Levels
NMWQCC Groundwater Standards for Irrigation Use (20 NMAC 6.2.3103)
NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900)
NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103)
NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103)
NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900)
2003 California DHS Action Level

Sources: 20 NMAC 6.2.3103, “Standards for groundwater of 10,000 mg/l TDS concentration or less,” Parts A, B, and C; 20 NMAC 6.4.900, “Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC,” Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

The Phase III RFI risk assessment showed acceptable risk outside of outfall source area soils. The regional groundwater that lies more than 1000 ft beneath the site, however, is a component of the regional drinking water aquifer. Potential risks to regional groundwater were not assessed in the Phase III RFI, but will be assessed during the regional groundwater CMS, which is to be completed at a later date. Although certain RFI COPCs showed acceptable risks during the Phase III RFI risk assessment, they cannot be eliminated as CMS COPCs because the regional groundwater risk assessment has not yet been completed. These CMS COPCs include RDX, which has been detected in regional groundwater in monitoring well R-25 (LANL 2003, 75986.2) (Figure 3.2-1).

When developing the CMS COPCs, therefore, a measure of judgment must be used to eliminate those RFI COPCs that do not pose an unacceptable risk in the industrial scenario and do not pose a potential risk to regional groundwater. In recognition of these conditions, CMS screening criteria are used that are a subset of the Phase III RFI screening criteria. This subset recognizes both the current and future industrial use of the site as well as the presence of regional groundwater more than 1000 ft below the site.

The CMS COPC screening criteria for site waters are listed in Table 3.2-2. Both EPA maximum contaminant levels (MCLs) and NMWQCC standards are used, specifically NMWQCC, Subpart IV, 4103 A and B, for toxic pollutants at a threshold cancer risk of 10^{-5} and groundwater standards listed in NMWQCC, Subpart III, 3103 A and B. For compounds such as RDX which are not included in NMWQCC standards, and are not toxic pollutants subject to a 10^{-5} cancer risk threshold, EPA screening levels for tap water at a 10^{-6} cancer risk (EPA 2003, 76867) are used. For perchlorate, the ~~California Department of Health Services (DHS)~~ EPA tap water screening level of ~~action level of~~ 3.6~~4~~ µg/L is used. Note that these CMS screening standards are different from the ARARs proposed in section 4 for regional groundwater, from which MCSs are, in part, derived.

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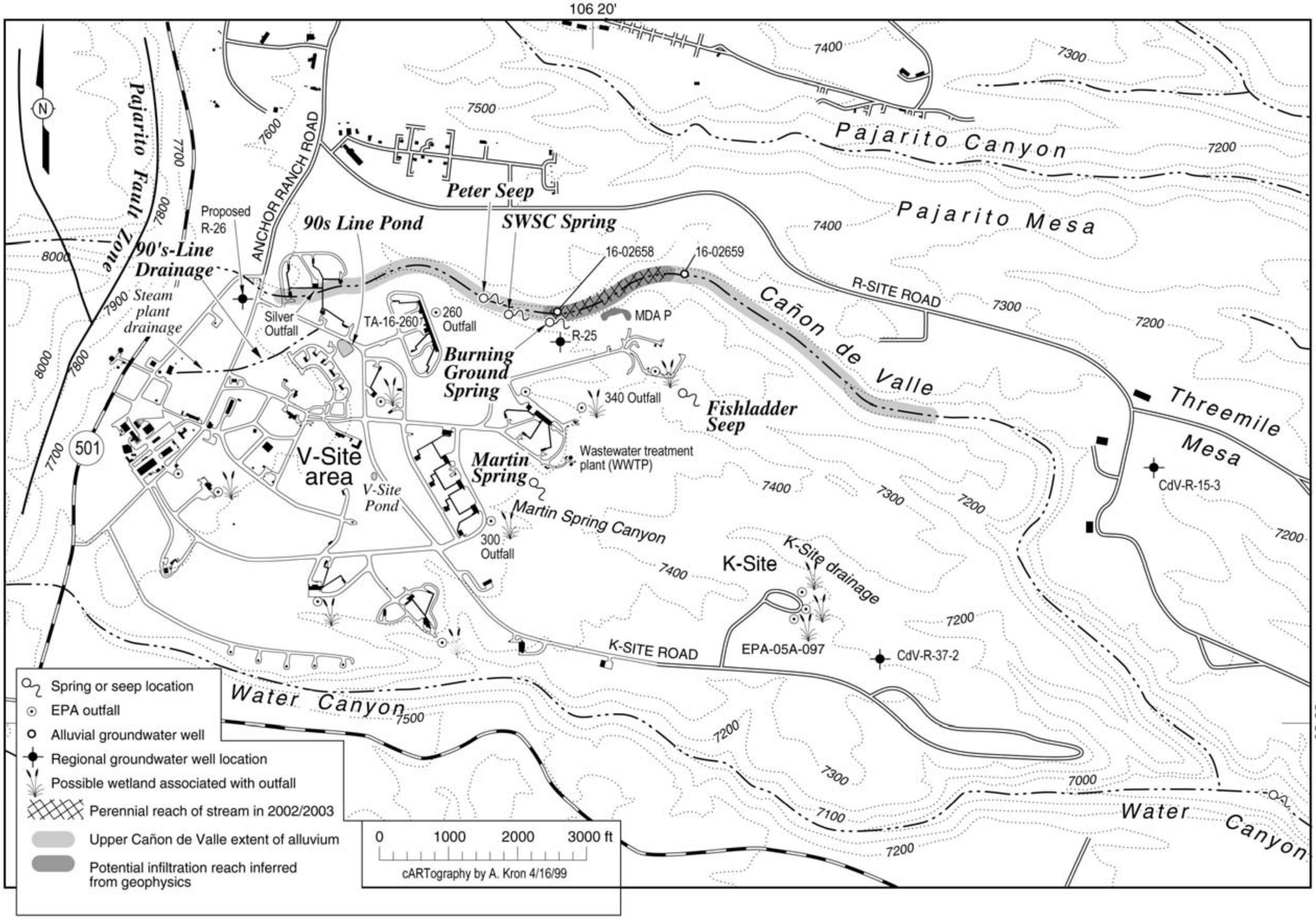

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Figure 3.2-1. Map of surface physical features important for the SCM

Table 3.2-2
CMS COPC Screening Criteria for Canyon Waters

US EPA MCLs
EPA Region 6 Tap Water Screening Levels
EPA Region 9 Preliminary Remediation Goals
NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103)
NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103)
Prevalence of detection
Relationship with an anthropogenic source
Potential for adverse effects on regional groundwater

Sources: 20 NMAC 6.2.3103, "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A and B; EPA 2002, 76871; and EPA 2003, 76867.

After comparison with the regulatory and advisory thresholds cited above, each COPC is then examined with respect to its prevalence and distribution, suspected sources, and potential to adversely affect regional groundwater.

The CMS COPCs identified for Cañon de Valle and Martin Spring Canyon groundwater, surface water, and springs are also carried over to alluvial sediment in these locations, if they were detected in sediment. Such a translation recognizes that alluvial sediment is an integral part of the hydrogeologic system.

The process for canyon waters CMS COPC identification can be summarized as follows:

1. Evaluate the RFI COPCs with respect to the regulatory and advisory thresholds (Table 3.2-2). RFI COPCs that exceed a CMS COPC screening limit solely because the upper detection limit exceeds a CMS COPC screening limit are not included, if the maximum detected value did not exceed a screening limit.

2. Evaluate the COPCs with respect to Phase III RFI risk assessment results, and

3. Evaluate the COPCs with respect to prevalence of detection, association with known anthropogenic sources, and potential to adversely affect regional groundwater.

Outside the outfall source area, this process essentially seeks to identify which chemicals are a concern from the standpoint of potential risk to regional groundwater, given that risks associated with site waters and sediment for an industrial exposure scenario were acceptable. Generally, the process focuses on HE and barium. A related discussion is presented in section 4, where ARARs and MCSs are identified.

Inside the outfall source area, the Phase III RFI COPCs are accepted as CMS COPCs, based on the results of the risk assessment for that area. A discussion of MCSs for this area is also presented in section 4.

3.2.1 Cañon de Valle CMS COPCs

Cañon de Valle surface water CMS COPCs are barium, manganese, silver, RDX, DNX, MNX and TNT. For alluvial groundwater the CMS COPCs are barium, manganese, RDX, MNX and TNT. For alluvial sediment, the CMS COPCs are barium, manganese, silver, RDX, and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.2.2 Martin Spring Canyon CMS COPCs

Martin Spring Canyon alluvial groundwater and alluvial sediment CMS COPCs are barium, manganese, and RDX. In Martin Spring Canyon surface water, manganese and RDX areis a CMS COPCs. In addition, manganese is a CMS COPC for Martin Spring Canyon alluvial groundwater. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.2.3 Springs CMS COPCs

CMS COPCs for springs in Cañon de Valle and Martin Spring Canyon are RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in Appendix B. Supporting data are available in Appendix B and in the Phase III RFI report, Appendix G (LANL 2003, 77965).

3.3 SCM Overview

The SCM attempts to explain the existing distribution of contamination in terms of the contaminant chemical properties, contaminant source, contaminant source release history, the natural hydrogeology of the area, and any other significant factors for, and driving forces behind, contaminant migration. As site investigation activities have proceeded through Phase III, the SCM has been refined.

The SCM, which is depicted in Figure 3.3-1, applies to a roughly triangular area that is bounded on the north by Cañon de Valle, on the south by Water Canyon, on the west by the Pajarito fault zone, and on the east by the confluence of Water Canyon and Cañon de Valle (see Figure 3.2-1, an area of roughly 3 mi^2). This area encompasses other historical contaminant sources, in addition to the TA-16-260 outfall. Thus, the SCM is applicable to all historical contaminant sources at TA-16, particularly those affecting waters. Within the SCM, contaminant transport pathways are associated with tuff, sediment, and waters. Saturated flow systems occur in many different forms, including perennially and intermittently saturated fracture and surge bed systems in tuff, and alluvial groundwater in Cañon de Valle and Martin Spring Canyon, SWSC Spring, Martin Spring, Burning Ground Spring, Fishladder Seep, Peter Seep, and the 90s Line Pond.

Figure 3.3-1 shows the key components of the SCM centered at the outfall source area. These components are the outfall source area and settling pond surge beds (1); the mesa vadose zone extending from the mesa top to the canyon bottom and consisting of fractured and non-fractured tuff (2); canyon alluvial sediments (3); canyon springs (4); canyon surface water (5); canyon alluvial groundwater (6); the vadose zone extending from the canyon bottom to groundwater (termed the deep vadose zone), including the perched groundwater (7); and the regional aquifer (8); as defined by monitoring well R-25. While the regional aquifer was not included in the scope of the Phase III RFI, key results from the installation and sampling of R-25 are important to a general understanding of the SCM. Similarly, while Martin Spring Canyon is not shown on this figure, components such as springs, alluvial sediment, alluvial groundwater, and fracture pathways to deeper zones, apply there as well. Figure 3.2-1 presents a map of the site with respect to physical features that are important in the SCM.

Sampling and analysis results from the RFI (Phases I, II, III) confirm that all components of the SCM are contaminated with HE, although the specific contaminants, their concentrations and the distribution of contamination vary. In addition to HE, other COPCs were also found. This CMS focuses on providing

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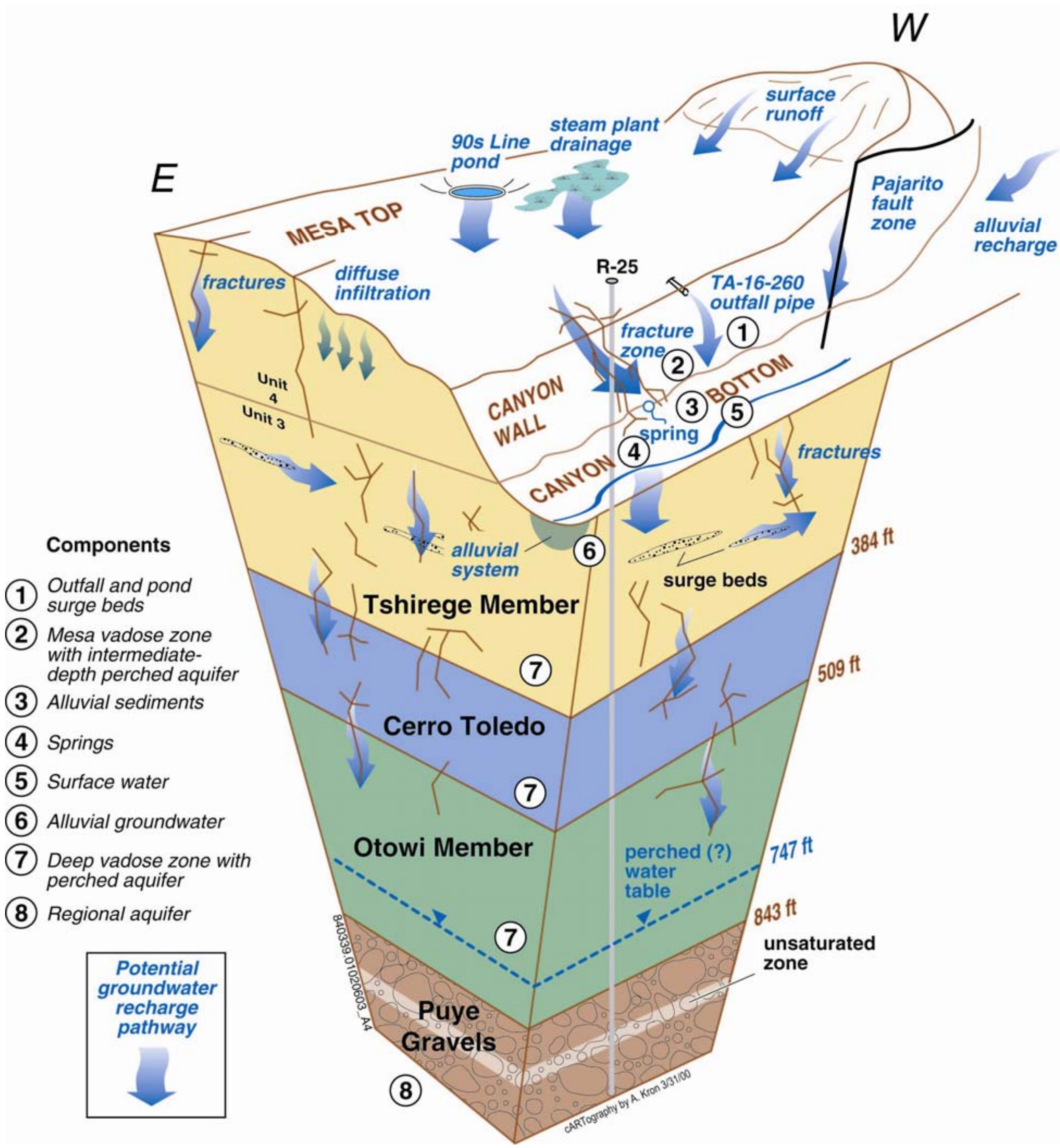

Figure 3.3-1. Hydrogeological and contaminant transport SCM for TA-16 and SWMU 16-021(c)-99

corrective measures for the following contaminated areas within the SCM (see Figure 3.3-1): the SWMU 16-021(c)-99 outfall source area and settling pond surge beds (component 1); the alluvial sediments, springs, surface water, and alluvial groundwater in Cañon de Valle (within approximately 7000 ft east of the outfall); and the sediments, springs, surface water, and alluvial groundwater in Martin Spring Canyon (components 3–6).

3.4 Component 1—Outfall Source Area and Surge Beds

The outfall source area and underlying surge beds are shown as component 1 on the SCM (Figure 3.3-1).

TA-16-260 outfall discharges during the past 50 yr served as a source for the HE and inorganic contamination found throughout the site (LANL 1998, 59891). Prior to the completion of the outfall source area IM, the principal contaminants in TA-16-260 outfall sediment were barium (up to 20,000 ppm) and HE (up to 20 wt%) (LANL 2002, 73706). Historically, discharge from the sumps at Building 260 to the outfall was reportedly as high as several million gal. per yr (LANL 1994, 76858). The outfall source area comprises a well-defined upper drainage channel that was fed directly by the building sumps, a settling pond, and a lower drainage channel that leads to Cañon de Valle. HE contamination in the outfall and drainage area has been recognized since at least 1960, when the first soil samples from the TA-16-260 outfall were analyzed.

The settling pond (and associated soil) which was removed during the 2000 IM (LANL 2002, 73706), measured approximately 50 ft long by 20 ft wide and was located within the upper drainage channel, approximately 45 ft below the TA-16-260 outfall. The drainage channel runs approximately 600 ft northeast from the outfall to the bottom of Cañon de Valle. A 15-ft, near-vertical cliff is located at a distance of approximately 400 ft from the outfall and marks the break between the upper and lower drainage channels. Prior to the IM, the upper part of the drainage channel (above the cliff) contained little vegetation and relatively little accumulated soil and sediment. The lower part of the drainage channel (below the cliff), which is steep and rocky, contained thick pockets of sediment.

Borings installed in the settling pond area revealed the presence of an upper surge bed~~s~~ underlying the settling pond area at a depth~~s~~ of approximately 17 ft bgs, a powder unit at approximately ~~and~~ 45 ft bgs, and a lower surge bed at approximately 90 ft bgs. The lateral extent of these units is not known. In the 17-ft bgs upper surge bed, RDX (4500 mg/kg), HMX (1700 mg/kg), and TNT (3500 mg/kg) were detected (LANL 1998, 59891). The 45-ft bgs powder unit ~~lower surge bed c~~contained RDX (4.4 mg/kg) and HMX (0.45 mg/kg) (LANL 2002, 73706). The concentration of HE did not exceed approximately 5 mg/kg in these lower units. The~~se~~ surge beds (granular tuff with a sand-like texture) possess increased porosity and hydraulic conductivity and represent potential contaminant transport pathways leading away from the outfall source area. ~~The lateral extent and continuity of the surge beds are unknown.~~

The outfall source area was substantially remediated when a large quantity of contaminated soil from the outfall and settling pond area was excavated and removed during the IM (LANL 2002, 73706). The main contaminants were barium, HE (HMX, RDX, and TNT), and HE-degradation products (dinitrotoluenes, A-DNT, and TNB). More than 1300 yd^3 of contaminated material containing an estimated 8500 kg of HE were removed from this area. The surge beds were not excavated during the IM. In general, excavation of the tuff did not prove feasible. Following IM excavation, the area of the settling pond was capped with a low permeability clay-soil mixture. Residual HE and barium contamination remains in pockets of soil distributed along the drainage channel. Although it contains elevated concentrations, the residual contaminated soil's total volume is estimated to be less than 100 yd^3. Figure 3.4-1 shows the outfall area and the location of post-IM sampling points.

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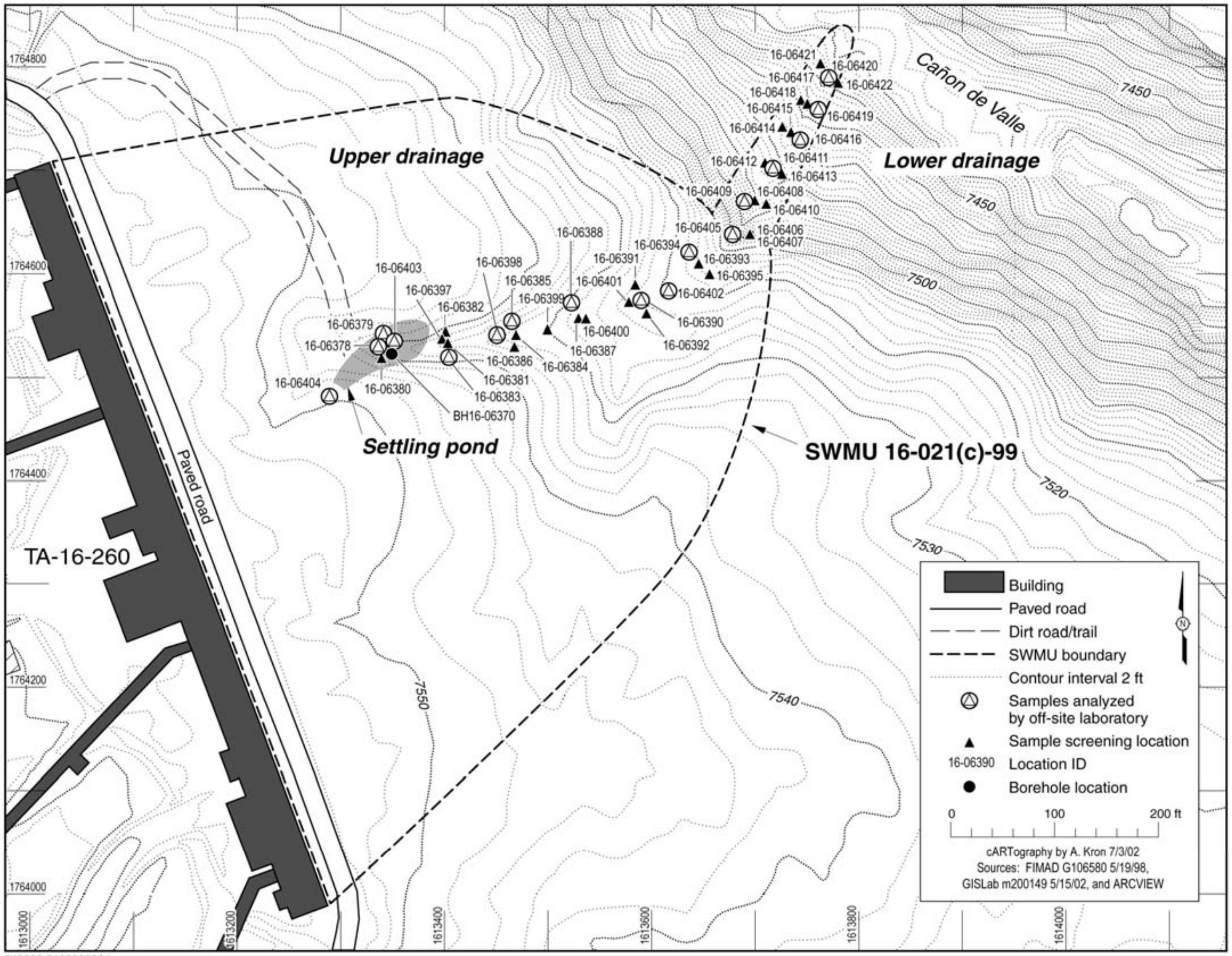

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Figure 3.4-1. Outfall source area and the location of post-IM sampling points

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Table 3.4-1 presents a summary of the sampling results for barium and HE in terms of distribution within post-IM and across soil and tuff. Post-removal concentration ranges, and the location ID for the maximum concentration, are summarized below:

Table 3.4-1
Summary of Barium and HE Post-IM Sampling (2000) Results

COPC	Media	Number of Analyses	Minimum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
Barium	Soil	16	148	3275	8200
	Tuff	4	890	1698	3000
HMX	Soil	16	1.10	465	2000
	Tuff	4	6.80	283	670
RDX	Soil	16	0.50	115	745
	Tuff	4	16.0	327	1,200
TNT	Soil	16	0.13	32.8	270
	Tuff	4	1.00	86.8	330

- Barium remains in concentrations ranging from 148 to 8200 mg/kg (location ID 16-06420) and was detected above the background value (BV) in all but one post-removal analytical sample.
- HMX remains in concentrations ranging from 1.1 to 2000 mg/kg (location ID 16-06409).
- RDX remains in concentrations ranging from 0.5 to 1200 mg/kg (location ID 16-06379).
- TNT remains in concentrations ranging from 0.13 to 330 mg/kg (location ID 16-06379).

Several additional HE compounds, HE-related compounds, and other organic and inorganic compounds are present in the drainage channel, at low concentrations. A complete description of these results can be found in the Phase III RFI report (LANL 2003, 77965).

The Phase III RFI COPCs for the outfall source area are aluminum, arsenic, barium, manganese, thallium, uranium, HMX, RDX, and TNT. As discussed in section 3.2 above, these Phase III RFI COPCs are accepted as CMS COPCs.

3.5 Component 2—Mesa Vadose Zone

The mesa vadose zone is the unsaturated area between the land surface at the top of the TA-16 mesa and the bottom of Cañon de Valle (Figure 3.3-1). This vadose zone is shallower in depth than the deep vadose zone (component 7) and encompasses the flow paths for springs, such as Burning Ground Spring and Martin Spring. In the Phase II RFI report, the principal contaminant flow paths within the mesa vadose zone were hypothesized to be ribbon-like structures (LANL 1998, 59891). This description, while not geologically specific, reflects a mesa vadose zone flow regime that is dominated by surge beds and fractures, both of which possess higher permeability than the surrounding non-fractured tuff. Intermittent groundwater has been encountered in wells within this zone, which the Phase III RFI characterized as an intermediate-depth perched aquifer.

As part of the Phase II RFI, five boreholes were drilled on the TA-16 mesa top in the vicinity of the former outfall, the 90s Line Pond, and the head of Martin Spring Canyon. The boreholes were drilled to depths between 91 and 207 ft and were completed as wells in order to characterize the intermediate-depth perched aquifer and define the nature and extent of contamination. The initial results of the drilling were reported in the Phase II RFI report (LANL 1998, 59891). The Phase III RFI data provide an updated assessment of the mesa vadose zone hydrogeology based on chloride, bromide, and stable isotope tracers; results of hydraulic testing of core; and groundwater chemistry data from samples collected from Well 16-02665 (Martin Spring Canyon) after completion of the Phase II RFI (post-1998).

Tuff samples from the five intermediate-depth boreholes and from others installed within the mesa vadose zone indicate no contamination in the subsurface intervals except in an uncased borehole drilled in the TA-16-260 settling pond (LANL 1998, 59891; LANL 2002, 73706). These results indicate that mesa vadose zone tuff contamination is primarily concentrated beneath the outfall source area. On occasion, however, groundwater samples from the intermediate-depth wells located in Martin Spring Canyon and the 90s Line Pond have contained contaminated groundwater. The latter result indicates the presence of contaminant inventories at the 90s Line Pond. The Martin Spring Canyon result is evidence for heterogeneous flow paths within the mesa vadose zone tuff, likely involving fractures and surge beds.

In terms of transport, tracer and isotopic studies provided information about how rapidly water and contaminants have been transported downward into the mesa from the outfall source areas. Data from key mesa vadose zone wells show that HE contaminants have moved from the top of the mesa down to at least 130 ft bgs in 50 yr or less. The breakthrough of bromide tracer at SWSC Spring and Burning Ground Spring within a few months is additional evidence for rapid contaminant transport along preferential pathways such as fractures and surge beds in the mesa vadose zone. Finally, the presence of HE contamination detected in the approximately 700-ft-bgs perched aquifer at R-25 (LANL 2003, 75986.2), and in the underlying regional aquifer, indicates that these transport pathways extend from the mesa (or canyon bottom) downward to these horizons.

Mesa vadose zone surface fracture mapping and fracture characterization of boreholes were conducted at MDA P (LANL 2003, 76876), which is located approximately 2000 ft east of the outfall source area. Surface fracture mapping indicated that the fracture set has a statistically significant north-northwest preferred orientation. Fracture dip angles vary from sub-horizontal to steep. Fracture densities of 20–40 fractures per 100 ft were observed, with fracture apertures generally 1–2 mm wide, although widths of 50 mm were observed. In six boreholes installed at MDA P, natural fractures were observed in all cores, but more commonly in welded tuff units. Fracture coatings consisted of clays and black manganese oxides.

The variable concentrations and presence of contaminants detected in the vadose zone at TA-16 are typical of fracture (and surge bed) controlled transport and have important implications for the CMS decision process. First, it is not possible at the present time to accurately quantify the inventory of contaminants in the mesa vadose zone. Future characterization efforts at TA-16 may provide a better estimate of contaminant inventories, although it is unlikely that a detailed inventory will ever be achieved. Second, remediation of the subsurface inventory is not possible if its location remains unknown. For these reasons, in addition to a lack of exposure pathway to humans, the mesa vadose zone is not explicitly considered for remediation, although the manifestations of the mesa vadose zone in the form of springs are addressed as component 4. Furthermore, the surge beds that were discussed as part of the outfall source area (component 1) can be viewed as part of the mesa vadose zone.

Other uncertainties in the mesa vadose zone SCM involve the effects of the 2000 Cerro Grande fire and the current forest thinning, both of which may have altered the runoff/recharge hydrology of the mesa.

3.6 Component 3—Cañon de Valle and Martin Spring Canyon Alluvial Sediment

Alluvial sediment is present in both Cañon de Valle and Martin Spring Canyon. Cañon de Valle and Martin Spring Canyon sediments were studied during geomorphic studies and as part of a Phase III RFI sediment resampling effort (LANL 2003, 77965) of Phase II RFI sampling points. These studies identified COPCs in sediment and they provide insight into the magnitude of HE and barium loading on sediments and the nature of sediment transport processes. A total of about 21,000 kg of barium is estimated to have been present in Cañon de Valle sediment before the Cerro Grande fire. About 62% is estimated to have been stored in fine-grained sediment deposits outside the active channel, about 10% was in the active channel, and the remainder was in coarse-grained deposits in abandoned channel units. This indicates that flood events play a key role in mobilizing contaminated sediments in and along the channel. Post-fire sediment sampling results indicate a substantial downstream redistribution of barium and RDX due to post-fire flooding. Estimates of the total inventory of HMX and RDX in Cañon de Valle sediment before the Cerro Grande fire indicate approximately 50 kg of HMX was present, 50% of which occurred in fine-grained sediment and 50% of which occurred in coarse-grained sediment. Approximately 5 kg of RDX is estimated to have been present, of which about 60% was found in fine-grained sediment.

In 2002, the resampling of a subset of the 1996 active channel sampling locations as part of the Phase III RFI allowed a comparison of the barium and RDX concentrations in 1994–6 with the concentrations in the channel 6 years after the termination of effluent releases from the outfall (Figure 3.6-1 and Figure 3.6-2). This period also includes the effects of post-fire floods. In the reaches sampled, barium and RDX concentrations in 2002 are much lower than in 1996. This indicates that much of the barium and RDX present in the active channel in these reaches in 1996 was scoured and suspended in subsequent floods and transported downstream, depleting the active channel inventory. The amount that was redeposited on abandoned channels and floodplains is unknown. Both plots support the inference that much of the contaminant inventory that was stored in the active channel in 1996 was remobilized and transported downstream prior to 2002, either in post-fire floods or in other storm runoff events (LANL 2003, 77965).

Post–Cerro Grande fire sampling for barium and RDX in Martin Spring Canyon indicated much lower concentrations and much smaller inventories than in Cañon de Valle. The estimated barium and RDX inventories in Martin Spring Canyon are approximately 820 kg and 0.2 kg, respectively.

For barium, RDX, and HMX, the contaminant mass estimate is limited by the depth of the geomorphic sampling (maximum of 2 ft bgs). Although borehole sampling results from alluvial well installation conducted during the Phase II RFI indicated minimal contamination at the saturated alluvial/tuff contact (LANL 1998, 59891), sediment samples were not collected in overlying saturated and unsaturated alluvial sediments. Consequently, the vertical distribution of contamination is unknown between approximately 2 ft bgs and the alluvial/tuff contact which is located at approximately 5–6 ft bgs.

Site maps of recent (1999–2002) Cañon de Valle alluvial sediment concentrations of barium and RDX in the active channel are presented as Figures 3.6-3 and 3.6-4, respectively. For Martin Spring Canyon, site maps of recent (2000) alluvial sediment concentrations of barium and RDX in the active channel are presented as Figures 3.6-5 and 3.6-6. These maps show the distribution of the two contaminants.

3.7 Component 4—Springs in Cañon de Valle and Martin Spring Canyon

The springs and seeps in Cañon de Valle and Martin Spring Canyon are labeled component 4 on Figure 3.3-1. Known springs and seeps include Burning Ground Spring, SWSC Spring, and Martin Spring. Based on water geochemistry results from surface and groundwater sampling detailed in the

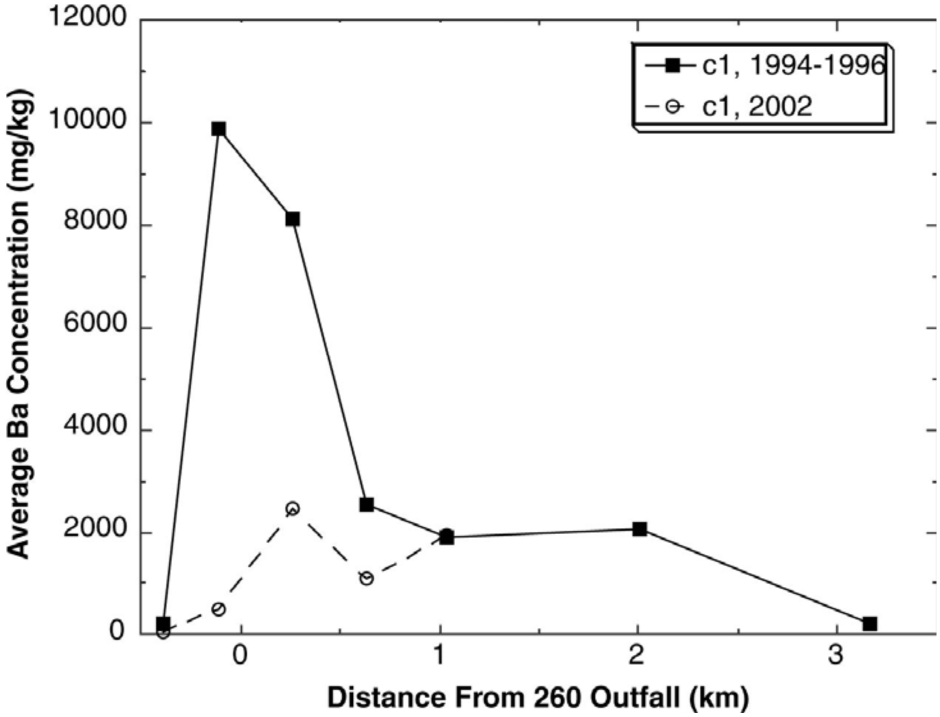

Figure 3.6-1. Plot of barium (Ba) concentrations (localized averages) in active channel samples (C1) in 1994–1996 and 2002

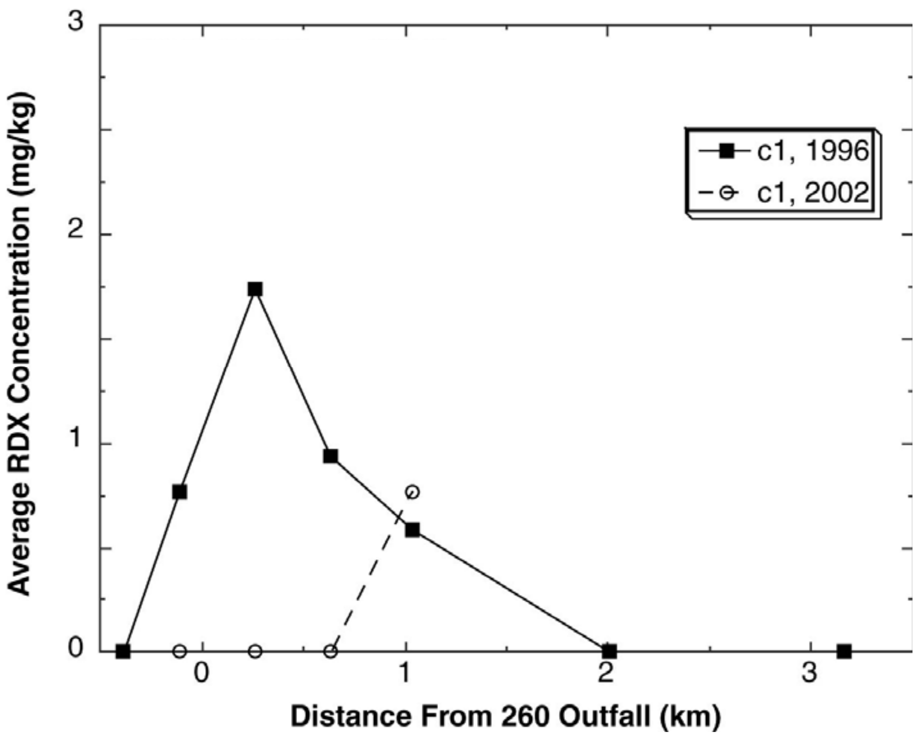

Figure 3.6-2. Plot of RDX concentrations (localized averages) in active channel samples (C1) in 1996 and 2002

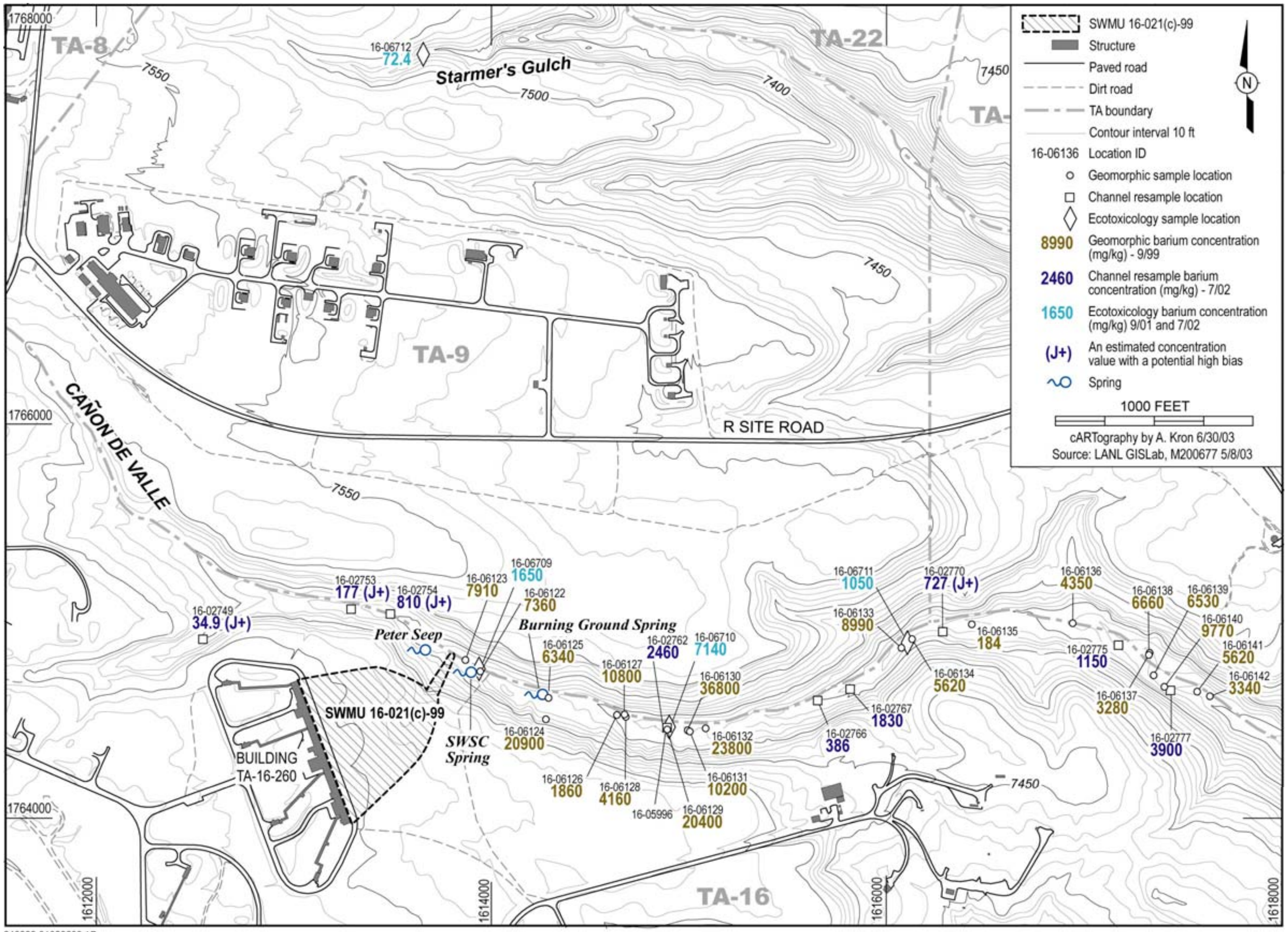

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Figure 3.6-3. Recent (1999–2002) Cañon de Valle barium active channel alluvial sediment sampling results

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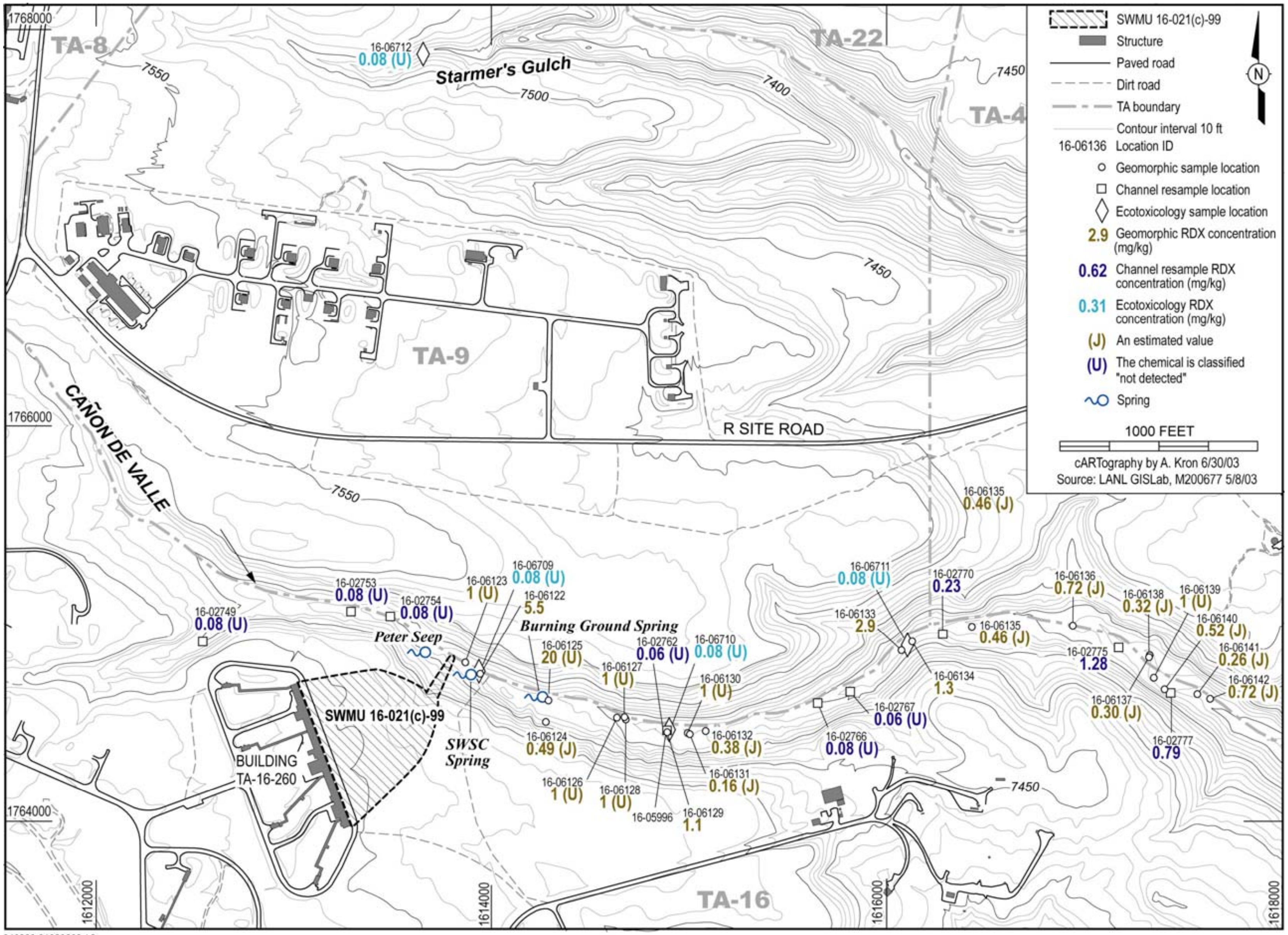

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Figure 3.6-4. Recent (1999–2002) Cañon de Valle RDX sediment sampling results

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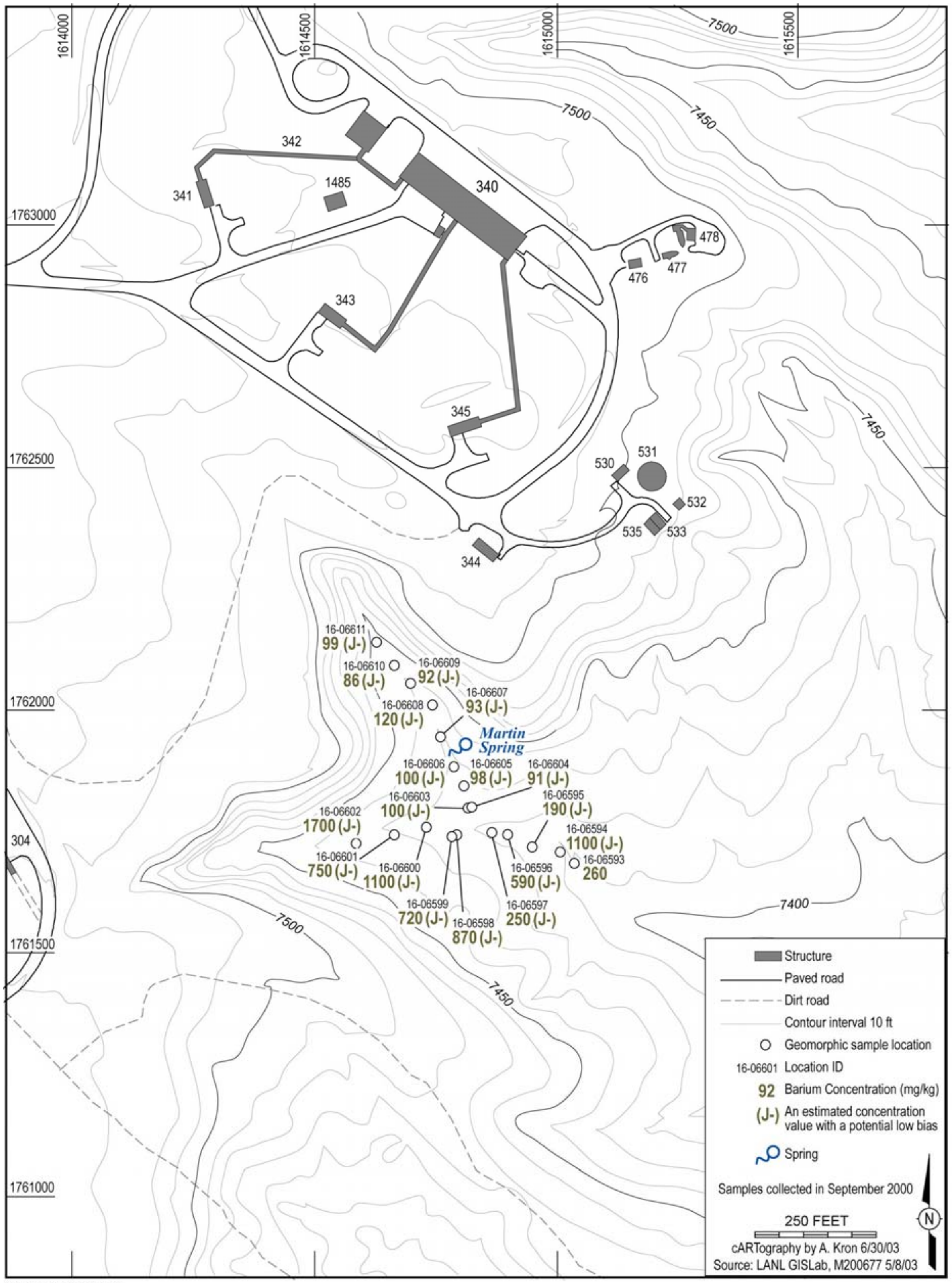

Figure 3.6-5. Martin Spring Canyon barium sediment sampling results from 2000

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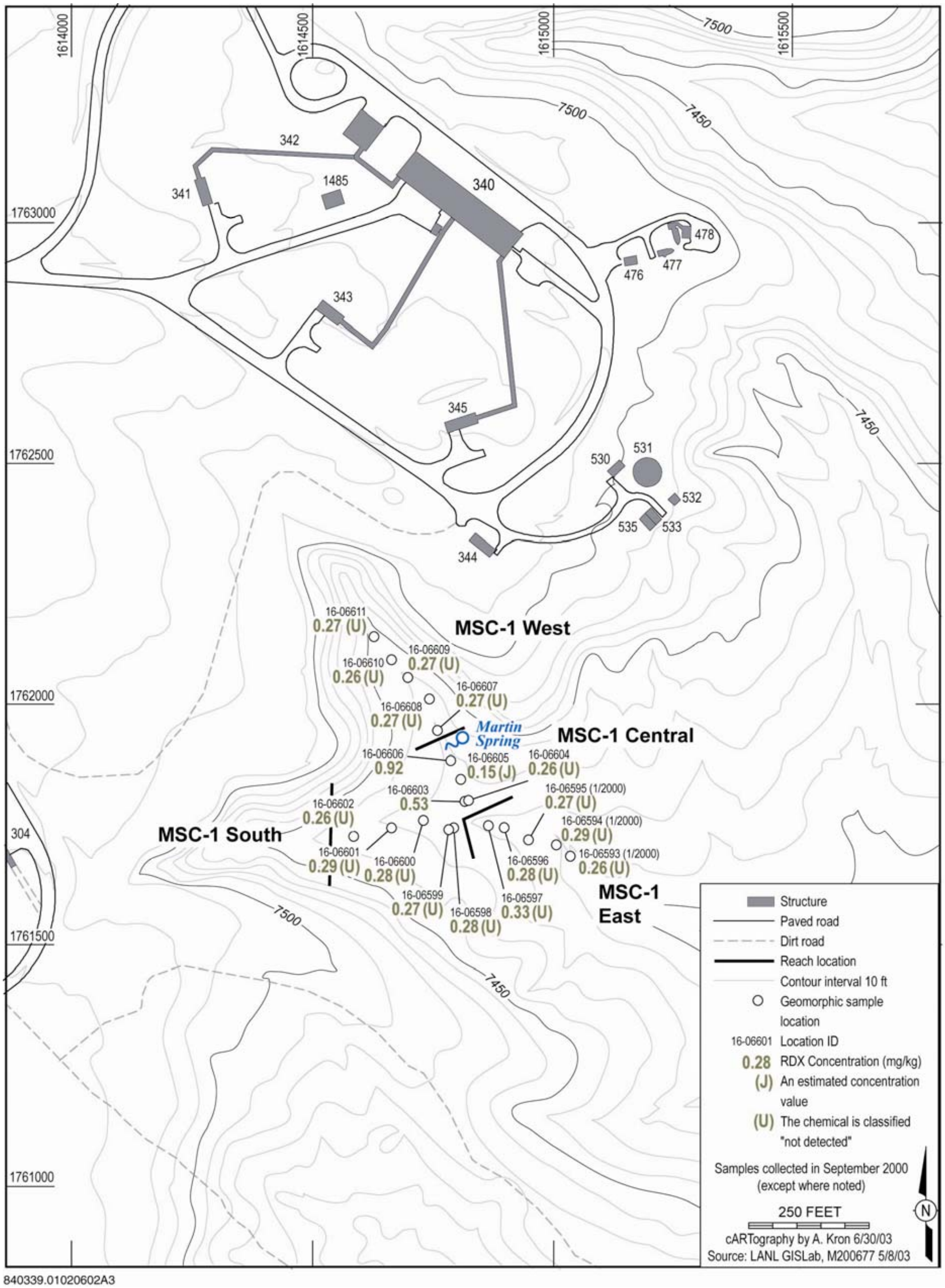

Figure 3.6-6. Martin Spring Canyon RDX sediment sampling results from 2000

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Phase III RFI (LANL 2003, 77965), it is considered possible that other, unknown springs or seeps may be discharging to the Cañon de Valle alluvial system. The current drought has substantially affected the flow rates from springs. Flow has decreased in Burning Ground Spring and flow from SWSC Spring and Martin Spring has stopped completely, as of this writing.

The Phase II and Phase III RFIs detected HE, barium, and other contaminants in SWSC Spring (in Cañon de Valle), Burning Ground Spring (in Cañon de Valle), and Martin Spring (in Martin Spring Canyon) (LANL 1998, 59891; LANL 2003, 77965). Key Phase II hypotheses concerning the SCM for the springs include

(1) The saturated systems that feed the springs may represent the discharge points of surge beds and fracture sets within the mesa;

(2) The springs are all located near the Unit 3/Unit 4 contact within the Tshirege Unit of the Bandelier Tuff, a zone characterized by several surge beds;

(3) The bromide tracer study demonstrates direct connectivity between the 260 outfall and SWSC Spring (and possibly Burning Ground Spring);

(4) The springs have multiple sources of groundwater recharge; and

(5) Contaminants in Martin Spring may come from a source other than the 260 outfall.

Martin Spring flow and chemistry are substantially different from the two Cañon de Valle springs.

Phase III RFI isotopic studies of the springs flow systems (LANL 2003, 77965) show that the springs have two main modes of recharge. These two modes can be described as (1) short residence-time pathways that are driven by individual rain or snowmelt events; and (2) slower, long residence-time pathways that provide “base flow” to the springs and whose flows are controlled more by longer-term climatic variations. The drought has lessened the frequency of the short residence-time recharge events, thus the contaminant concentrations observed during the drought are probably being transported via the slower, long residence-time base flow pathways. The stable isotope data indicate that base flow is largely recharged to the west, at elevations above TA-16 (and above any HE or barium contamination). Therefore, the base flow must be encountering a source of contamination in the mesa vadose zone as it travels to the springs.

Analyses of contaminant time-series data gathered since the IM was completed in 2000 and conducted as part of the Phase III RFI do not show any significant reduction in contaminant concentrations. This lack of reduction does not reflect the overall long-term effectiveness of the outfall source area IM; rather it is likely due to three factors: (1) the drought, (2) deeper vadose zone contamination and related inventory, and (3) the long residence-time component of springs flow. The drought has limited the transport of contaminants from shallow depths at the 260 outfall source area. Thus, there has not been enough water flow to flush out the existing contaminants. Contamination is still present in the vadose zone below the depths from which soil was removed during the IM, and this deeper contamination zone is what currently supplies the springs systems. The last factor might account for the lack of changes in springs contaminant concentrations in that analysis of trends in spring flow shows there is a long residence-time (base flow) component to springs discharge, on the order of several years.

The 2000 Cerro Grande fire and current forest thinning may alter the runoff/recharge relations on the mesa. If runoff increases as a result of loss of vegetative cover, recharge to the springs could decrease, thereby decreasing vadose zone transport of some contaminants. However, it is not known if the potential runoff/recharge shift would prove to be a substantial influence over the long term.

Representative Phase III RFI (LANL 2003, 77965) barium and RDX concentrations in site springs, surface water, and groundwater from 2000 to 2002 are shown in Figures 3.7-1 and 3.7-2, respectively.

3.8 Components 5 and 6—Canyon Surface Water and Alluvial Groundwater

Cañon de Valle and Martin Spring Canyon surface water and alluvial groundwater are important components of the SCM (Figure 3.3-1). Both represent potential human and ecological exposure sources and both are critical to the overall site hydrogeological regime which includes the regional groundwater. Surface water is present both perennially and intermittently along Cañon de Valle. The approximate extent of perennial surface water is shown in Figure 3.2-1.

Key hypotheses concerning the SCM include (1) surface runoff and spring flow contribute contaminants to the alluvial system, but the springs generally dilute the higher levels of contamination in the surface water and alluvial groundwater; (2) alluvial groundwater disappears downgradient from MDA P and therefore there may be a loss of water to underlying units; and (3) there appears to be mixing of alluvial groundwater and surface water downgradient from MDA P.

The Cañon de Valle saturated alluvium may be viewed as a fixed volume with inputs (springs, precipitation, and groundwater flow) and outputs (evapotranspiration and leakage into the underlying fractured tuff which lessens water volume). A conceptual water balance model is shown in Figure 3.8-1, in terms of gal. per ft of canyon per day. As detailed in the Phase III RFI report (LANL 2003, 77965), component flows were prepared using historical data on spring water flow; groundwater elevation in wells; historical averages for precipitation and evapotranspiration; and literature values for alluvial permeability, in the absence of actual data. Based on these component flows, the rate of infiltration was estimated.

Assuming a steady state, the rate of loss of groundwater to the underlying tuff is estimated to be approximately 2.6 gal. per day per ft of canyon.

In terms of water balance, the springs contribute substantial amounts of water to the canyon bottom; exchange also occurs between the surface water and alluvial groundwater and vice versa. These conditions affect contaminant distributions in the canyon bottom. Figure 3.8-2 presents examples of the effect of the springs, alluvial groundwater, and surface water interconnection on barium and RDX concentrations. Barium concentrations remain relatively consistent among the three types of water over low, medium, and high surface flow sampling events, probably due to buffering by barium-contaminated sediments. Alluvial groundwater barium concentrations are the highest, surface water concentrations are intermediate, and the springs concentrations are the lowest. These results show that the springs water dilutes the concentrations in the alluvial groundwater and surface water systems. The differences between the alluvial groundwater and surface water concentrations are largely controlled by the spatial distribution and buffering capacity of existing barium concentrations in the canyon sediment. For RDX, there is no consistency in contaminant concentrations. Springs water tends to have the lowest concentration and generally dilutes the alluvial groundwater and surface water.

Spatial trends of contaminants in surface water and alluvial groundwater, screening parameters, and flow provide other key insights into the alluvial system. Flow profiles indicate that there is a losing reach in the region between Burning Ground Spring and the area just upgradient from MDA P. In addition, temperature data, barium and RDX concentrations, and flow increases all indicate that alluvial

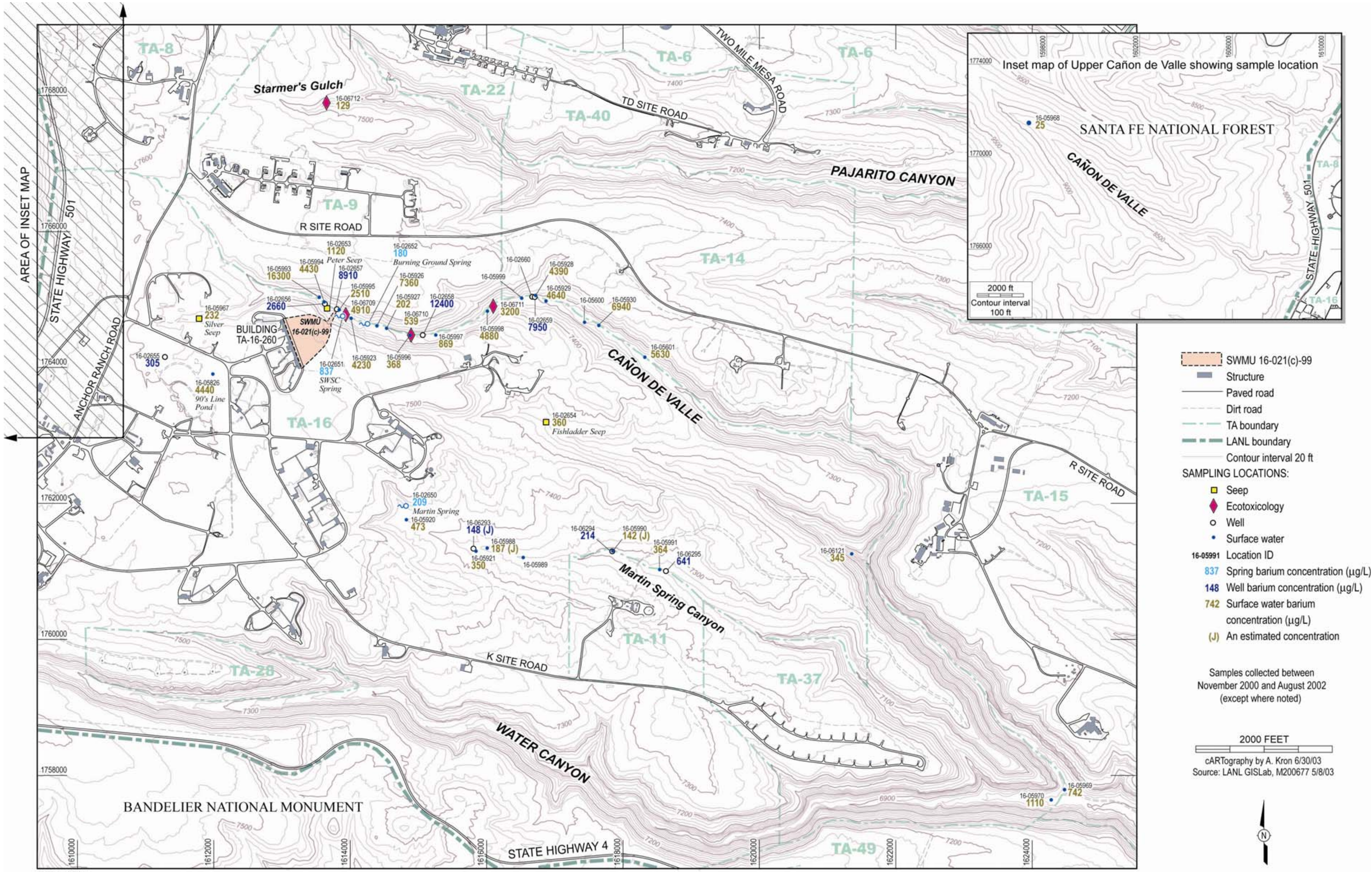

Figure 3.7-1. Representative barium concentrations in springs, surface water and alluvial groundwater from 2000-2002

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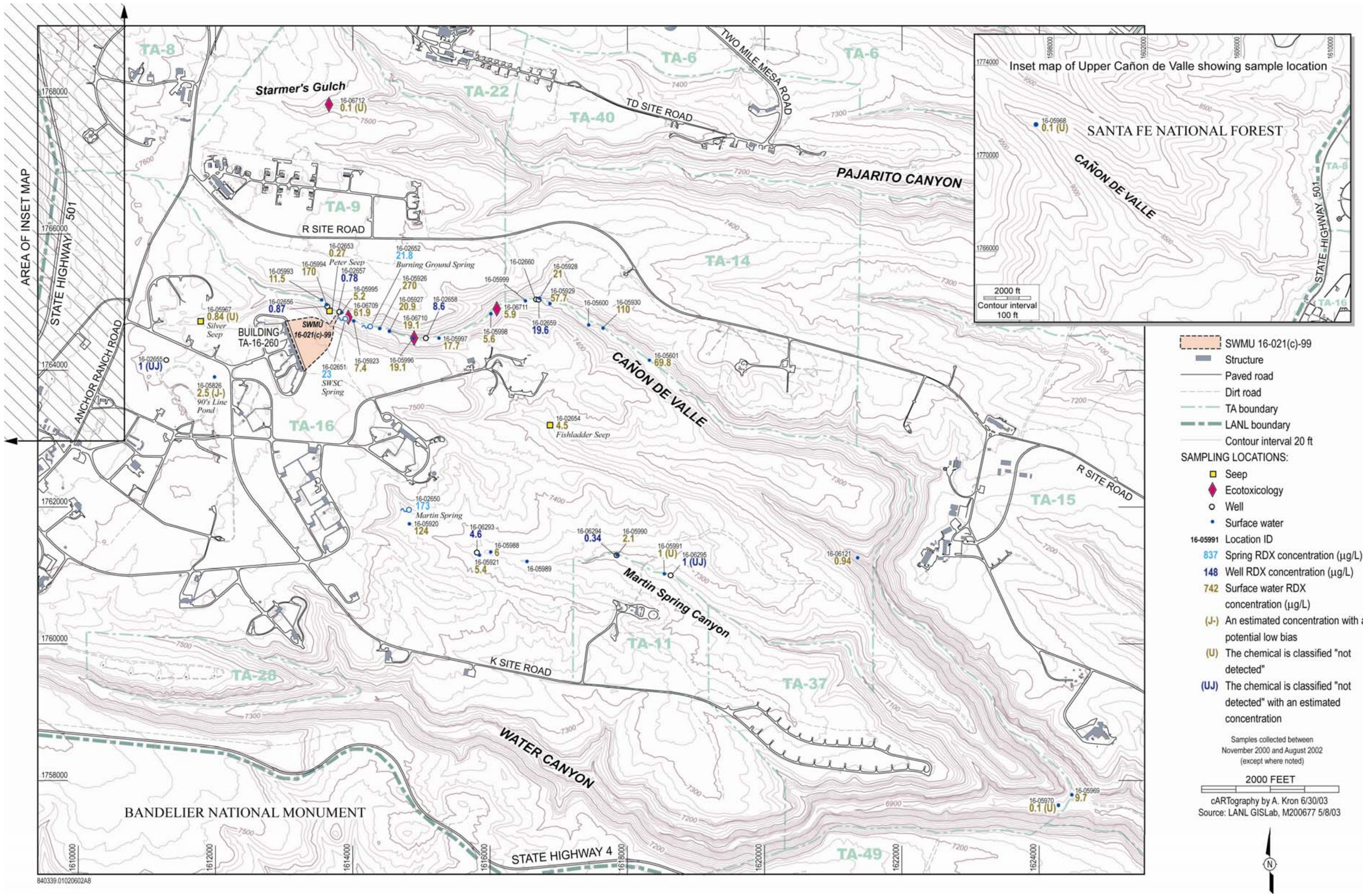

Figure 3.7-2. Representative RDX concentrations in springs, surface water and alluvial groundwater from 2000-2002

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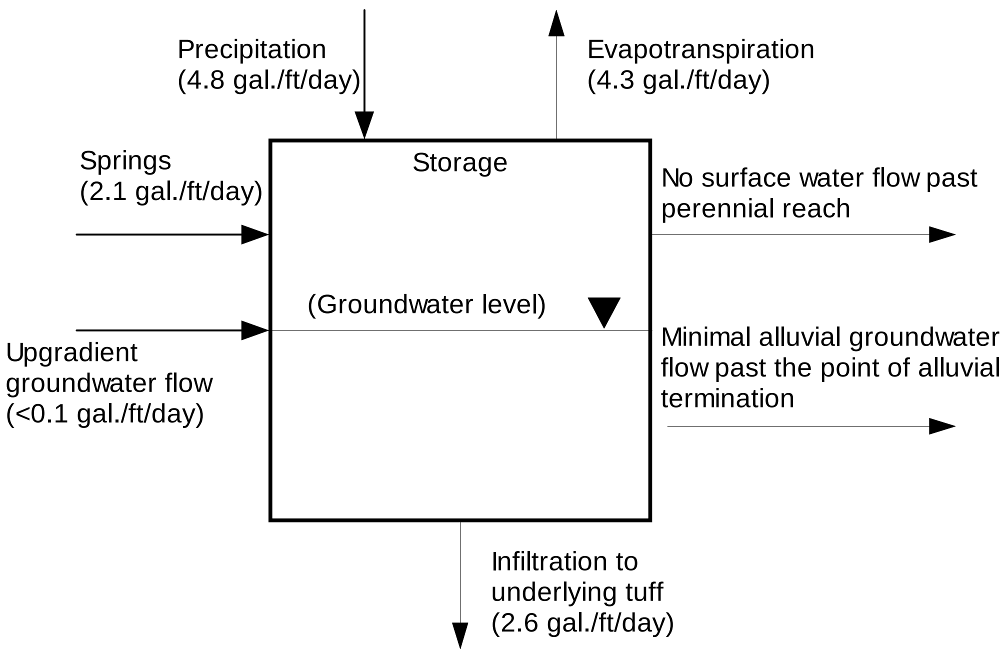

Figure 3.8-1. Conceptual water balance model for the Cañon de Valle alluvial system (in gal. per ft of canyon per day for an average water year)

groundwater may be discharging into the surface water system downgradient from Well 16-02659 (see Figure 3.2-1). The high RDX values in Well 16-02659 as compared with upgradient Well 16-02658 indicate that either RDX is being leached from secondary sources within the alluvial system or increased inputs into the alluvial groundwater system from higher concentration surface waters are occurring. In addition, the presence of both RDX and barium upgradient from the 260 outfall discharge point indicates that residual contamination at MDA R, the 90s Line Pond, as well as other upgradient sources may be contributing to the alluvial system.

The spatial trend for manganese concentrations in alluvial groundwater in Cañon de Valle indicates a strong positive correlation between manganese concentration and distance from the Cañon de Valle headwaters. In addition, manganese sediment concentrations are all within background. These facts indicate that naturally occurring manganese is dissolving as a result of reducing conditions present within alluvial groundwater, most likely as a result of the presence of organic matter. Whether this organic matter is naturally occurring or HE is not known.

Stable isotopic results indicate that surface waters respond much more rapidly to precipitation events and other discharges to the surface, whereas alluvial waters represent more well-mixed waters that have had time to interact with alluvial sediments.

Most of the data collected during the Phase III RFI indicate that the alluvial groundwater system in Cañon de Valle is heterogeneous in both contamination and hydrologic properties such as saturation. Contaminant concentrations in water do not represent a simple “plume” with decreasing concentrations from the source or center of the plume. Both RDX and barium increase and decrease in relative abundance in springs, surface waters, and alluvial groundwater. This is due to variable exchange

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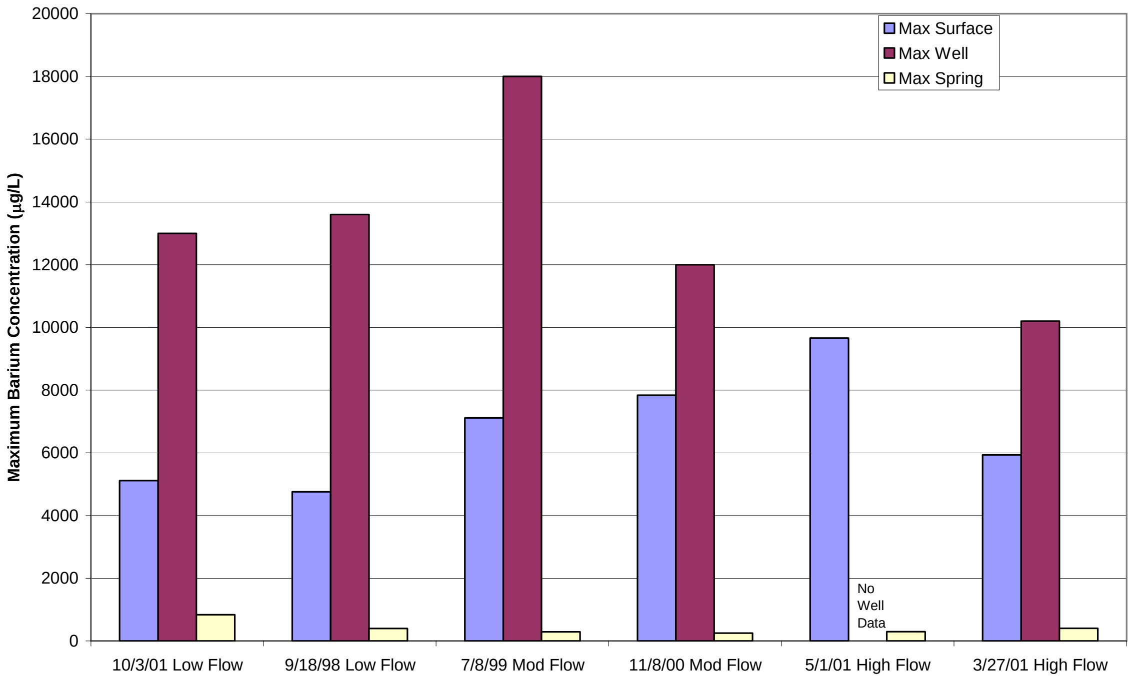

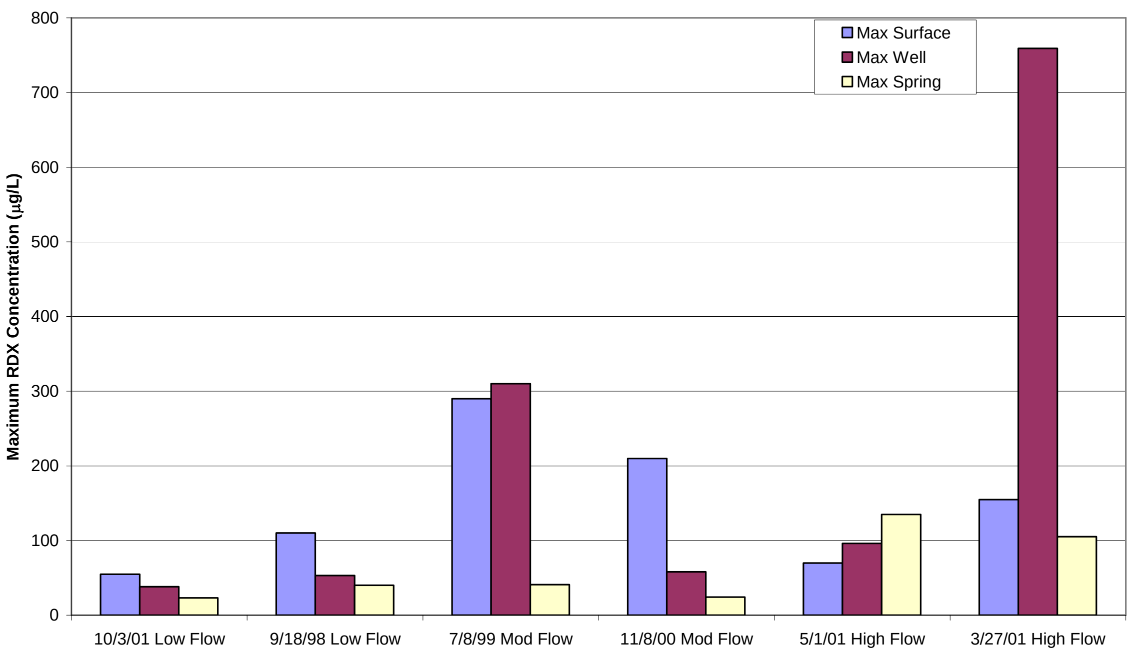

Figure 3.8-2. Comparison of barium (top) and RDX (bottom) concentrations among Cañon de Valle alluvial groundwater (Max. Well), springs (Max. Spring), and surface water (Max. Surface) for selected flow events from 1998 to 2002

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between surface water and alluvial groundwater which is dependent on the flow regime; variable degrees of mobilization of vadose zone and alluvial sediments; location of contaminant inventories; and varying degrees of dilution from runoff, interflow, and vadose zone discharge. Similarly, the geophysics, the piezometer results, and the results of head monitoring in the alluvial wells indicate that the saturated system in the Cañon de Valle alluvium is heterogeneous with respect to saturation and permeability.

For Martin Spring Canyon, spring water provides alluvial groundwater and, prior to infiltration, surface water. Stormwater is an intermittent contributor to alluvial groundwater and surface water. As of this writing, Martin Spring has ceased to flow. Based on the SCM presented in the Phase III RFI report, Martin Spring served as the main source for Martin Spring Canyon contamination.

As part of Phase III RFI activities, a geophysical resistivity survey was conducted, the objectives of which included defining the lateral and vertical extent of saturated alluvium within Cañon de Valle along the survey lines and within the vicinity of established monitoring wells (LANL 2003, 77965). A secondary goal was to investigate potential vertical pathways for downward migration of meteoric water and groundwater to the Bandelier Tuff. A prominent low-resistivity feature was detected between alluvial groundwater monitoring wells 16-02658 and 16-02659 (see Figure 3.2-1 for locations of these wells). These zones are possible areas of saturation or elevated water content relative to the surrounding media, and they may indicate zones of enhanced groundwater recharge to the underlying tuff (although the correlation between resistivity and water content has not been field-verified at TA-16).

Representative Phase III RFI barium and RDX concentrations in surface water and alluvial groundwater are shown on Figures 3.7-1 and 3.7-2, respectively.

3.9 Components 7 and 8—Deep Vadose Zone and Regional Aquifer

The deep vadose zone and regional groundwater are labeled as components 7 and 8, respectively, on the SCM (Figure 3.3-1).

To better characterize the TA-16 deep vadose zone, two geophysical surveys were conducted as part of the Phase III RFI (LANL 2003, 77965) and the activities described in the CMS plan addendum (LANL 2003, 75986.2). The main objective of these surveys was to identify potential saturated zones deep in the mesa and the lateral extent of such zones. In 2001, an electromagnetic “flyover” survey was performed over the Laboratory. The survey data indicate a more conductive (presumably wetter, perhaps saturated) zone in the western half of the TA-16 mesa, ending in a steeply dipping zone of electrical conductivity in the vicinity of R-25. Wells CdV-R-37-2 and CdV-R-15-3 are located in the less conductive zone further to the east. These wells did not intercept the 700-ft-deep perched groundwater observed in R-25 (Kopp et al. 2002, 73707; Kopp et al. 2002, 73179.9). Zonge Engineering (Zonge) performed a controlled-source audio-frequency magneto-telluric (CSAMT) survey during 2002. The data indicate the presence of discrete, heterogeneous, sub-vertical, electrically conductive layers (presumably wetter, perhaps saturated) in Cañon de Valle and on the TA-16 mesa. The data also indicate a geophysical feature at R-25 which was interpreted to be the perched groundwater unit.

According to the geophysical surveys, the intermediate (approximately 700 ft) perched groundwater zone (and any associated contamination) below the TA-16 mesa is probably limited in extent. The Zonge data support the SCM hypothesis that vertical preferential pathways may be responsible for groundwater recharge and contaminant transport to perched groundwater zones (where present) and to the regional groundwater at R-25. Intermediate-depth wells, which are scheduled for 2003–2004, will provide further insight into vadose zone contamination and pathways.

In 1999, R-25 was drilled to a depth of 1942 ft from the mesa top above Cañon de Valle (see Figure 3.2-1) into regional groundwater. Based on the groundwater elevation in this well, confined conditions may be present. HE contamination (RDX, HMX, and TNT) was detected in R-25 during 1999 and continues to be detected (maximum detected RDX concentration is 75 μg/L) in quarterly samples (LANL 2003, 75986.2). Barium has been detected, but at low concentrations ranging from 2.4 to 73 µg/L (LANL 2001, 70295.5; LANL 2001, 71368.5; LANL 2002, 73712.5) that may be within background ranges. (A background study has not been completed for regional groundwater.)

The lack of contamination in the regional groundwater at monitoring wells CdV-R-37-2 and CdV-R-15-3 (Kopp et al. 2002, 73707; Kopp et al. 2002, 73179.9), which were designed as plume-definition wells and installed during 2001 and 2002, also places bounds on the extent of contamination within the framework of the SCM. The locations of these wells are shown on Figure 3.2-1. To assess the nature and extent of contamination, additional well installations are planned for the regional groundwater (LANL 2003, 75986.2).

3.10 Physical and Chemical Contaminant Characteristics and Environmental Fate

An important part of the site hydrogeological and contaminant transport SCM involves the chemical and physical properties of the contaminants and their behavior in the environment. Specific properties include the degree of saturation (barium minerals), the potential for ion exchange (barium) or adsorption (barium on metal oxides and HE on natural organic carbon), and the potential for natural attenuation and bioremediation.

The high specific gravity of RDX and HMX indicates that particulates of these compounds were probably deposited in the TA-16-260 outfall and settling pond, rather than carried into Cañon de Valle as particulates. Because of its lower specific gravity, this may not be true for TNT. The potential for particulate settling along the channel is also dependent on the flow velocity, flow rate, and residence time in the settling pond—all factors not studied during the operational period of the outfall. The probable lack of particulate transport into Cañon de Valle leaves transport of dissolved constituents within water discharged to the outfall as the primary transport mechanism for HE (and barium) into Cañon de Valle.

HE that is dissolved in groundwater partitions between a soluble and an adsorbed phase. Both tuff and sediment adsorb HE, though to a varying extent. On the basis of HE contaminant adsorption studies done on clays (Myers 2003, 76188), it can be inferred that tuff has a relatively low adsorption capacity (on the order of 1 mL/g) for RDX, HMX, and TNT. These constituents, however, are adsorbed onto organic carbon present in the Cañon de Valle alluvium, with the capacity for adsorption represented by the compound-specific organic carbon adsorption coefficient (K_{oc}). While the fraction organic carbon (FOC) in the alluvium is not known, FOC studies in Los Alamos Canyon (Hickmott 2003, 76190) indicate that the FOC ranges from 0.1% to 5%. Finer fractions, like fine sand and silt, which are representative of floodplain deposits, tend to be in the higher end of the FOC concentration range (e.g., 2 to 5%). Concentrations in the medium sand and larger fractions, which are representative of buried channel deposits, tend to be in the lower end of that range (e.g., 0.1 to 2%).

In contrast to HE, which does not dissociate in groundwater and is slightly soluble, barium nitrate dissociates into the barium cation and nitrate anion, and is freely soluble in water. In groundwater, barium will partition between dissolved, adsorbed, and solid phases, the latter including barite and witherite (LANL 1998, 59891). The respective partitioning fractions of the total barium inventory is not known. This uncertainty is important because certain barium phases, particularly barite and barium adsorbed by ion exchange, may not be available for groundwater transport, as discussed below.

Barium has an affinity for adsorption onto clays, oxides, and hydrous oxides, with literature values for equilibrium adsorption coefficients in soil ranging from 66 to 2800 mL/g (Myers 2003, 76188). While the concentrations of clays has not been studied in Cañon de Valle, clay content has been quantified for other canyons, and it is generally positively correlated with the fraction of fine particle size (Katzman 2003, 76850). For Cañon de Valle, the fine particle-size fraction appears to contain the highest contaminant inventories when compared to other geomorphic units, indicating that the clay content of the fine particle-size fraction may be higher. Barium adsorption onto these clay and oxide minerals takes the form of ion exchange and chemisorption, with adsorption onto clays primarily due to ion exchange. Furthermore, barium adsorption onto clay is thought to be irreversible under natural conditions. Once barium is adsorbed, it is immobilized or “locked down” on the clay surface (Myers 2003, 76188). Consequently, the ion exchange of barium on natural clay can serve as a means of immobilizing barium or retarding its movement in the environment.

A literature search for barium adsorption studies on tuff was conducted, but yielded no published results. The dynamics of barium adsorption onto both tuff and alluvial sediment and the relative fraction of barium partitioning between its various forms is an important uncertainty in the SCM. Not all the barium inventory may be available for transport, but the fraction that is unavailable is not known.

Based on the preceding discussion, Figure 3.10-1 shows the conceptual vadose zone distribution of barium and RDX, the two primary CMS COPCs present in Cañon de Valle alluvial sediment. In Cañon de Valle, the alluvial water table fluctuates seasonally due to precipitation. Rising groundwater levels will desorb barium that is reversibly adsorbed and will dissolve barium minerals, primarily witherite. Rising groundwater also causes the release of RDX-containing pore water that was previously trapped in the vadose zone. RDX and barium are also present as adsorbed phases, with barium adsorbed onto clay particulates and other mineral phases and RDX adsorbed onto organic carbon present in the sediment. Alternatively, falling groundwater tables may cause the evaporation of water and the precipitation of barium minerals. In either scenario, the presence of these forms of barium and RDX in alluvial sediments represents a widespread, continuing source that is mobilized by stormwater or a rising alluvial groundwater table associated with episodic precipitation events in Cañon de Valle.

The relative adsorption potential of barium and RDX is reflected in their respective contaminant distributions. In R-25, barium has been detected, but at low concentrations that are at least a factor of 10 below the NMWQCC standard of 1000 µg/L, whereas RDX has been detected at a maximum concentration of 75 µg/L, this despite the prevalence of high barium concentrations in Cañon de Valle alluvial groundwater. This difference might be related to the higher relative adsorption potential for barium onto sediment and tuff. While the tuff adsorption potential for barium is unknown, sediment strongly adsorbs barium, particularly fine-grained sediment. Although the preferential path from the alluvial groundwater to the regional groundwater consists mostly of fractures in tuff, fractures that directly underlie the saturated alluvium may be filled with sediment, which serves to adsorb and retard barium.

The potential for biodegradation is another chemical property important to the long-term environmental fate of HE. TNT degrades aerobically and anaerobically, with reduction of the nitroso groups, eventually leading to cleavage and assimilation or mineralization of a portion of the TNT carbon. Groundwater analytical data from Cañon de Valle indicate active TNT degradation, with breakdown products typically present in higher concentrations than TNT itself.

The biodegradation of RDX and HMX in the environment also occurs aerobically and anaerobically (Card and Autenrieth 1998, 76873). Anaerobic degradation rates are typically greater than aerobic rates. For either pathway, nutrient concentrations are also important. In subsurface regions of the SCM, including the mesa vadose zone, canyon alluvium, and alluvial groundwater, the rate of natural biodegradation of

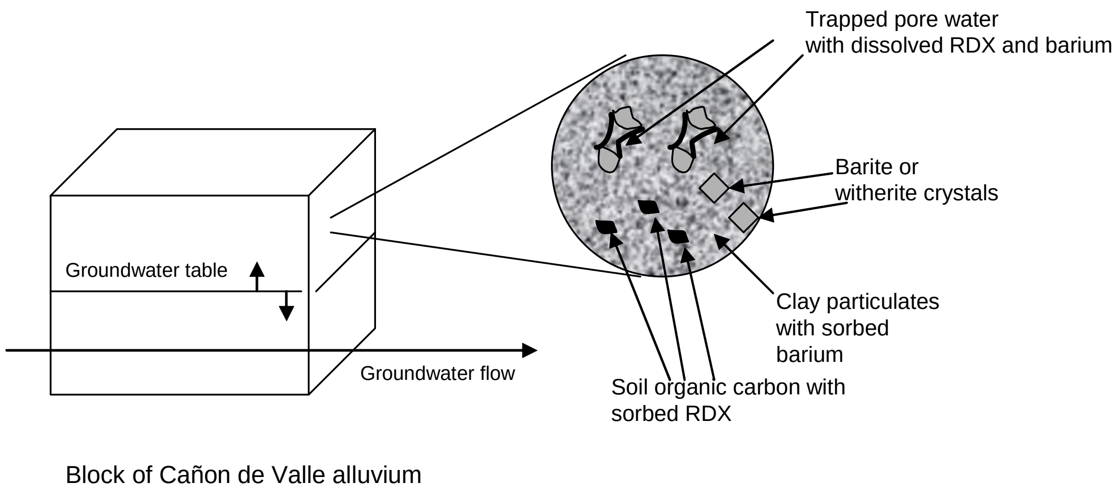

Figure 3.10-1. Conceptual distribution of RDX and barium in the Cañon de Valle vadose zone

RDX and HMX is likely to be low, given the lack of appropriate anaerobic conditions. The low concentrations of RDX breakdown products [MNX, DNX and hexahydro-1,3,5-trinitroso-1,3,5-triazine (TNX)] in groundwater and surface water support this hypothesis. RDX and HMX can also degrade chemically via an inorganic pH hydrolysis reaction (Layton et al. 1987, 14703); however, the potential for this degradation pathway at the site is unknown.

Barium does not biodegrade because it is an inorganic contaminant. As discussed above, the long-term environmental fate of barium is dependent upon its chemical state, whether precipitated, dissolved, or adsorbed.

3.11 SCM and Current Site Conditions Uncertainties

Despite the refinements made to the TA-16 SCM in the Phase III RFI (LANL 2003, 77965), uncertainties about the TA-16 system remain, as discussed below.

1. Characterization activities have not yet bounded the vertical extent of subsurface contamination beneath the potential source areas (other than the TA-16-260 source area) located on the mesa. Future drilling activities (e.g., at the 90s Line Pond) may address this uncertainty.

2. The uncertainties in the hydrogeology of the springs include the effects of terminating the TA-16-260 outfall and other discharges, the drought, the Cerro Grande fire, tree thinning, and the possibility of other springs or seeps discharging to the Cañon de Valle alluvial groundwater. As of this writing, Martin Spring is dry, and it is not known when flow will return. In addition, it is unclear if and when the benefits of the IM excavation at the outfall source area will be evident in Cañon de Valle springs (and in alluvial groundwater).

3. As noted in the 1998 Phase II RFI report, there is little evidence for a hydrogeological link between the TA-16-260 outfall and Martin Spring Canyon. Additional characterization performed since 1998 has reinforced the idea that the Martin Spring system is affected by contaminant sources other than the TA-16-260 outfall. There are other potential source areas, but these have not been positively identified as contamination contributors to Martin Spring Canyon. The planned mesa characterization through intermediate-depth borings should help address this uncertainty, as discussed in revision 1 to the CMS plan addendum (LANL 2003, 75986.2).

4. The hydrogeological interconnection between the canyon bottoms and the deeper groundwater systems, including the intermediate perched groundwater encountered in R-25 and the regional groundwater, is not well characterized. The lateral extent of the 700-ft perched groundwater encountered in R-25 is not well bounded (although monitoring wells CdV-R-15-3 and CdV-R-37-2 improved this). The Zonge geophysical survey conducted as part of the Phase III RFI (LANL 2003, 77965) indicates there may be an abrupt eastern boundary to the intermediate perched groundwater, but this has not been verified. These uncertainties will be addressed by other investigations proposed in revision 1 to the CMS plan addendum (LANL 2003, 75986.2).

5. Detailed characterization of the lateral distribution of contaminant concentrations within Cañon de Valle alluvium has not been completed. Of the estimated 7000 ft of suspected saturated alluvium downstream from the TA-16-260 outfall source area, monitoring wells are located along the first 4000 ft. In addition, alluvial groundwater and sediment characterization is incomplete in Cañon de Valle upstream from the confluence of Cañon de Valle with Water Canyon. The Canyons Team will sample the alluvial groundwater and sediment in these reaches as part of its investigation.

6. The permeability distribution in Cañon de Valle saturated alluvial sediment is not known. These data are important to refining the water balance and assessing the efficacy of groundwater remediation alternatives, and will be addressed by the CMI.

7. Potential areas of enhanced vertical groundwater infiltration within the Cañon de Valle alluvium can be inferred from geophysics resistivity results. The permeability of the sediment or fractures that comprise these areas is not known. Moreover, the correlation between geophysics resistivity data and water content has not been verified by field sampling. Additional subsurface investigations, as planned under revision 1 to the CMS plan addendum (LANL 2003, 75986.2), will help verify the geophysical interpretations.

4.0 MEDIA CLEANUP STANDARDS AND REMEDIAL ACTION OBJECTIVES

The fundamental objective of corrective action is to control or eliminate potential risks to human health and the environment by initiating remedies that reduce contaminated media concentrations to protective levels. During the CMS, accomplishing this objective is a twofold process involving the establishment of site-appropriate MCSs (addressed in this section) and the identification of one or more corrective measure alternatives (addressed in subsequent sections). In this section, a set of media- and contaminant- specific cleanup objectives are proposed for the outfall source area and Cañon de Valle and Martin Spring Canyon alluvial systems. Points of compliance (POCs) and a compliance time frame (CTF) are also proposed.

MCSs are generally derived from two sources: (1) existing state or federal standards determined to be ARARs and (2) a site-specific, human health and ecological risk assessment (EPA 1998, 80120). According to EPA guidance, use of ARARs is a CERCLA requirement that is also suited to the development of MCSs under RCRA. The process of MCS development for this CMS considers site-specific criteria such as:

- the presence of multiple contaminants in a medium at the site;
- cumulative risk exposure from other hazards not directly related to the analyzed release;
- the site's physical restrictions and accessibility;
- the land-use designation appropriate to the site (e.g. industrial); and
- the effectiveness, practicality, reliability, and cost of the selected corrective measures and the potential for achieving the MCS.

4.1 Identification of ARARs

Existing NMWQCC regulations 20 NMAC 6.2.3103 Parts A and B, for groundwater of less than 10,000 mg/L total dissolved solids (TDS) concentration establish contaminant concentration standards and specify a 10^{-5} cancer risk threshold for concentrations of toxic pollutants. Because the TDS concentration of alluvial groundwater is less than 10,000 mg/L, these regulations are proposed as site ARARs for alluvial groundwater. Because of the interchange between site surface water and alluvial groundwater, these ARARs are also proposed for surface water and spring water. In the discussion that follows alluvial groundwater, surface water and spring water are referred to as shallow site waters. With respect to the discussion in section 4.0, these ARARs, which are NMWQCC regulations, incorporate both standards and an acceptable risk threshold.

For alluvial sediment in the alluvial vadose zone, the proposed ARAR is the requirement that alluvial sediment contaminant concentrations should not cause shallow site water contaminant concentrations above the shallow site water ARAR cited above, as measured from the point of withdrawal (20 NMAC 6.2.4103).

Given the future industrial use of the site and the presence of regional groundwater beneath the site, there are two potential points of withdrawal. For incidental shallow site water ingestion associated with industrial use, the point of withdrawal is the shallow site water. For residential drinking water, the point of withdrawal is the location of the nearest municipal well that draws from regional groundwater. The latter point of withdrawal is applicable to shallow site water because of its potential to infiltrate to regional groundwater.

Potential risk shallow site water calculated during the Phase III RFI (LANL 2003, 77965) was acceptable. Potential risk associated with the transport of contaminated shallow site waters to regional groundwater and subsequent extraction for residential use has not been quantified. This potential risk will be determined during the regional groundwater CMS using a site-specific computer model to evaluate groundwater flow and solute transport to the closest municipal well.

The ARARs cited above are the basis for the MCSs for site shallow water and alluvial sediment. Based on the provisions of the ARARs, MCSs for all CMS COPCs are derived from either ARAR concentration standards or ARAR risk-based provisions for toxic pollutants based on potential risk to regional groundwater. For example, the MCS for barium is set by a concentration standard in 20 NMAC 6.2.3103

Part A. The calculation of risk-based MCSs for toxic pollutants for the residential drinking water pathway is deferred to the regional groundwater CMS.

Several CMS COPCs, such as RDX and TNT, are not currently listed in 20 NMAC 6.2.1101 as toxic pollutants, but are suspected carcinogens. For these compounds, a 10^{-5} acceptable cancer risk threshold, as established by the proposed ARARs, is proposed.

Although CMS COPCs such as RDX and TNT do not have MCSs resulting from this CMS (and therefore, in a strict sense, have no drivers for remediation under this CMS), it is appropriate for this CMS to develop corrective measure alternatives to address these CMS COPCs in addition to CMS COPCs with MCSs. Similar remediation technologies are suited to both, and remedial action in the shallow site water can be viewed as a measure of source control with respect to regional groundwater.

4.2 Outfall Source Area MCSs

4.2.1 Identification of Risk-Based MCSs for Soil and Tuff in the Outfall Source Area

Phase III RFI COPCs for the outfall source area are aluminum, arsenic, barium, manganese, thallium, uranium, HMX, RDX and TNT. As discussed in section 3.2 and in detail below, these Phase III RFI COPCs are retained as CMS COPCs.

The following exposure pathways were quantitatively evaluated in the human health risk assessment for the outfall source area soil that was conducted as part of the Phase III RFI (LANL 2003, 77965):

- inhalation of volatiles or dust particles;
- incidental ingestion, and
- dermal contact.

These pathways are the most likely for exposure pathways for human receptors at the outfall source area (LANL 1998, 59891; 2000, 64355.4). All human receptors are workers associated with industrial use of the site: the on-site environmental worker represents individuals involved in environmental monitoring, such as field sampling efforts; the trail user is a worker who uses the trails for recreation/exercise purposes such as walking or jogging; and construction workers are involved in more intrusive work activities, such as excavation.

Cumulative excess cancer risk to the environmental worker from potential exposures to COPCs in soil and tuff is slightly above the NMED's target level of 10^{-5} (NMED 2000, 68554), but within EPA's target risk range of 10^{-6} to 10^{-4} (EPA 1991, 76865). The cumulative excess cancer risk for the other receptors is below NMED's target level of 10^{-5} (NMED 2000, 68554). Noncancer hazard (HI) (>1.0) is associated with exposure to outfall source area COPCs for the construction worker but not the other receptors (HI<1.0).

The excess cancer risk for the environmental worker is due primarily to the presence of RDX and TNT. Site-specific screening action levels (SSALs) based on a 10^{-6} acceptable cancer risk threshold (the EPA ARAR) for RDX and TNT were calculated for outfall source area soil as part of the Phase II RFI (LANL 1998, 59891). These SSALs were developed in consultation with the NMED (LANL 1998, 59173) and in accordance with EPA guidance documents (EPA 1991, 58234; EPA 1998, 58751). The SSALs for RDX and TNT are 36.9 mg/kg and 135.0 mg/kg, respectively. The SSALs for RDX and TNT are proposed as MCSs for the outfall source area.

For the construction worker, the total HI from the Phase III RFI risk assessment was 1.9, of which 1.6 or 84% was attributed to TNT, RDX, and barium. Therefore, reduction of the HI below 1.0 will be the focus of remediation in the outfall source area. Post-remediation sampling will evaluate the concentrations of all the CMS COPCs in the calculation of the HI, but the residual concentrations of TNT, RDX and barium will determine whether the objective of attaining an HI<1.0 is met. In this calculation, the mean of post-remediation CMS COPC sampling results will be used, specifically the 95% upper confidence limit on the mean.

Because RDX and TNT are involved with both noncancer and cancer risks, the minimum of their respective MCSs are proposed as the site MCS.

The MCSs based on an HI <1.0 ~~cannot be~~ will be determined using~~without~~ post-remediation sampling results and the 95% upper confidence limit on the mean concentrations. To satisfy the cancer risk requirement for the environmental worker, TNT and RDX must be less than or equal to their carcinogenic SSALs. If it is assumed that post-remediation average concentrations of TNT and RDX are equal to these SSALs, ~~A~~an estimate of the MCS for barium, ~~however,~~ can be calculated using the HI. ~~if it is assumed that the post-remediation average concentrations of TNT and RDX are at their cancer risk MCSs for RDX and TNT, and that, furthermore, these cancer risk MCSs are the site MCSs.~~ Following these assumptions, the calculated barium MCS concentration would be approximately ~~would be approximately 10,000~~10,000 mg/kg. Because the total HI is less than one for the construction worker, this MCS would be protective of construction workers.

4.2.2 Outfall Source Area Surge Bed MCSs

The outfall source area risk assessments did not assess the contaminated surge bed~~s~~ and powder unit beneath the source area because these areas are not directly accessible to humans. The concern with these units ~~surge beds~~ lies in their potential to adversely affect groundwater, either by discharging to the alluvial groundwater systems or by discharging to regional groundwater via fracture and surge bed flow paths. Although placement of the settling pond cap as part of the outfall source area IM has alleviated the potential for ponding of water and subsequent infiltration of groundwater, subsurface fracture groundwater flow paths may still intercept the surge bed horizons.

Because of the absence of potential human exposure pathways and the lack of constant groundwater contact, MCSs for these units ~~surge beds~~ are not defined and a best management practice (BMP) remedial objective that calls for the isolation or removal of the 17-ft surge ~~bed is proposed~~, where approximately 9700 mg/kg of HE was detected (LANL 1998, 59891), is proposed. In contrast to the upper surge bed, HE concentrations do not exceed 4 mg/kg in tuff units below the upper surge bed. An HE concentration of 4 mg/kg poses less potential for adverse effects to regional groundwater than an HE concentration of 9700 mg/kg. On this basis the deeper vadose zone units (such as powder beds and surge beds) is deferred to the regional groundwater RFI, where modeling will be conducted to determine whether remediation of HE in these areas is necessary. The regional groundwater RFI is due in August 2006.~~Other tuff discontinuities, such as powder beds, showed concentrations similar to those for the 45-ft surge bed, are similarly not addressed.~~

4.3 Proposed MCSs for Springs, Groundwater and Surface Water

The CMS COPCs for surface water, alluvial groundwater and springs in Cañon de Valle and Martin Spring Canyon are listed in section 3.2. The CMS COPCs include barium, manganese, RDX, DNX, MNX and TNT, though not all are present in every location.

For barium, the proposed MCS for alluvial groundwater and surface water consists of the barium NMWQCC standard for groundwater (1000 µg/L). For manganese, the proposed MCS consists of the manganese NMWQCC standard for groundwater (200 µg/L). It is not known whether manganese is the result of naturally occurring reducing conditions present in the saturated alluvium or man-made reducing conditions caused by the present of organic HE. If man-made, once HE concentrations are reduced through remediation, manganese concentrations should decrease. If natural, decreasing HE concentrations will have no affect on manganese concentrations. If the manganese is naturally occurring, this MCS will not apply.

RDX, DNX, MNX, and TNT do not have standards and are not listed as toxic pollutants subject to a 10^{-5} risk threshold. Nevertheless, as part of the industrial-trail user scenario, in the Phase III RFI (LANL 2003, 77965), cancer risks were calculated for these compounds as associated with incidental ingestion of site waters. The RFI determined that under this scenario the potential risk associated with site contaminants was less than 10^{-5}, which complies with the NMWQCC toxic pollutant ARAR.

Potential risks were not calculated for a second exposure scenario, residential ingestion of regional groundwater at the nearest municipal drinking water well. To date, no site-related contaminants have been detected at the closest municipal well, which is located approximately 4 mi from the site. Calculation of the potential risk and the corresponding MCSs for this scenario are deferred to the regional groundwater CMS. The regional groundwater CMS will calculate the potential risk and the risk-based MCSs for shallow groundwater by using a predictive groundwater transport model to calculate the transport of shallow site water contaminants to the closest municipal well.

At the present time, only an MCS for barium and manganese in groundwater and surface water is proposed. For other CMS COPCs in springs, surface water and groundwater, the MCSs will be developed as part of the regional groundwater CMS.

For all site waters, it is proposed that remediation is complete when the MCSs, developed either as part of this CMS or the regional groundwater CMS, are attained for eight consecutive quarters. This is consistent with current NMWQCC abatement standards in 20 NMAC 6.2.4103.

4.4 Proposed MCSs for Alluvial Sediment

The proposed ARAR for alluvial sediments stipulates that alluvial~~alluvial~~ sediments not cause groundwater or surface water contaminant concentrations at the point of withdrawal that exceed the water ARARs. The alluvial sediment ARAR makes no distinction between groundwater and surface water because of the interchangeability of waters at the site.

For barium, the MCS for shallow site water is the NMWQCC standard. As discussed in section 3, the sediment-water partition coefficient for barium that describes the sediment barium concentration in equilibrium with a barium water concentration is not currently known. Therefore, testing of the sediment to determine compliance with the sediment ARAR is proposed using standard leaching test procedures, with test results averaged across the alluvial vadose zone in a statistically ~~statistically~~ representative fashion.

For sediment CMS COPCs, such as RDX and TNT, without corresponding MCSs derived from NMWQCC standards, the vadose zone sediment ARARs state that sediment concentration of contaminants not cause water contaminant concentrations to exceed a risk level of 10^{-5}. As discussed above, there are two points of shallow site water withdrawal: an industrial trail-user scenario in which shallow surface water is ingested and a regional groundwater drinking water scenario involving the nearest municipal well. Under the industrial trail-user scenario, site waters did not pose an unacceptable risk; and by inference, site alluvial sediments are not likely to cause water to exceed the risk threshold for this scenario.

Calculation of shallow site water MCSs that are protective of regional groundwater is deferred until completion of the regional groundwater CMS. Once established, these MCSs can be applied to leaching test results for sediments to determine compliance with the sediment ARAR. As with barium, the test results would be averaged in a statistically representative fashion across the alluvial vadose zone.

Alluvial sediments should also not cause unacceptable risk to the ecological environment. For COPCs such as silver, this implies a sediment concentration at which ecological testing, such as chironomus testing, consistently fails.

4.5 POCs

Compliance with the MCSs is determined at specified POCs. These are specific locations where regular sampling is conducted for the purpose of assessing progress in attaining the MCSs.

For the outfall source area, soils will be remediated to attain the risk-based MCSs. To determine compliance with the risk-based MCSs within the outfall source area, the POCs consist of post-remediation sampling points. The mean (95% upper confidence limit of the mean) would be calculated and compared to the MCSs to determine compliance.

For the outfall area settling pond 17-ft surge bed, a POC is not proposed, given that there are no MCSs. To gauge the success of the BMP for this area, however, a new groundwater well is proposed to be installed for the 17-ft surge bed horizon. This well will be used to test for the presence of contaminated groundwater within the surge bed. If contaminated groundwater is detected inside the grouted area, then corrective steps will be taken consisting of additional grouting.

The proposed groundwater POCs in Cañon de Valle consist of the five existing alluvial groundwater wells. These wells are located within the groundwater plume. The historical data that exists for these locations will enable a determination of remedial progress with respect to past trends. Progress in attaining the remedial objective of eight consecutive quarters of MCS compliance will also be determined at each POC. As part of the Consent Order, three additional wells will be installed within the Cañon de Valle alluvial system. These wells, due to be installed in the 2008-2009 timeframe in locations downgradient from the existing alluvial wells, will also serve to gauge remedial progress.

For surface water, two POCs located along the perennial reach of surface water are proposed. The first surface water sampling point is proposed for the midpoint of the perennial reach; the second is proposed for the end of the perennial reach.

In Martin Spring Canyon, the three existing alluvial groundwater wells are proposed as the POCs. These wells may go dry, given that Martin Spring is currently dry. If Martin Spring stays dry, alluvial groundwater in Martin Spring Canyon may be seasonally, rather than permanently, present. Sampling of the POCs will be conducted during the seasonal periods when groundwater is present.

A single POC for Martin Spring surface water is proposed. Given that the spring has gone dry, surface water in Martin Spring may be limited to seasonal cycles or stormwater events. Sampling of the POC for compliance would be conducted during the periods when surface water is present.

For the springs in Cañon de Valle and Martin Spring Canyon, the proposed POC is spring water. ~~wherever it emerges from the ground.~~ Fixed sampling points, one at each spring, will be used. If spring flow is intermittent, sampling will be conducted during periods of flow.

For alluvial sediment, the proposed POCs are a statistically representative set of sediment sampling points at which samples would be collected and subjected to a leaching test to determine an equilibrium water contaminant concentration. The 95% upper confidence limit of the mean water concentration would then be calculated and compared to the water MCSs to determine compliance.

4.6 CTF

The CTF establishes the length of time required to attain the MCSs. A specific CTF is not proposed for the outfall source area, springs, or alluvial systems. Site conditions, including the magnitude and extent of contamination and potential risks, do not warrant the imposition of an urgent, set time frame in which the remedial objectives and MCSs must be attained. Rather, the time required to meet these targets will be used as an evaluation factor for remedial alternatives, recognizing that those alternatives that require less time to meet the remedial and MCSs are preferable.

5.0 SELECTION OF REMEDIATION TECHNOLOGIES AND SCREENING

5.1 Overview of the CMS Process

Prior sections of this CMS report have reviewed current site conditions, identified CMS COPCs for site media, and proposed MCSs and POCs. In the remaining sections of this report, remedial technologies are evaluated (section 5), corrective measure alternatives are formed using the screened technologies and evaluated (section 6), and the preferred corrective measure alternatives are proposed (section 7). The public enters the decision-making process following regulatory submittal of this document. The PIP is presented in Appendix D. Figure 5.1-1 presents a flow chart of the CMS process.

The focus of the remediation technology screening process is on barium and HE. Although manganese is listed as a CMS COPC for Cañon de Valle and Martin Spring groundwater, it is not known at present whether the presence of manganese is due to natural reducing conditions present in these canyons or is the result of reducing conditions caused by the presence of HE. In the latter case, the remediation of HE will alleviate these reducing conditions, and manganese groundwater concentrations will decrease. Silver is also a CMS COPC, although the area of concern is limited to SWSC cut. Excavation technologies will be examined for this area.

5.2 Identification of Remediation Technologies

5.2.1 Sources for Technology Information

The process of selecting and evaluating corrective measure alternatives begins with reviewing all remediation technologies, both standard and innovative, that could be used to achieve the MCSs for the various site media. Sources of candidate technologies include literature reviews, working groups, and EPA databases.

Since January 1998, Laboratory personnel have participated in the DOE's Innovative Treatment and Remediation Demonstration (ITRD) Program's HE Advisory Group, a group whose goals are the identification and testing of potentially cost-saving remediation technologies for HE environmental contamination. The ITRD Program was designed to study HE and barium remediation technologies in both soils and water, focusing on the unique problems associated with DOE HE-processing facilities such as LANL and Pantex. Contamination at these sites differs from that found at many Department of Defense (DoD) sites because of the occurrence of barium and because the principal HEs used were HMX and RDX (the nitrosamines) rather than TNT and DNT (the nitroaromatics). In the ITRD Program, DOE facilities work cooperatively with the EPA, industry, national laboratories, and state and federal regulatory agencies to identify applicable, innovative, and cost-effective remedial technologies. For this CMS, the ITRD Program served as a resource for technologies and information about their effectiveness.

5.2.2 Overview of Technology Types

Remediation technologies may be broadly classified as either in situ (in place) or ex situ (removed from place). In situ technologies do not require removal of the media (i.e., in situ remediation of soils involves treatment in place rather than excavation). These definitions apply to site shallow groundwater, surface water, sediment, and soil.

Technologies can be further classified by their point of application and their operating principle. In general, in situ technologies have the advantage of minimally disrupting the local ecosystem, which, for Cañon de Valle, includes wetlands and a threatened and endangered species (the Mexican Spotted Owl).

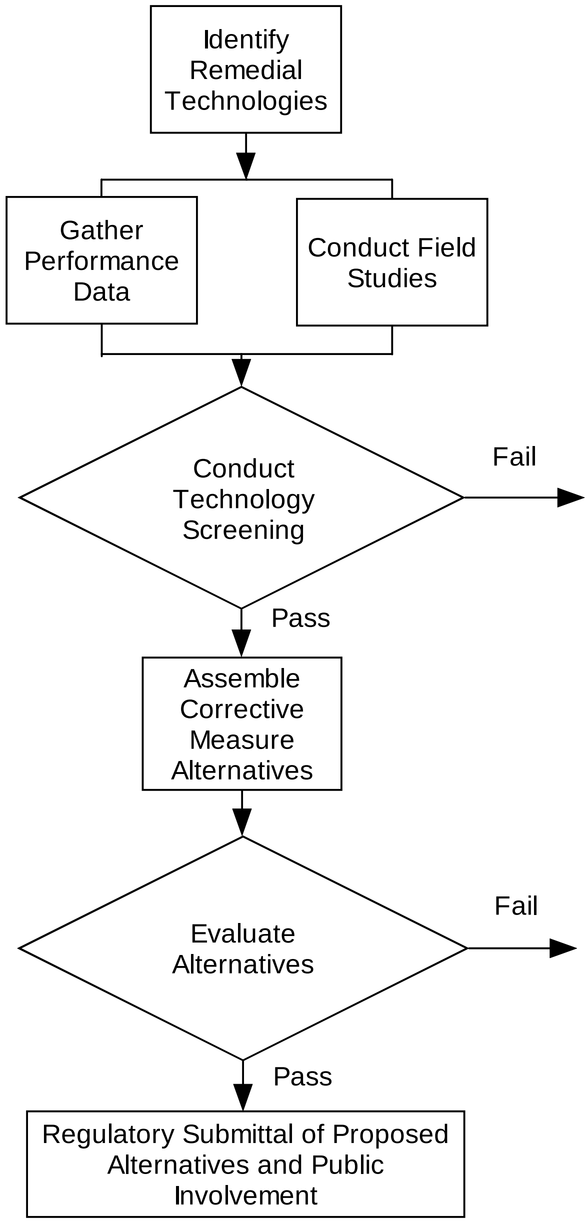

Figure 5.1-1. Flow chart of the CMS process for proposing alternatives

The disadvantages of in situ technologies include leaving contaminants or their byproducts in the environment and difficulties with demonstrating effectiveness and completion. Ex situ technologies, particularly when combined with off-site disposal, have the advantage of completely removing contaminants from the environment and the disadvantage of substantially disrupting the local ecosystem.

Containment technologies isolate the contamination and prevent migration and exposure. This isolation may prevent direct exposure or preclude contamination of other media, thereby preventing secondary exposure. One example of in situ technology is the capping of soils to prevent infiltration of surface water. One ex situ example is excavation of soils and their placement in a secure landfill.

Stabilization technologies limit the environmental movement of contaminants by altering the chemistry or physical state of the contaminant, usually by converting it into a non-soluble form. Like containment technologies, they may be either in situ or ex situ. Soil removal and stabilization at a secure landfill is an example of ex situ stabilization.

Other technologies destroy the contaminants and are typically ex situ. Examples include thermal destruction or incineration, chemical oxidation, and bioremediation, with bioremediation employed either in situ or ex situ. These are referred to, broadly, as thermal, physical-chemical, and biological treatment, respectively.

5.2.3 Standard Remediation Technologies

Several remediation technologies are considered standard proven technologies for the treatment of barium and HE in soil and water. Although they are standard, these technologies often have limitations regarding application and cost-effectiveness at a specific site. These limitations have been the impetus for the development of new innovative technology. Table 5.2-1 presents a list of standard remediation technologies that have been implemented on a production scale, in the field, for HE and barium at the Laboratory and at other sites across the country.

Table 5.2-1
Standard Technologies for Remediation of HE and Barium

Ex Situ Treatment of Soils
• Incineration • Thermal desorption • Stabilization and landfilling (for hazardous soils) • Landfilling without treatment (for nonhazardous soils) • Composting • Bioremediation and landfilling
In Situ Treatment of Soils
Low permeability caps Impermeable covers
Ex Situ Treatment of Water
• GAC[a] treatment for organic HE

[a] GAC = granulated activated carbon.

5.2.4 Innovative Remediation Technologies

Innovative technologies hold the promise of increased effectiveness and lower cost when compared to standard technologies. Any innovative technology needs to be compared with the standard baseline technologies to determine if there is any overall benefit to schedule, performance, cost, or regulatory acceptability.

The ITRD Program identified a list of innovative treatment technologies for in situ or ex situ applications at the Laboratory and at Pantex (LANL 1998, 62413.3). This list is shown in Table 5.2-2. Since the ITRD HE Advisory Group first met in 1998, several of these technologies have undergone significant development.

To augment the ITRD findings, a literature review was conducted for this CMS to gather additional information about technology performance status and data. For example, zero valent iron (ZVI) has shown promise as a technology for groundwater remediation of organic HE constituents when it is deployed as part of a permeable reactive barrier (PRB) (Wildman and Alvarez 2001, 80123). Similarly, calcium sulfate has shown promise for the immobilization of barium in groundwater by forming relatively insoluble barium sulfate (barite) (Wilkens et al. 2001, 79572).

5.3 Screening of Standard and Innovative Technologies

5.3.1 ITRD HE Working Group Screening of Technologies

Using the identified innovative technologies in Table 5.2-2, the ITRD HE Advisory Group screened each one for its applicability to sites at the Laboratory and Pantex (LANL 1998, 62413.3). To help with this evaluation effort, Pantex and the Laboratory provided detailed information about site monitoring, contaminant distribution, and geotechnical data to the ITRD HE Advisory Group. Additionally, the group toured SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon. The screening factors included the following requirements:

- Be protective of human health and the environment
- Attain likely MCSs
- Control the sources of releases to reduce or eliminate, to the extent practicable, further releases that may pose a potential unacceptable risk to human health and the environment
- Comply with standards for management of wastes

As a result of the screening, the innovative technologies shown in Table 5.3-1 were retained for further evaluation for use at SWMU 16-021(c)-99 and affected areas. Evaluation included pilot-scale testing. Some of the technologies eliminated by the ITRD, such as natural attenuation, were reconsidered for this CMS because of advances in the technology or advances in site characterization.

5.3.2 Recent Technology Pilot and Field Studies

To date, phytoremediation, composting, and chemical treatment using ZVI pilot-treatment studies have been completed by ITRD members and collaborators. Other important studies not listed in Table 5.3-1 include the Pantex in situ bioremediation field study (EPA 1996, 79573). These studies, as well as others, are described in greater detail below.

Table 5.2-2
Innovative Remediation Technologies Identified by the ITRD HE Advisory Group

Technology Name	Technology Class	In situ/Ex situ Medium
Bioaugmentation Biosep/DuPont process	Biological	In situ soils
Biodegradation(aerobic, anaerobic) with gas and liquid phase additions	Biological	In situ soils
Biodegradation with thermal enhancement	Biological	In situ soils
Biodegradation with natural attenuation	Biological	In situ soils
Biodegradation—phytoextraction	Biological	In situ soils
Soil flushing	Physical-chemical	In situ soils
Potassium permanganate treatment	Physical-chemical	In situ soils
Cobalt-60 irradiation	Physical-chemical	In situ soils
Fenton’s reactions	Physical-chemical	In situ soils
Chemoxidation	Physical-chemical	In situ soils
Soil heating with soil vapor extractions	Thermal	In situ soils
Soil vitrification	Thermal	In situ soils
Radio frequency heating	Thermal	In situ soils
Steam stripping	Thermal	In situ soils
Downhole burner (disco)	Thermal	In situ soils
Composting	Biological	Ex situ soils
Bioslurry—white rot fungi, bioslurry—indigenous microbes	Biological	Ex situ soils
Bioslurry-gas phase additions	Biological	Ex situ soils
ZVI abiotic reduction	Physical-chemical	Ex situ soils
Solvent extraction	Physical-chemical	Ex situ soils
Fenton’s reagent	Physical-chemical	Ex situ soils
Base hydrolysis with humic acid	Physical-chemical	Ex situ soils
Solvated electrons	Physical-chemical	Ex situ soils
Gamma irradiation	Physical-chemical	Ex situ soils
Molten salt	Physical-chemical	Ex situ soils
Electron beam	Physical-chemical	Ex situ soils
UV[a]/peroxide	Physical-chemical	Ex situ surface and groundwater
Peroxone	Physical-chemical	Ex situ surface and groundwater
Titanium oxide/UV	Physical-chemical	Ex situ surface and groundwater
Phytoremediation	Biological	In situ surface and groundwater
Electron beam	Physical-chemical	Ex situ surface and groundwater
ZVI	Physical-chemical	Ex situ surface and groundwater
Supercritical water oxidation	Physical-chemical	Ex situ surface and groundwater
Biotreatment	Biological	Ex situ surface and groundwater
Reactive barriers	Physical-chemical	Ex situ/in situ surface and groundwater

[a] UV = ultraviolet.

Table 5.3-1
Innovative Technologies Recommended for Further Study by ITRD HE Advisory Group

Technology	Media	Nature of Pilot Study
Chemical treatment/ZVI	Soil	Laboratory-scale
Bioslurry with ZVI	Soil	Laboratory -scale
Phytoremediation	Water	Pilot-scale
Passive barrier	Water	Laboratory- and pilot-scale
Bioremediation—vapor phase augmented	Soil	Pilot-scale
Composting	Soil	Pilot-scale

5.3.2.1 Martin Spring Canyon Stormwater Filter: Field Study

A pair of stormwater filters was installed at Martin Spring (IT Corporation 2001, 80122) as part of a feasibility study for treatment of HE- and barium-contaminated springs water. The filters were designed and constructed by StormWater Management, Inc., of Portland, Oregon (Figure 5.3-1). Stormwater filters are commonly used to treat runoff from parking lots. To treat both the barium and HE, it was necessary to install two separate units, each with a different filter medium. The first unit contains GAC to remove HE, and the second unit contains ion exchange resin to remove barium. The units were plumbed in series such that springs water first encountered the GAC filter, then the ion exchange resin filter.

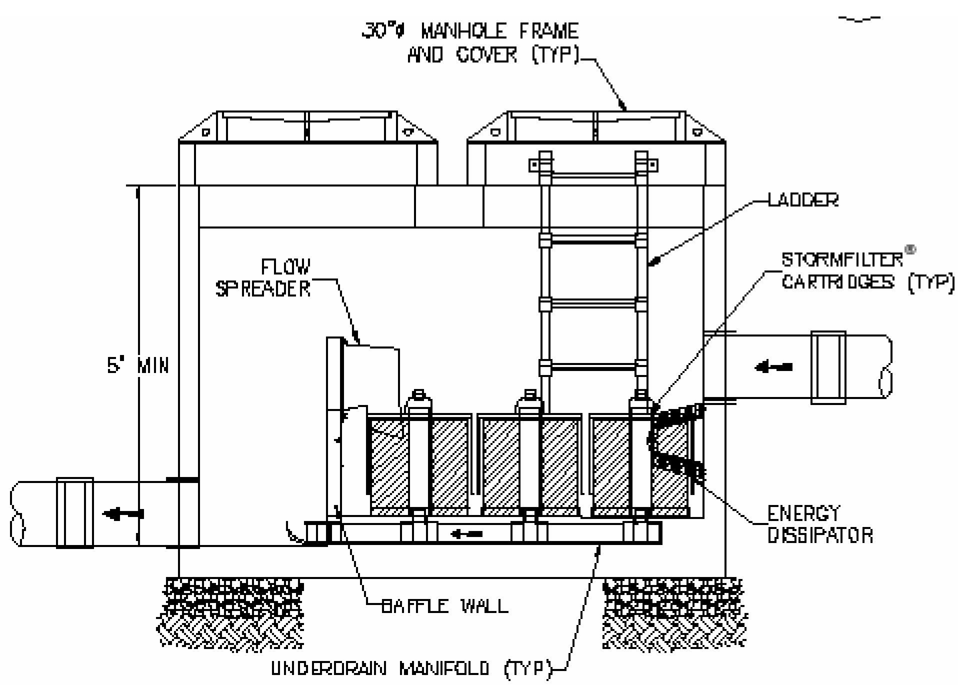

Figure 5.3-1. Typical stormwater filter, side view
(diagram courtesy of StormWater Management, Inc.)

For RDX, the units have performed well to date, but barium breakthrough has been detected earlier than anticipated, the cause of which is not known.

5.3.2.2 Phytoremediation: Field Study

HE has been shown to degrade in constructed wetlands (Sikora et al. 1997, 80124). Natural wetlands may also have some HE degradation ability. At Burning Ground Spring, a 200 m^2 natural wetland area is present between the spring outlet and the confluence with the main Cañon de Valle channel. This wetland was the focus of an investigation into the potential for phytoremediation of RDX and TNT (IT Corporation 2002, 79576). Concentrations of the parent compounds and primary metabolites were monitored at several locations within the wetland. The study also examined the capability of the dominant plant species to take up RDX. These plant species include sago pondweed (*Potamogeofpectinatus L.*), water stargrass (*Heteranthera dubia*), elodea (*Elodea canadensis*), parrotfeather (*Myriophyllum aquaticum*), reed canary grass (*Phalaris arundinacea L.*), wool grass (*Scirpus cyperinus*), and sweetflag (*Acorus calamus L.*). The specific objectives were to

- monitor levels of RDX and TNT breakdown products across the Burning Ground Spring wetland and determine if any reduction in parent compound concentration by wetland plants can be detected,
- monitor concentrations of primary metabolic breakdown products to help determine if degradation of RDX and TNT is occurring in the wetlands,
- observe seasonal trends in HE concentrations and wetland degradation performance, and
- conduct bench-scale laboratory studies of selected wetland plant species that are present at the Burning Ground Spring site and determine if they are capable of taking up HE.

The overall objective of the study was to assess the effectiveness of wetlands as an in situ treatment technology for the HE-contaminated surface waters present in Cañon de Valle.

The results from the Burning Ground Spring wetland investigation indicate that, under the current surface water flow pattern and retention time from the spring outlet to the confluence with Cañon de Valle, there is no evidence for a reduction in RDX and TNT concentrations from phytoremediation. Certain locations within the wetland, however, showed evidence of RDX biodegradation caused by microbial degradation. This indicates that the wetland area could be modified to enhance the microbial degradation processes (e.g., increasing water residence time under anaerobic conditions).

5.3.2.3 TNT and RDX Removal Using ZVI

In 1997, University of Nebraska researchers conducted laboratory tests of ZVI’s ability to remove TNT and RDX from water and soils. The effectiveness of ZVI in removing TNT and RDX from contaminated soil slurries in the laboratory indicates that ZVI might be successfully used to remediate these compounds from contaminated soil and water on a field scale (Hundal et al. 1997, 79575).

5.3.2.4 Composting and ZVI: Field Study

In 2000, a pilot-scale composting study was conducted at TA-16 (IT Corporation 2002, 79577). The study used surface soils from the outfall source area (prior to the IM excavation of these soils) to test both a conventional composting process and the Grace Bioremediation Technologies Daramend™ ZVI treatment process (EPA 1996, 79573). This study investigated technologies that could, to varying degrees, effectively treat the highly contaminated HE and barium soils in the outfall source area. In the study, ammonium sulfate was used to immobilize barium through the formation of a relatively insoluble barium sulfate precipitate (barite). Ammonium sulfate was also a soluble-nitrogen source for the compost.

Conventional composting achieved substantial reductions in total HE concentrations, with HE levels likely meeting or exceeding potential appropriate treatment goals for the outfall source area drainage channel derived wastes. Barium was effectively stabilized by the ammonium sulfate. The most significant limitations of conventional composting are the time required for treatment, the space requirements, and the large increase in waste volume; amendments comprise approximately 70% of the waste. Daramend™ did not perform as well as conventional composting, and potential HE treatment goals were not reached; however, in other studies (EPA 1996, 79573) Daramend™ successfully reduced HE concentrations to levels comparable to those achieved through conventional composting and the process remains potentially advantageous due to its minimal increase in waste volume.

Pilot testing of both methods have shown that elevated temperatures and the maintenance of anoxic reducing conditions are critical for success. The composting experiments were negatively affected by large diurnal fluctuations in ambient air temperature due to the low thermal mass of the treatment piles. The Daramend™ experiments were subject to moisture-content control problems due to uneven drying rates within the small treatment piles and the non-uniform distribution of added water which was, in turn, due to the limitations of hand mixing methods. Both temperature and moisture requirements would be easier to meet in the field, where the larger masses of soil would reduce rapid soil drying and diurnal temperature fluctuations.

For the IM treatment of soils, excavation and off-site disposal were selected over on-site treatment such as composting. This decision was made on the basis of cost and on the time and space required for on-site composting of excavated soils.

5.3.2.5 Pantex In Situ Bioremediation of HE-Contaminated Soils: Field Study

The first pilot-scale field demonstration of a technology for in situ remediation of vadose zone soils contaminated with HE was conducted at Pantex in 1999–2000 (Rainwater et al. 2002, 79752). The HE of concern at the demonstration site were RDX, TNT, and TNB. To stimulate the anaerobic conditions required for biodegradation, the system used nitrogen injection through a well array to flood the vadose zone. After 300 days of operation, the concentrations of HE were reduced by approximately one-third. While promising, applying this technology in Cañon de Valle would be difficult, given the long narrow configuration of the canyon and the difficulty of attaining an adequate nitrogen flooding of the soil.

5.3.2.6 Massachusetts Military Reservation, Camp Edwards: Innovative Technology Evaluation

An innovative technology evaluation program was initiated by the US Army and National Guard Bureau in March 2000 to identify and investigate promising innovative technologies for remediating soil and groundwater contaminated with explosives at Camp Edwards (Weeks and Veenstra 2001, 79580). This program specifically targeted technologies and vendors that had demonstrated success with remediating HE-contaminated soils. Promising technologies for soil and groundwater remediation were selected for laboratory treatability studies based upon each vendor’s response to a request for a proposal specific to Camp Edwards. The technologies chosen for the soil program were composting, solid-phase bioremediation, low temperature thermal destruction (LTTD), bioslurry, chemical oxidation, and chemical reduction. Using soils from the Known Distance Rocket Range at Camp Edwards, treatability studies were performed for composting, solid-phase bioremediation, LTTD, and bioslurry. Although the soil contained RDX, TNT, HMX, dieldrin, lead, and other contaminants, the goal of the studies was to address explosives. The study obtained the following results:

- Composting successfully treated washed (by soil washing) soils and partially succeeded in degrading HE compounds in unwashed soils. The results indicated that HMX concentrations were reduced to cleanup goals; however, RDX concentrations were not reduced to levels below cleanup goals.
- Solid-phase bioremediation using the Daramend™ process, which uses ZVI, effectively degraded HE compounds to levels below soil cleanup goals in one of the two studies performed on the washed soils and in one of the two studies performed on the unwashed soils.
- Low-temperature thermal destruction appears to effectively reduce the concentrations of HE compounds to levels below soil cleanup goals in unwashed and washed soils at temperatures of 250oC and 300oC.
- Bioslurry results using intermittently stirred reactors met soil cleanup goals over a period of 35 days in both unwashed and washed soils. Soil cleanup goals were met only in the continuously stirred reactors using previously washed soils.
- Chemical oxidation (using Fenton’s Reagent) partially succeeded in degrading explosive compounds in washed soils. Concentrations of explosive compounds were reduced, but not to levels below cleanup goals.
- Using ZVI with the addition of aluminum sulfate, chemical reduction was effective in washed soils. Concentrations of explosive compounds were reduced to levels below cleanup goals. Tests were not conducted on unwashed soils.

5.3.3 Screening of All Technologies

The candidate technologies from all sources, including the ITRD HE Advisory Group and literature searches, are presented in Table 5.3-2, along with the screening evaluations. The evaluation of screening factors is summarized in this table through a plus (+) and minus (–) system. In the evaluation, feasibility, given site-specific conditions, is weighted more heavily than other factors. This is because feasibility assesses whether the technology is applicable from a practical standpoint. Advancement of a technology to the next stage of the CMS process (development and evaluation of corrective measure alternatives), is indicated by either a yes or no. A more complete description of the evaluation of each technology is presented below.

5.3.3.1 Ex Situ Treatment of Soils

The ex situ treatment of soil implies that soil is excavated and either treated on-site or treated, and disposed of, off-site. In the case of off-site treatment, clean soil is imported. Assuming a 2-km excavation length in Cañon de Valle, and a cross-sectional area of 10 m^2, the volume of excavated soil is approximately 20,000 m^3. This volume is probably conservative given the fact that the width of the active channel in several areas of Cañon de Valle is less than 1 m across. Soil contamination, however, may not be limited to the active channel (LANL 2003, 77965). Moreover, post-excavation soil swell may increase

Table 5.3-2
Final Screening of Remedial Technologies

Technology Name	Protection of Human Health and the Environment	Ability to Meet Media Cleanup Standards	Ability to Control Releases	Compliance with Standards for Management of Wastes	Feasibility Given Site-Specific Conditions	Retained for Further Evaluation?
Ex Situ Treatment of Soils						
Incineration	+[a]	+	+	+	-[b]	No
Low-temperature thermal destruction	+	+	+	+	-	No
Soil washing	+	+	+	+	-	No
Off-Site landfilling (nonhazardous soils)	+	+	+	+	+	Yes
Off-Site stabilization	+	+	+	+	+	Yes[c]
Soil bioslurry	+	+	+	+	+	Yes[c]
Composting (including accelerated)	+	+	+	+	+	Yes[c]
In Situ Treatment of Soils						
Composting	-	-	-	+	-	No
Bioremediation (vapor-phase augmented)	-	-	-	+	-	No
Low permeability cap (source area)	+	+	+	+	+	Yes
Grouting of source area surge beds	+	+	+	+	+	Yes
Stabilization of barium by sulfate addition	+	+	+	+	-	No
Flushing of alluvial sediments	+	+	+	+	+	Yes
Ex Situ Treatment of Groundwater						
GAC treatment for RDX	+	+	+	+	+	Yes
Ion exchange treatment for barium	+	+	+	+	+	Yes
In Situ Treatment of Groundwater						
PRBs—GAC	+	+	+	+	+	Yes
PRBs—ZVI	+	+	+	+	+	Yes
Stormwater filters	+	+	+	+	+	Yes
Slurry walls	-	-	-	-	-	No
Phytoremediation	-	-	-	+	-	No
Monitored natural attenuation	-	-	-	N/A[d]	-	No

[a] + = favorable. [b] - = unfavorable [c] Likely to be feasible for off-site hazardous treatment only.
[d] N/A = not applicable.
.

the in situ volume by 10%. Alternatively, a limited excavation of areas with elevated concentration may be feasible if more restricted excavation length and corresponding soil volume are removed.

In general, excavating areas such as the one that contains Cañon de Valle alluvial sediments is problematic due to National Environmental Policy Act (NEPA) and wetlands concerns, including the disturbance of wetlands and Mexican Spotted Owl habitat. Nevertheless, excavation could be effective if coupled with the appropriate remediation technologies, and the anticipated soil volume is not prohibitive. For the limited silver sediment contamination potentially present in SWSC cut, limited excavation is an effective technology. Excavation and candidate treatment technologies have been developed into corrective measure alternatives and are evaluated in section 6.

(a) Incineration

Incineration was first demonstrated on explosives-contaminated soil in 1982 at the Savannah Army Depot (Sisk 1998, 58940). Projects have been completed at four sites, with costs that range from $250 to $600 per ton. Pilot-scale feed rates were 200–400 lb/hr, and full-scale rates are estimated to be 20–40 ton/hr. The advantages of incineration are (1) it is a process that can handle a wide range of waste characteristics and contaminant concentrations, (2) it has a large treatment rate, (3) it has little downtime, (4) it is not affected by the weather, and (5) it can treat both liquids and solids. Incineration has been used to treat explosive compounds and reduce levels to 1 mg/kg. Neither incineration nor any thermal treatment removes inorganic barium. Consequently, other technologies, such as soil washing with water, must be used in tandem with thermal treatment.

The disadvantages of incineration include a negative public perception, the need for air pollution control equipment and air permitting to control byproducts, high mobilization and demobilization costs ($2–3.5 million), and the energy-intensive nature of the process. On average, 2 yr are required to obtain regulatory approval for incineration.

In general, on-site treatments of remediation wastes will require a corrective action management unit (CAMU) permit. The CAMU permitting alone may require several years. The difficulties involved in obtaining a CAMU permit meant that off-site disposal was favored for the IM remediation project (LANL 2000, 64355.4).

On the basis of the preceding discussion, incineration is not retained as a preferred technology, despite its proven ability to meet standards. Primarily because of the high permitting costs and negative public perception, and the relatively small volume of soil that is anticipated, its feasibility is unfavorable and it is not retained for further evaluation.

(b) Low-Temperature Thermal Destruction

Low-temperature thermal destruction is similar to incineration, except that lower temperatures are used. In this process, soil containing trace explosives residues is heated in a rotary kiln to volatilize or desorb contaminants. Volatilized contaminants are destroyed in a thermal oxidizer or adsorbed onto carbon. Thermal desorber units are typically smaller than incineration units and require less mobilization expense and consequently less threshold soil volumes to justify their use. Consequently, per-ton costs are less than incineration (approximately $150 per ton). Like incineration projects, thermal desorber projects require an extended permitting process, including a trial testing period. Although the process is similar in operating principle to incineration, the public and regulatory perception is somewhat better, and it has been widely used for soil remediation, primarily for petroleum hydrocarbon and chlorinated hydrocarbon remediation. Like incineration, thermal desorption will not remove barium, which would require a technology such as soil washing for removal.

As an on-site treatment requiring a RCRA CAMU permit, thermal desorption would require a lengthy permitting process. Moreover, given the successful IM remedial action, which used off-site soil disposal cost-effectively, on-site treatments are at an economic disadvantage. Therefore, any on-site treatment would have to show significant cost advantages over off-site disposal.

Schedule and cost requirements dictated by the CAMU permitting required for on-site treatment however, place on-site treatment in general at a disadvantage, especially for the relatively small volume (20,000 m^3) of soil in this case. For these reasons, the feasibility of thermal desorption is unfavorable and it is not retained for further evaluation.

(c) Soil Washing

Soil washing has been shown to be effective for such HE as RDX and TNT (Weeks and Veenstra 2001, 79580). Soil washing also removes barium, if it is present in a soluble form such as witherite (barium carbonate). Soil washing has been successfully used in technology demonstration projects and in full-scale site-remediation projects (EPA 1993, 79565). To treat barium-containing wash water, sulfate precipitation or ion exchange would be used. The average cost for soil washing is $170 per ton, including excavation (Federal Remediation Technologies Roundtable 2002, 79570).

The principle of soil washing is largely based on separating soil particles by size and density, which takes advantage of preferential HE adsorption onto the FOC within soil. In essence, the process is one of waste volume reduction, with the FOC subjected to other treatment, or off-site disposal. The clean fraction is returned to the excavation.

As an on-site treatment, soil washing would require a CAMU permit, so it suffers from the same disadvantages as incineration and low-temperature thermal destruction. Moreover, soil washing must be implemented with other technologies that address HE. For these reasons, the feasibility of soil washing is unfavorable and it is not retained for further evaluation.

(d) Off-site Landfilling without Treatment (Nonhazardous Soils)

Off-site landfilling was used successfully on nonhazardous soil during the IM remediation of the outfall source area (LANL 2002, 73706). Hazardous wastes were shipped to Waste Management's Chemical Waste Management (CWM) Subtitle C facility in Lake Charles, Louisiana, where the waste was treated using their EPA-approved bioremediation process. Nonhazardous wastes were loaded directly from the pile into 30 yd^3 end-dumps and shipped to Waste Management's industrial waste landfill in Rio Rancho, New Mexico, at a cost of approximately $50 per ton. Off-site landfilling requires compliance with land disposal restriction (LDR) under RCRA. Because of its successful implementation at TA-16 as part of the 260 IM and MDA P (LANL 2003, 76876) projects, and the assumption that most soils, sediments, and tuff should qualify as nonhazardous, this technology is retained for further evaluation.

(e) Off-site Stabilization

Stabilization of HE-contaminated soil has been demonstrated at the Umatilla Army Depot site (EPA 1995, 58942; Channel 1996, 58943). Stabilization was the selected remedy for the Umatilla Army Depot Burning Ground because its soil contained metals as well as explosives. Incineration was also evaluated, but addressing the metals would have required stabilization after incineration, for a total cost of $15 million. The cost of stabilization alone was estimated at $4 million. An on-site landfill accepted the stabilized soil, which had to meet toxicity characteristic leaching procedure (TCLP) criteria for metals as well as separate leaching criteria for HE. Laboratory- and pilot-scale tests were performed using combinations of Portland cement, fly ash, and GAC as amendments. Carbon in the cement mix improves performance, 5% GAC provides optimal performance. The full-scale recipe used only 10% Portland cement, no fly ash and 1–1.5% GAC. This reduced recipe caused about 10% of the waste to fail TCLP, requiring breakup and retreatment. Approximately 30,000 tons of soil was processed, at a cost of approximately $5 million.

The Umatilla Army Depot stabilization operation had a capacity of 80 ton/hr and a cost of $170 per ton (turnkey). It is estimated that costs at other sites would range from approximately $150 to $200 per ton (turnkey costs). There is about a 50% increase in volume over the starting amount. To better stabilize barium as insoluble barium sulfate, stabilization amendments could also include sulfates. At the Laboratory's MDA P, stabilization was used on barium-hazardous soils at a cost, including transportation and treatment at a Texas landfill, of approximately $250 per ton (Criswell 2003, 80121).

The cost of stabilizing nonhazardous soils precludes its application to the outfall source area soils and nonhazardous canyon alluvial sediments. If hazardous soils or sediments were encountered, however, stabilization is a feasible ex situ technology. Judging by the existing barium sediment concentrations in Cañon de Valle, barium-hazardous sediments may be encountered during the excavation of Cañon de Valle. Based on the preceding discussion, stabilization is retained for further evaluation.

(f) Soil Bioslurry

Slurry phase biotreatment was demonstrated successfully at the Joliet Army Ammunition Plant in 1995 and 1996 and at the Iowa Army Ammunition Plant in 1997 and 1998 (US Army Environmental Center 2003, 79578). Bioslurry consistently achieved removal rates above 99%, with a high rate of mineralization. These studies, which were performed in support of feasibility studies at Joliet and Iowa Army Ammunition Plants, developed comprehensive concept designs and cost estimates for full-scale application of aerobic and anaerobic bioslurry processes. The studies found that bioslurry systems have higher construction and facility costs, but lower operation and maintenance costs, when compared to composting. An estimated unit cost of $230–270 per ton is close to that of composting.

Bioslurry was evaluated as an HE soil-remediation technology as part of treatability studies conducted at the Massachusetts Military Reservation, Camp Edwards (Weeks and Veenstra 2003, 79580). The tests used previously treated (by soil washing) and untreated soils. The results successfully met soil cleanup goals over a period of 35 days in both the unwashed and washed soils.

Bioslurry is feasible for the off-site treatment of soils, and is retained for further evaluation. Like stabilization, it is a candidate technology for the off-site treatment of hazardous soils and sediments only.

(g) Composting

The broad category of composting includes conventional composting (land-farming) and accelerated composting processes such as Daramend™ (EPA 1996, 79573), a composting process with ZVI soil amendments, and Chemical Waste Management's two-stage, solid-phase (TOSS) composting process (Waste Management, Inc. 2003, 79582), which was used for the off-site treatment of hazardous soils from the IM excavation of the outfall source area (LANL 2002, 73706). The underlying operating principle of each is bioremediation, and excavation is generally required prior to composting so that the soil can be worked.

Both the Daramend™ and the more conventional composting technologies were evaluated in the feasibility study conducted at TA-16 (see section 5.3.2). TOSS is a two-stage solid-phase bioremediation technology that involves both anaerobic and aerobic treatment stages. For the first stage, HE-contaminated soil is combined with a carbon source, an innoculum, vitamins, and water to achieve anaerobic conditions. The resulting mixture is formed into a static pile or placed in a bermed construction area or box to facilitate the chemical reduction of nitroaromatic and nitramine explosives. For the second stage, the anaerobically treated soil is combined with yard waste compost and built into an aerated biopile. The biopile may be aerated by forced air which is conveyed through perforated piping buried within the pile or by turning the pile with a compost turner.

Previous testing of TOSS has demonstrated TNT-removal efficiencies that are greater than 99% (Waste Management, Inc. 2003, 79582). Moreover, TOSS was used successfully as an off-site treatment for the hazardous soils excavated during the IM remediation at the outfall source area, as referenced above.

For the IM at the outfall source area, composting was ruled out as a method for treating on-site hazardous and nonhazardous soils on the basis of cost, time needed for treatment, and space considerations. Based on the preceding information, composting by TOSS is retained for further evaluation as an off-site treatment of hazardous soil, sediments, or tuff, but not as an on-site treatment.

5.3.3.2 In Situ Treatment of Soils

(a) Composting

While shown to be effective ex situ (see section 5.3.2), composting either the outfall source area soils or canyon alluvial sediments in situ would not be feasible, given the requirement for soil amendment and working of the soil. Moreover, the small volume of outfall source area soils (less than 100 yd^3), precludes cost-effective in situ treatment. For these reasons, composting is not retained for further evaluation as an in situ treatment.

(b) Bioremediation with Vapor-Phase Augmentation

Used at Pantex as part of a feasibility study (Rainwater et al. 2002, 79752), this technology used nitrogen injection through a five-spot injection well pattern to flood the vadose zone, thereby stimulating the anaerobic conditions required for biodegradation (see section 5.3.2). After 300 days of operation, the concentrations of HE were reduced by approximately one-third. Although it is promising, application of this technology at Cañon de Valle would be difficult, given the long narrow configuration of the canyon and the difficulty of attaining adequate nitrogen flooding of the soil. For these reasons, this bioremediation technology is not retained for further study.

(c) Low Permeability Cap

Installing a low permeability cap in Cañon de Valle to prevent the further leaching of HE from canyon alluvial sediments by precipitation would not be effective or practical. According to the SCM, residual barium and HE is present in the vadose zone and could be mobilized by rising alluvial groundwater. A cap would not address groundwater. Moreover, installation is not practical given the long narrow configuration of the canyon and the lack of a well-defined area of sediment contamination.

A low permeability cap was installed for the outfall source area settling pond as part of the IM. The purpose of the cap was to preclude the infiltration of stormwater into lower horizons, including the surge beds. Because the cap is in place and is presumably effective, it will be retained as a technology for the outfall source area, including the surge beds.

(d) Grouting of Source Area Surge Beds

In situ grouting with clay-based grouts has been used to isolate mine waste drainage (EPA and DOE 1997, 79569) and prevent underflow in dams (USGS 2001, 79579). Isolating the surge bed within the outfall source area by grouting would prevent groundwater flow into the contaminated areas of the surge beds. Contamination would remain in place, but would be isolated from further contaminant transport. Grouting is feasible because the surge beds possess a relatively higher permeability than the surrounding tuff. An estimate of the relative permeability between intact tuff and the surge beds is provided in the RFI Phase III (LANL 2003, 77965), where a surge bed and intact tuff hydraulic conductivities of 3.8×10^{-3} and 1.7×10^{-8} cm/sec, respectively, are reported for intermediate depth borings. Respective porosities were 51 and 20 percent. The permeability of the surge bed is roughly a factor of 10^{5} higher than surrounding tuff. An implementation would require (1) better definition of the extent of the surge beds, and (2) the installation of boreholes for grouting. Grouting is retained for further evaluation.

(e) Barium Stabilization by Sulfate Addition

The in situ stabilization of barium in sediments entails mixing in calcium sulfate to enable the formation of insoluble barium sulfate (McGraw 2003, 80700). While this would be feasible ex situ, the in situ application would be difficult to implement given the requirements of sediment amendment and of mixing for several (in Cañon de Valle), potentially at depths of up to 5 ft. Such a disruption to the canyon is not likely to be feasible, given wetlands and NEPA concerns. While ex situ treatments requiring excavation pose similar disruptions, the general effectiveness of ex situ over in situ favors ex situ technologies. For these reasons, this technology is not retained for further evaluation.

(f) Flushing of Alluvial Sediments

Soil flushing is a process, which is naturally ongoing in canyon alluvial sediments, by which precipitation and stormwater serve to flush contaminants. According to the SCM, the canyon sediments, both saturated and unsaturated, contain HE and barium residues that are mobilized by water. These HE and barium residues may take several forms, including sorbed, dissolved, and, in the case of barium, precipitated. Remediation by soil flushing removes and captures the flushed contaminants. Natural flushing is slow, particularly under drought conditions. Induced flushing adds water to accelerate the process.

Either natural stormwater or induced flushing must be coupled with another technology that captures or treats the resulting contaminated water. Otherwise, the resulting groundwater may infiltrate into underlying tuff and potentially migrate to the regional aquifer. At TA-16, where protecting the underlying regional aquifer is a focus, the control of flushed water is a concern, particularly because the water creates a higher static head, which may increase vertical infiltration. Two technologies for containing the resulting contaminated water are (1) groundwater recovery and treatment, and (2) a system which treats groundwater as it flows through the PRB.

In the initial technology screening conducted by the HE Advisory Group as part of the CMS plan (LANL 1998, 62413.3), the potential for failing to contain soil-flushing water was cited as a negative factor. Subsequent Phase III RFI geophysics conducted in Cañon de Valle, however, identified canyon regions that are likely to be areas of enhanced infiltration (LANL 2003, 77965). These potential infiltration areas could allow proper placement of groundwater recovery or PRB systems so that flushing water would be treated prior to infiltration. These groundwater recovery or treatment systems may consist of recovery wells, interceptor trenches, or PRBs. On the basis of the preceding discussion, soil flushing is retained for further evaluation.

5.3.3.3 Ex Situ Treatment of Groundwater

Ex situ treatment of groundwater involves recovering groundwater with wells or recovery trenches, treating the water in a central above-ground treatment plant, and then discharging the treated water back into the alluvium. The methods for groundwater recovery, including wells and interceptor trenches, are further evaluated in section 6.

(a) GAC Treatment for RDX

Treating RDX with GAC has been done successfully on field-scale HE-remediation projects (Card and Autenrieth 1998, 76873; Federal Remediation Technologies Roundtable 2002, 79570; Pantex Plant 2003, 79784). GAC's high capacity to adsorb RDX and the simplicity of the technology make it attractive for use in RDX groundwater treatment plants. GAC treatment may also be useful for an in situ application such as a PRB or stormwater filter. On this basis of prior treatment success, the technology is retained for further evaluation.

(b) Ion Exchange Treatment for Barium

Ion exchange treatment of dissolved barium has been used with success on several field-scale projects (American Water Works Association 1990, 80125). In a treatment plant setting, ion exchange treatment typically consists of packed beds of sorbent, either ion exchange resin or clay beds such as zeolites. As part of the Martin Spring stormwater filter study, ion exchange was used for barium, but premature breakthrough, which may have resulted from mechanical difficulties with the stormwater filter was a problem (IT Corporation 2001, 80122).

The preferential adsorption of barium onto ion exchange resin can cause difficulties and expense with the regeneration of the resin. This may favor natural zeolites or conditioned clays that are less expensive and can be landfilled. On the basis of this discussion, ion exchange for barium is retained for further evaluation.

5.3.3.4 In Situ Treatment of Groundwater

(a) PRBs

Within the last 10 yr, PRBs have been developed for the treatment of dissolved groundwater contaminants, particularly recalcitrant contaminants such as chlorinated volatile organics which do not readily biodegrade. When compared to ex situ groundwater recovery and treatment, PRBs offer several advantages, primarily the potential for low operating costs due to low maintenance of an in situ system. A conceptual drawing of a PRB is shown in Figure 5.3-2.

PRBs commonly contain ZVI, the oxidation of which helps to create reducing conditions needed for the degradation of contaminants. To treat barium, a PRB using calcium sulfate to form immobile barium sulfate has also been reported (Wilkens et al. 2001, 79572) (EPA 2003, 79568). While GAC PRBs have not been found in the literature, in principle, GAC PRBs should also be effective given the effectiveness of ex situ GAC groundwater treatment for RDX.

In the laboratory, ZVI has shown promise as an in situ treatment of explosives residues, such as RDX, in groundwater. A ZVI PRB in Cañon de Valle would likely consist of a ZVI-containing PRB in which ZVI was deployed as an active medium. In the form of a bed of iron filings and inert media, such as pea gravel, a ZVI PRB degrades RDX while groundwater flows through the PRB. The technology can be deployed alone, or in combination with other technologies such as soil flushing. Although the exact mechanism is

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unknown, the reducing environment of the zero valent metal is thought to promote the reductive degradation of RDX. Recently, an anaerobic bioremediation component was shown to be an important part of the process (EPA 2000, 79567). Based on the ability of PRBs to successfully treat other

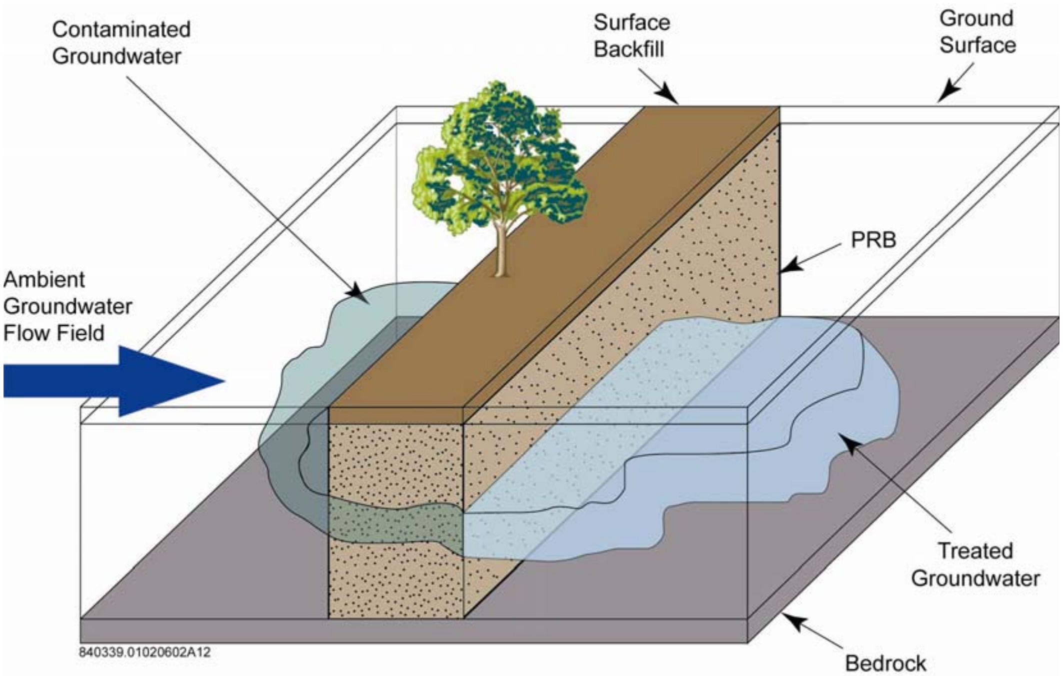

Figure 5.3-2. Conceptual drawing of a PRB

contaminants, and their potential to successfully treat RDX and barium, the technology is retained for further evaluation.

(b) Stormwater Filters

As part of a field feasibility study, stormwater filters were installed in Martin Spring Canyon (IT Corporation 2001, 80122). These filters used GAC to treat RDX and ion exchange resin to treat barium (see section 5.3.2). The filters proved to be effective for RDX, though barium showed breakthrough, which may have been due to mechanical difficulties. The filters are an attractive option because of their relatively low cost (approximately $60,000) and suitability for use at the springs. Stormwater filters could potentially be combined with other technologies such as PRBs. Despite the difficulties experienced with barium in the field study, the technology is retained for further evaluation.

(c) Slurry Walls

Slurry wall technology is used to either divert groundwater from contaminated soils or prevent contamination of clean soils. In addition, slurry walls can also be used to direct groundwater through a PRB. In Cañon de Valle, use of a slurry wall is difficult to envision, given that the canyon vadose zone sediments are already contaminated with barium and RDX. A slurry wall may have some utility during canyon excavation to divert groundwater around the excavation, but given the shallow depth of the alluvium, a recovery trench is more suitable. In addition, given the narrow configuration (approximately 10-20 ft wide) of Cañon de Valle alluvium, use of a slurry wall to deflect groundwater through a PRB would not be required. For these reasons, slurry wall technology is not retained for further evaluation.

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(d) Phytoremediation

Phytoremediation did not effectively remediate such HE as TNT and RDX (IT Corporation 2002, 79576) as part of a wetland system at Burning Ground Spring (see section 5.3.2). Some evidence of RDX degradation was detected, but it was attributed to an anaerobic microbial pathway. Implementation would require alternate aerobic/anaerobic zones, which would entail alternately flooded and dry zones. Zones of flooding have the potential to increase vertical infiltration of contaminated groundwater. The slow rate of degradation, coupled with practical problems, precludes this technology from further evaluation.

(e) Monitored Natural Attenuation (MNA)

Natural attenuation is defined as dilution, dispersion, volatilization, adsorption, biodegradation, and abiotic reactions that reduce contaminant concentrations in site groundwater or soil over time. MNA is a site remediation alternative in which the progress of natural attenuation is monitored by periodic testing. Its use has been prompted by the observation that sites such as petroleum hydrocarbon contamination sites often clean themselves up over a period of a few years, principally by natural biodegradation. By contrast with petroleum hydrocarbons, however, natural attenuation of HE compounds is not well documented. It is generally thought to be slow because of the recalcitrance of HE organic compounds such as RDX and HMX to biodegradation, except under unusually anaerobic conditions. One exception is TNT, which is generally more receptive to natural biodegradation.

As an inorganic contaminant, barium is not biodegradable. Barium, however, an opportunity for MNA because of its propensity to adsorb onto clay and other minerals through an ion exchange or adsorption process. Furthermore, once sorbed, the barium may stay “locked down,” making it unavailable for further migration. This may explain why RDX has been observed at relatively high concentrations in groundwater from regional aquifer well R-25 with respect to RDX concentrations in Cañon de Valle alluvial groundwater, whereas barium has been detected at relatively low concentrations (less than 100 µg/L), despite its presence at higher relative concentrations in alluvial groundwater and sediment over a long reach of Cañon de Valle. At present, however, the process is not well understood, nor has it been characterized for site-specific conditions.

For the above reasons, MNA is not retained for further evaluation for the purposes this CMS, however, it may be a viable option for the regional groundwater corrective measure (contaminant migration pathways to potential receptors are longer for regional groundwater).

6.0 DEVELOPMENT AND EVALUATION OF CORRECTIVE MEASURE ALTERNATIVES

6.1 Assembly of Remediation Technologies into Corrective Measure Alternatives

The identification and screening of remediation technologies identified potentially applicable technologies, both standard and innovative, that are capable of attainment of MCSs and remedial objectives for the site. In this section, those technologies are assembled into corrective measure alternatives and associated conceptual designs and subjected to evaluation. This evaluation yields the preferred alternative that is proposed for a specific area of the site. Depending on the site conditions, corrective measure alternatives may consist of one or more technologies. Moreover, the alternatives are not mutually exclusive; a combination of one or more alternatives may be preferred.

The focus of the remedial alternatives is barium and HE. Although manganese is listed as a CMS COPC for Cañon de Valle and Martin Spring groundwater, it is not known at present whether the presence of manganese is due to natural reducing conditions present in these canyons or is the result of reducing conditions caused by the presence of HE. In the latter case, the remediation of HE will alleviate these reducing conditions, and manganese groundwater concentrations will decrease.

Based on remedial objectives developed in section 4, the following areas of the site are the focus of this CMS:

- Outfall source area residual soils and tuff,
- Outfall source area settling pond and 17-ft surge bed,
- Cañon de Valle springs, surface water, alluvial sediment, and alluvial groundwater,
- Martin Spring Canyon spring, surface water, alluvial sediment, and alluvial groundwater.

Table 6.1-1 presents the candidate corrective measure alternatives for these areas. For the outfall source area, excluding the settling pond, the sole alternative is soil removal and off-site disposal. Tuff is not addressed by this alternative, only soil. The mean tuff barium and TNT concentrations do not exceed the MCSs (as estimated in section 4.0) outside of the settling pond. For RDX, the mean tuff concentration is slightly above (45 mg/kg) the MCS for RDX (36.9 mg/kg); however, tuff does not pose the same degree of potential hazard as soil with regard to dust generation during potential construction.

Alternatives for the outfall source area settling pond 17-ft surge bed (referred to as the surge bed hereafter) are:

- excavation and off-site disposal of the surge bed and cap installation (replacement of the existing cap) on the settling pond;
- in-situ grouting of the surge bed and maintenance of the existing settling pond cap; and,
- maintenance of the existing settling pond cap but no action for the surge bed.

For Cañon de Valle and Martin Spring Canyon springs and alluvial systems, three alternatives consisting of several technologies are described. These are:

- alluvial sediment excavation for HE and barium and off-site disposal, with stormwater filters for springs;
- natural flushing of sediments for HE and barium removal coupled with PRB (ZVI or GAC and calcium sulfate) alluvial groundwater treatment (for HE and barium) and stormwater filter treatment for springs; and,
- natural and induced flushing of sediment (for HE and barium) and recovery of spring and groundwater and treatment in a central treatment system, followed by injection discharge of treated water (induced flushing) to alluvial sediment.

6.2 Process for Evaluation of Corrective Measure Alternatives

Corrective measure alternatives are compared and contrasted using criteria established in the CMS Plan (LANL 1998, 62413.3), including:

- performance and reliability,

Table 6.1-1
Proposed Corrective Measure Alternatives

Site Area	Alternative Number	Description
Outfall source area (excluding settling pond)	I.1	Soil removal and off-site disposal
Outfall source area settling pond and 17-ft surge bed	II.1	Excavation and offsite disposal of the 17-ft surge bed and replacement/maintenance of the existing cap
	II.2	In situ grouting of the 17-ft surge bed and maintenance of the existing cap
	II.3	Maintenance of existing cap and no action for the surge beds
Canyon springs and alluvial system	III.1	Sediment excavation and offsite disposal, with storm water filters for springs
	III.2	Natural flushing of sediments coupled with PRB[a] (ZVI[b] or GAC[c] and calcium sulfate) alluvial groundwater treatment and storm water filter treatment for springs
	III.3	Natural/induced flushing of sediments and recovery of spring and groundwater (by interceptor trenches) and treatment in a central treatment system
	III.4	Resampling of SWSC Cut for silver to define extent of silver sediment contamination, followed by limited excavation

[a] PRB = permeable reactive barrier.
[b] ZVI = zero valent.
[c] GAC = granulated activated carbon.

- reduction of toxicity, mobility, or volumes of contaminants or wastes,
- effectiveness in achieving MCSs,
- time required for implementation,
- ease of installation,
- long-term reliability,
- institutional constraints,
- mitigation of human health and environmental exposures,

- other considerations, such as safety and waste minimization; and
- cost.

These criteria are compliant with Task VIII of Module VIII of the Hazardous Waste Facility Permit for Los Alamos National Laboratory (NM0890010515) (EPA 1994, 44146) and RCRA CA guidance (55 FR 30798; 61 FR 19432), though ordered differently. Sections 6.2.1 through 6.2.11 further explain these criteria.

6.2.1 Performance and Reliability

These criteria are used to assess both the effectiveness of considered remedial approaches in controlling the source of release and the impacts associated with the potential remedy. The effectiveness of remedial approaches at similar sites and under analogous conditions is considered.

6.2.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

This criterion is used to evaluate whether the proposed alternatives are effective at reducing the contamination at the site and determines if the remedy successfully eliminates or reduces the toxicity, reduces the ability of the contaminant(s) to move, or substantially decreases the volume.

6.2.3 Effectiveness of Remedy in Achieving Target Concentrations

This criterion is used to assess each alternative with regard to its ability to achieve the target MCSs.

6.2.4 Time Required for Implementation

This criterion is used to assess the time required to implement each potential alternative and the time anticipated to see the results. The setup and implementation of an alternative includes the design, mobilization, demobilization, construction, permitting, establishment of a monitoring system, and waste acceptance for off-site disposal. For hazardous waste treatment, permits are required prior to construction.

6.2.5 Ease of Installation

The ease of installation criterion is used to consider the degree of difficulty that implementing the alternatives will entail. Examples of site conditions that may affect implementation include depth to water table, heterogeneity of surface and subsurface materials, terrain, and site location. Other conditions include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities.

6.2.6 Long-Term Reliability

Evaluation of long-term reliability is used to assess the alternatives with respect to length of time that an alternative can be maintained in an effective condition.

6.2.7 Institutional Constraints

This criterion is used to consider the alternative’s regulatory requirements, including federal, state, local, and public health regulations, or permitting requirements that may substantially affect the implementation of the alternatives.

The laws and regulations that may apply to the SWMU 16-021(c)-99 CMS under the proposed EPA Subpart S and Module VIII of the Laboratory's Hazard Waste Facility Permit (EPA 1994, 44146); the medium (e.g., surface water or soil) to which each relevant regulation applies; and the wetlands permitting process and threatened and endangered species protection under NEPA are discussed hereafter. Wetlands issues pose a major institutional requirement that may preclude certain corrective measure alternatives.

Generator and Transporter Requirements Any action resulting in the generation of hazardous and solid wastes under the CMS will comply with the regulations under 20 NMAC 4.1.100 which adopts 40 CFR Part 260 et seq. for hazardous waste management. These requirements will also apply to the hazardous and solid wastes generated during the treatment of soils and water.

Land Disposal Restrictions The restrictions on the land disposal of hazardous wastes address mitigation of the hazards that are posed by waste constituents. All SWMU 16-021(c)-99 activities that generate hazardous waste as part of the RCRA corrective action will comply with the LDR requirements of 20 NMAC 4.1.400 which adopts 40 CFR Part 268. If a media is treated in situ and a waste is not generated, the LDRs do not apply, as stated in the Federal Register Volume 63, pages 28556-28634, published May 26, 1998. However, any ex-situ CMS treatment (soil or water) that generates a waste is required to comply with LDR requirements.

Public Participation and Community Relations RCRA § 7004 encourages public participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program activities. The Public Participation and Community Relations regulation is currently implemented in the RRES-RS project through community interactions with stakeholders such as Citizen's Advisory Board, the Northern New Mexico pueblos, the County of Los Alamos, and officials of the community. Public participation activities specific to SWMU 16-021(c)-99 are included in Appendix D as part of the PIP.

The National Environmental Policy Act Section 102(2)(c) of the National Environmental Policy Act (NEPA) requires that all federal agencies prepare an environmental assessment (EA) for all major federal actions that have the potential of affecting the quality of the human environment. The DOE has established procedures for compliance with NEPA. These procedures are defined in 10 CFR 1021 and 40 CFR 1500–1508. Before implementing a CMS alternative, all NEPA procedures will be completed. The environmental safety and health (ESH) questionnaire will be completed and reviewed by the Laboratory's NEPA team. A significant NEPA issue for this CMS is the presence of the threatened Mexican Spotted Owl. Other NEPA issues relevant to the site are covered under the wetlands section which follows hereafter. Because of the importance of NEPA issues at this site, the permitting process is described in detail.

Wetlands Permitting Process Figure 6.2-1 illustrates of the wetlands permitting process. This process which is applicable to projects in most states is more specialized for projects in Northern New Mexico, where projects are subject to the Albuquerque District Regulatory Office of the United States Army Corps of Engineers (USACE). The USACE is charged with enforcing Section 404 of the Clean Water Act (CWA) subject to the review and authority of the EPA Office of Wetland Protection.

Wetlands Identification

The permitting process begins with a determination of the applicability to the subject project of the requirements of Section 404 of the CWA. Applicability is established based on two primary components: (1) the proposed project must contain jurisdictional waters, and (2) these waters are expected to be affected by dredge and fill activities during project construction or operation. With respect to the Section 404 permit, jurisdictional waters include navigable waters of the US, interstate waters (lakes, rivers, and streams), interstate wetlands, all impoundments of these waters, and tributaries to these waters. For federally funded projects, determination of the presence of jurisdictional waters typically

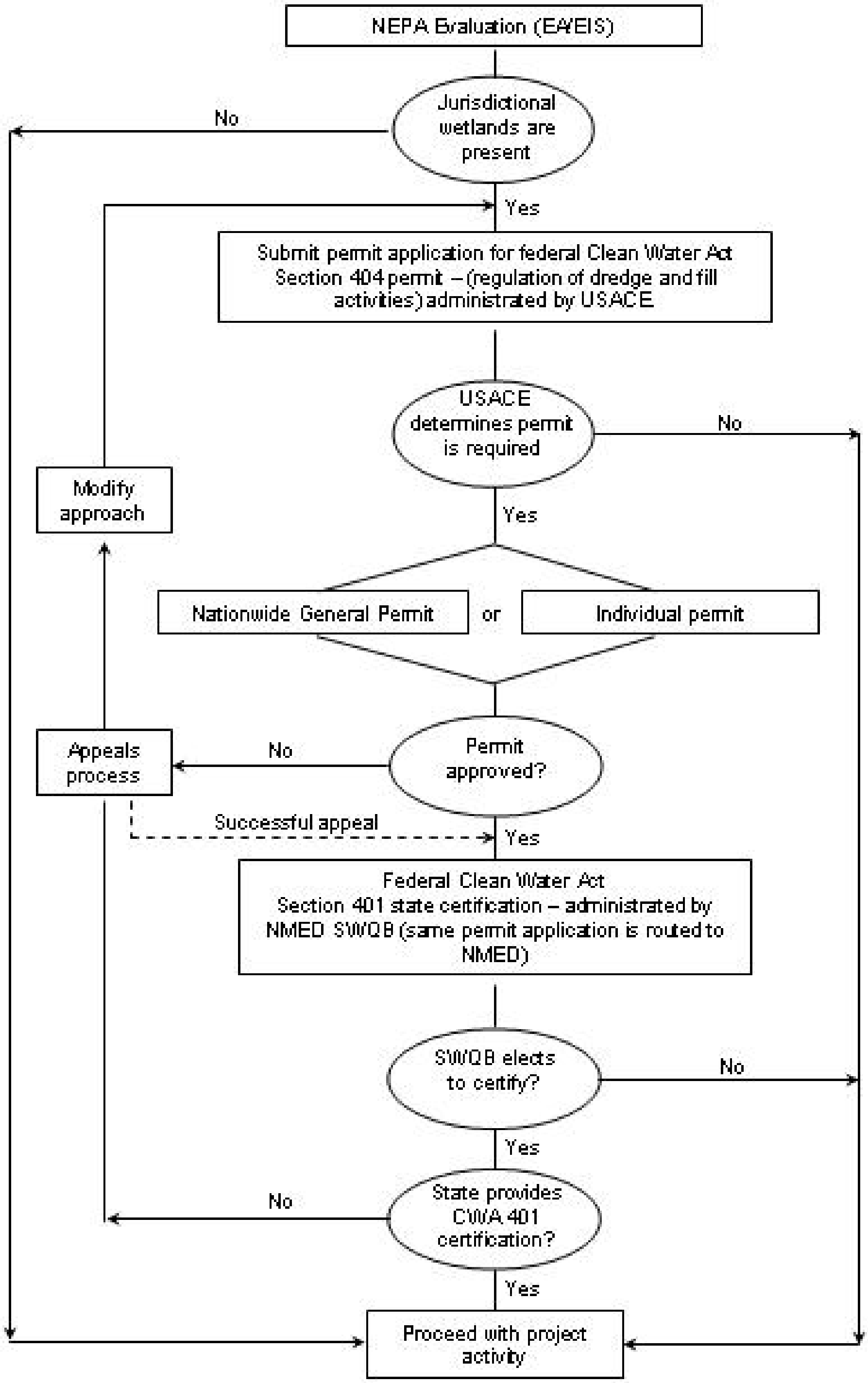

Figure 6.2-1. Flowchart of wetlands permitting process

occurs during the NEPA review phase of the project; either through an EA or an environmental impact statement (EIS). Wetlands are determined to be present according to the findings of a review of vegetation, soil, and hydrologic indicators.

404 Applicability Determination and Submittal of Section 404 Permit to USACE

After establishing that jurisdictional waters are present, the applicability of Section 404 is evaluated with regard to types of activities expected to occur during construction and long-term operation of the project. In general, the USACE has determined that activities that involve placement of fill material, ditching, levee construction, road construction, or land-clearing in an area that could affect jurisdictional waters require permitting under Section 404 of the CWA. If there is any question about the applicability of the Section 404 permit, or the type of permit for which to apply, arrangements can be made through the USACE Albuquerque district secretary for consultation. Officially, the determination of applicability is made by the USACE district office after formal review of the Section 404 Permit application for the project.

In New Mexico, application is submitted for the Section 404 permit by use of a joint application for a permit through the Department of Army and the Surface Water Quality Bureau (SWQB). In general, the joint permit application requires the following:

- information about the applicant;
- name of project and affected water bodies;
- nature, purpose, and duration of the project activity;
- reason(s) for discharge of dredged or fill material into wetlands or water body;
- maps illustrating limits of wetlands or water bodies to be dredged or upland areas to receive dredge discharges; and
- description of water quality impacts and mitigation measures.

USACE Determines if Permit Required

Based on the criteria presented, the Albuquerque District of the USACE determines if a Section 404 permit is required for the project. For projects that require Section 404 permitting, there are two general permitting options. A particular project may be permitted as an individual or under a pre-existing nationwide permit (NWP). The USACE has developed 39 NWPs that address types of typical construction projects and activities whose wetland impacts are considered minimal. The specific NWP for the cleanup of hazardous and toxic wastes in NWP 39, which provides exemption for activities contained entirely on sites under the regulations of the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA). In general, issues related to the NWPs are discussed through consultation with the USACE before the application is made, and the applying party understands whether or not an NWP can be obtained and what the permit requirements entail.

USACE Permit Approval

After the applicability of Section 404 applicability is established and the application is made for the permit, the USACE makes a determination as to whether the project can be permitted under either an individual permit or NWP. The review process takes 45 days for NWPs and from 60 to 120 days for individual permits. If an individual permit is sought, a public review and response period is required, and the USACE conducts or updates the NEPA EA or EIS for the project. The process of conducting additional NEPA evaluation opens the project to scrutiny of all areas covered by NEPA, including, but not limited to, threatened and endangered species, natural and cultural resources, historical properties, and public involvement.

In general, permits are not issued if

- there is a practicable alternative which would have less impact;
- the discharge would violate any applicable federal legal standards;
- it would result in significant degradation of waters of the US and
- unless appropriate and practicable steps have been taken to minimize potential adverse effects.
- Permit denials of individual or NWP permit components can be appealed subject to the provisions of 33 CFR Part 331. The appeals process can take up to a maximum of 180 days.
- *CWA Section 401 State Certification*

Under Section 401 of the CWA, the State of New Mexico has the option to certify any Section 402 or 404 CWA permits or licenses. If the certification option is exercised, the state can deny, approve, or approve conditionally the subject permit. In New Mexico, the SWQB of the NMED is charged with this responsibility. Typically, SWQB approval requires that the project be in accordance with applicable state laws and regulations, such as the New Mexico Surface Water Quality Standards.

In general, the NMED elects to certify Section 404 NWPs if affected streams are perennial or intermittent. Certification is typically waived for small ephemeral streams. All Section 404 individual permits undergo state certification. The state has up to 60 days to conduct or waive Section 401 certification. If for any reason a Section 404 permit cannot be certified under Section 401, the applicant has to make appropriate modifications (e.g., mitigation measures, engineering controls, best management practices), and resubmit the permit application through the process.

The Clean Water Act The CWA requirements apply to the CMS at SWMU 16-021(c)-99 if additional discharges, impacts to stormwater, or release of treatment agents will result from implementing the CMS. Under the proposed corrective measure alternatives, only groundwater treatment uses chemicals that may be subject to provisions of the CWA.

The Clean Air Act The Clean Air Act is not applicable for the CMS because there are no anticipated air releases. Typically, dust is mitigated for health and safety reasons during excavation activities.

The Toxic Substances Control Act The Toxic Substances Control Act(TSCA) is not applicable to the CMS at SWMU 16-021(c)-99 because no significant TSCA constituents are present.

NMED Groundwater Discharge Permit

A groundwater discharge permit is required for any discharge of treated groundwater to the subsurface. An application and permitting process involves development of a sampling and analysis plan to ensure that the discharge meets discharge standards.

6.2.8 Mitigation of Human Health and Environmental Exposures

Each alternative was evaluated with respect to its capability to mitigate short- and long-term potential risks to human receptors both during and after implementation. There were no associated environmental risks to ecological receptors (LANL 2003, 77965).

6.2.9 Cost

The relative costs of each alternative were compared. The cost estimate for each alternative included costs for each phase of implementation, including design construction and operations and maintenance (O&M). In accordance with RCRA guidance (55 FR 30798; 61 FR 19432), a 30-yr lifetime is assumed. Costs are reported in terms of capital and installation costs and 30-yr O&M costs, which are presented in terms of net present value (NPV), assuming a discount rate of 5%, net of inflation. Wherever possible, costs are based on prior projects at the Laboratory. The costs estimates are accurate to approximately plus or minus 15%.

Costs were divided into design, permitting, installation, and operations and maintenance activities. Costs for all proposed alternatives are presented in Appendix C.

6.2.10 Other Considerations

Additional criteria important in the evaluation of the alternatives include:

- public acceptance of feasible technologies;
- the safety of nearby environments as well as workers during implementation; and
- energy efficiency, pollution prevention and waste minimization, and resource conservation.

6.3 Outfall Source Area

One alternative is proposed for this area: soil removal and off-site treatment and disposal. The volume of residual soil to be removed is expected to be less than 100 yd^3.

6.3.1 Soil Removal and Off-Site Disposal (Alternative I.1)

Under this alternative, outfall source area soils with levels of contamination that exceed the MCSs are removed by excavation and disposed of off site in a permitted landfill. The focus of the remediation will be on barium, TNT and RDX, because these comprise the majority of the potential non-cancer and cancer risk in the outfall source area. This alternative excludes contaminated tuff underneath the existing cap system within the settling pond. The previously completed IM removed the majority of highly contaminated soil. Currently, a maximum of 100 yd^3 of soil with contamination levels above the MCSs remain in isolated pockets in the area.

Because of the presence of hazardous concentrations of HE, the IM used expensive remote excavation methods. Based on analytical results, the remaining soils do not pose an explosive hazard and can be removed by skid loaders and hand digging. On-site field analytical techniques, such as immunoassay methods, are proposed to be employed to ensure that all soil with contamination levels that exceed the soil MCSs are removed and that soils meet the LDRs. If acceptable for disposal, soils will be loaded into roll-off bins for transport to a licensed disposal facility. If hazardous soils are encountered, they will be disposed of off site and treated by a licensed hazardous waste treatment facility. Treatment by the facility will consist of bioremediation for HE, which was shown to be a successful form of treatment for both MDA P and outfall source area soils excavated during the IM. Soils that are hazardous for barium would be treated by stabilization.

6.3.2 Evaluation of Alternatives

6.3.2.1 Performance and Reliability

Because soil removal and off-site disposal offer the potential of removing all residual soil with contaminant levels above the MCSs, it thereby precludes exposure to contaminants at levels above the MCSs. The performance and reliability for this alternative are high.

6.3.2.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

Soil removal and off-site disposal of soils with contaminant levels above the MCSs reduce the toxicity of the remaining soil. A requirement for off site disposal in a hazardous waste landfill is that the LDRs are met, which by definition limits contaminant mobility. This alternative does not increase or reduce the volume of excavated soil. Based on available soil analytical data, hazardous wastes are not expected.

6.3.2.3 Effectiveness of Remedy in Achieving Target Concentrations

Soil removal and off-site disposal are effective at achieving the MCSs for contaminant concentrations within the outfall source area. Under this alternative contaminated soil is physically removed from the site and is no longer accessible.

6.3.2.4 Time Required for Implementation

For soil removal, the time required to meet the MCSs at the site is simply the time required to complete the field excavation. Excavation activities, including mobilization, excavation, waste manifesting, post-removal confirmation sampling, and demobilization for soils with contaminant levels above the MCSs for barium, RDX and TNT will likely require from two to four weeks to complete.

6.3.2.5 Ease of Installation

Excavation of the outfall and related areas was conducted as part of the IM (LANL 2002, 73706). The greatest challenge for soil removal is the identification, through the detection of contaminant levels above the MCSs, of soils to be excavated. Ideally, field analytical methods for the identification of RDX, TNT and barium will be used to minimize the analysis time required to identify the vertical and horizontal limits of excavation.

6.3.2.6 Long-Term Reliability

Soil removal and off-site disposal of the remaining outfall soil are reliable because soils are removed from the site. Provided the soil meets the required LDRs, there would be no residual liability as a result of off-site disposal.

6.3.2.7 Institutional Constraints

Soil excavation was conducted as part of the IM. Local institutional constraints attendant upon the removal of a maximum of 100 yd^3 of soils are expected to be minimal, with the exception that institutional activities at TA-16 may impose limits on the operational hours. To qualify for off-site disposal, excavated soils must meet the LDRs, but given the success of the IM and the relatively lower concentrations of COPCs detected for residual soil, meeting these requirements should not be a problem.

6.3.2.8 Mitigation of Human Health and Environmental Exposures

Excavation and off-site disposal of soil with contaminant levels above the MCSs offer the best way to attain MCSs in the outfall source area. Both potential human health and environmental risks will be obviated by this action.

6.3.2.9 Costs

The total costs for this alternative (see Appendix C) are estimated to be $162,000.

6.3.2.10 Other Considerations

The public has already accepted the use of soil removal both at the outfall source area as part of the IM and at MDA P. Therefore, public acceptance of soil removal at the outfall source area is expected. NEPA concerns should not be a factor given that the outfall source area is not located on the canyon floor where wetlands are located. Due to the small expected volume of soil (100 yd^3 or less), waste minimization is not a factor. Likewise, safety is not expected to be a major concern.

6.4 Outfall Source Area Settling Pond and Surge Bed

6.4.1 Excavation and Disposal of the Surge Bed (Alternative II.1)

In this alternative, blasting is used to break up the tuff overlying the surge bed, after which the tuff and surge bed are excavated. Before excavation, three additional borings are installed to better define the extent of the surge bed. After excavation, the settling pond cap is replaced, and long-term monitoring and maintenance, including sampling of a new groundwater monitoring well, are implemented.

During the IM, excavation of the tuff was attempted using a 60,000-lb. track-mounted excavator, and the rate of excavation progress was slow. Drilling and blasting of the intact tuff overlying the surge bed to break up the intact rock would allow excavation to proceed at a faster pace. Pneumatic drills would be used to install the borings for the blasting charges. After blasting and excavation to the surge bed horizon, the surge bed would be excavated and hauled off site for disposal. These wastes will likely be hazardous, and treatment at the accepting facility by bioremediation would be required. Off-site bioremediation of hazardous wastes was successfully used on hazardous HE waste from the outfall source area IM. Tuff would be returned to the excavation. In this way off site hauling of waste would be minimized.

The cap system, consisting of two barriers, was installed in the settling pond area as part of the IM. Under all alternatives for this area, this cap system will be either left in place or replaced. The purpose of the system is to provide hydrologic barriers to water infiltration so that migration of residual HE and barium under the caps is minimized.

The first barrier was installed at the final depth of the settling pond excavation (in tuff at the bottom of the excavation test pit), which ranged from 3 to 4 ft. below ground surface (bgs). The surface of the test pit was covered with several inches of hydrated 3/8 bentonite. The pit was then filled with processed castoff aggregate and compacted with the wheeled loader. The rock layer was subsequently covered with an 8-in. layer of crushed tuff amended with 2.5% (by weight) dry bentonite and 1.5% hydrated bentonite. This layer was also compacted with a wheeled loader.

The second barrier was installed at the depth of the soil/tuff interface. The barrier consisted of multiple compacted 4-in. lifts of crushed tuff amended with 2.5% (by weight) dry bentonite (approximately twenty 50-lb bags of 3/8 bentonite per lift). Each lift was manually mixed with rakes to ensure blending of the bentonite and crushed tuff. Following blending, the lifts were compacted with the wheeled loader. Four lifts were installed in this manner. The fourth layer was amended with 1.5% bentonite and was hydrated following placement. A finish cap of compacted crushed tuff was placed over the hydrated layer, bringing the average total thickness of the barrier to 20 in. In total, this barrier consisted of 40 yd^3 of crushed tuff amended with ninety-eight 50-lb bags of 3/8 bentonite. The saturated permeability of the barriers is estimated to be less than 1×10^{-7} cm/s.

6.4.2 In-Situ Grouting of the Surge Bed with Existing Settling Pond Cap Maintenance (Alternative II.2)

In this alternative, the extent of the surge bed is first defined using three additional borings and sampling. These borings will also serve to better characterize the horizon to be grouted so that a grouting plan and design can be developed. Groundwater, if detected, will be characterized using these borings with regard to extent and direction of flow. If necessary, additional borings can be installed to better define the upgradient edge of groundwater so that an appropriate grouting design can be developed. The surge bed is then isolated with a clay-based grout applied by pressure grouting through boreholes that intercept the surge bed. A monitoring well on the downgradient edge of the surge bed is proposed so that the effectiveness of the grouting can be determined. Under this alternative, the existing settling pond cap is maintained following repair, if necessary, of borehole areas.

6.4.3 No Action for the Surge Bed and Maintenance of Existing Cap (Alternative II.3)

Under this alternative, the existing cap would be inspected and maintained to ensure that surface water cannot infiltrate lower horizons, including the 17-ft surge bed. The weakness of this alternative is its inability to control the potential for subsurface fracture to allow lateral groundwater flow to the surge bed. This preferential pathway is discussed in section 6.4.4.

6.4.4 Evaluation of Alternatives

6.4.4.1 Performance and Reliability

If the surge bed is defined and excavated to its full extent, then excavation of the surge bed would be a removal action that would reduce the potential for contaminant migration. However, the complete extent of the surge-bed is not known, and excavation to its full extent may not be practical.

Grouting the surge bed offers a means of isolating the surge bed from groundwater and thereby reducing the potential migration of contaminants. Grouting is expected to be reliable because the grout is essentially impermeable to water. Grouting is more practical with regard to the extent of the surge bed. Unlike excavation, which may prove impractical if the surge bed is too extensive, grouting can be feasibly expanded outside the practical and economic limits of excavation.

Alone, maintenance of the existing cap system, with no action for the surge bed, would preclude surface water infiltration but not groundwater contact with the surge bed via a lateral, upgradient fracture pathway. If groundwater contact does not occur through this pathway, then the existing cap itself and its occlusion of surface water will suffice for the long term. However, additional site characterization is required to determine if the lateral subsurface pathway is important.

In the face of these considerations and uncertainties, grouting offers a superiority of performance and reliability over excavation. Both excavation and grouting are preferable to maintenance of the existing cap alone.

6.4.4.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

Excavation of the surge bed would serve to remove barium and HE in the surge bed, thereby reducing their potential mobility. Although excavation does not eliminate the potential for fracture groundwater flow, the contamination in the surge bed would be removed. Grouting both isolates the surge bed and reduces contaminant mobility. Grouting potentially offers superior isolation than excavation because excavation of the entire surge bed may not be practical, whereas the feasibility grouting is less sensitive to the extent. The capping alternative might preclude stormwater contact, but it would not preclude groundwater contact that might occur with the surge bed through lateral fractures.

Under the excavation alternative, contaminated surge bed materials would be hauled off site for disposal in an approved landfill. This alternative does not destroy or reduce the toxicity of the contaminants; rather, it would transfer the contaminants to a permitted landfill. Contaminant mobility would be reduced because disposal in the landfill would eliminate direct contaminant contact with groundwater. Moreover, the waste would be required to meet LDRs that preclude contaminant migration.

Given these considerations, the grouting alternative is rated more favorably than excavation. Both excavation and grouting alternatives are rated more favorably than cap maintenance alone.

6.4.4.3 Effectiveness of Remedy in Achieving Target Concentrations

An MCS was not established for the surge bed. Rather, a BMP objective that seeks to preclude potential for contaminant migration from the surge bed was established. As discussed above, the alternatives differ in their ability to prevent potential groundwater contamination, which is integral to the attainment of the BMP objective.

Groundwater flow via upgradient, lateral fractures has the potential for intercepting the surge bed and transporting contaminants. The goal of the excavation of the surge bed is to remove as much highly contaminated material as is possible from the surge bed. Grouting isolates the contaminated material and prevents contact with groundwater. Accordingly, excavation and grouting alternatives are rated higher than the capping alternative.

6.4.4.4 Time Required for Implementation

Definition of the extent of the surge bed using three borings is a part of both the excavation and grouting alternatives. Up to ~~six~~ three months or more may be required to complete such an investigation. Following the investigation, the actual implementation will require ~~another~~ six months for planning and execution.

The capping alternative is already in place at the site. The capping alternative is therefore rated higher than the other alternatives with respect to this criterion.

6.4.4.5 Ease of Installation

Implementation of the excavation alternative, including blasting, would not be difficult. First, the backfill and cap system placed during the IM would be removed. Drilling and blasting of the overlying tuff would then proceed, followed by excavation of the surge bed. Site restoration would consist of backfilling of the tuff rubble, followed by the installation of a replacement low permeability cap system. Given the proximity to existing operations within Building 260, blasting may pose institutional difficulties, as discussed in section 6.4.4.7.

Following installation of the three borings for further surge bed definition, grouting of the surge bed would be conducted in new or existing boreholes. If the existing cap is penetrated, it would be repaired.

Obviously, ease of installation is greatest for the existing cap system, followed by grouting, then excavation.

6.4.4.6 Long-Term Reliability

As discussed, both excavation and grouting are more reliable than a cap alone, because HE and barium in the surge bed are either no longer physically present or are isolated. Grouting has the advantage of allowing the surge bed to be over-grouted (grouted beyond its apparent extent), whereas over-excavation of the surge bed, if extensive, may prove difficult. For these reasons, grouting is rated higher for long-term reliability than excavation. Both alternatives are superior to maintenance of the cap alone.

6.4.4.7 Institutional Constraints

Excavation of the surge bed, including the use of blasting, ~~may~~ will encounter institutional constraints in the form of Building 260 restrictions. These constraints may range from limitations on operational hours to a prohibition on blasting, in which case the excavation alternative is not feasible. With regard to blasting, discussions with TA-16 operational personnel indicate that blasting would be extremely difficult to implement because of safety concerns. A change in the site's authorization basis would have to be initiated, which is a lengthy process that in the end would likely not be approved. The ~~former~~ constraint with regard to operational hours would be applicable to grouting operations as well. It is less critical for cap maintenance. NEPA concerns should not be a factor for any of these alternatives. Based on these considerations, the capping alternative would face fewer institutional constraints with regard to implementation.

6.4.4.8 Mitigation of Human Health and Environmental Exposures

The presence of the cap in all alternatives precludes contact with contaminated tuff within the settling pond area, thereby mitigating potential risks to a construction worker, although the MCSs are not met.

With regard to the surge bed, a concern is the potential to cause groundwater contamination. Both grouting and excavation isolate or remove (respectively) HE and barium contamination in the surge bed. As stated earlier, cap maintenance by itself does not address lateral groundwater flow in fractures that may intercept the surge bed, causing the potential for contaminant migration. Accordingly, both grouting and excavation are rated as superior to cap maintenance alone.

6.4.4.9 Costs

Capital and 30-yr O&M costs for these alternatives are shown in Table 6.4-1.

6.4.4.10 Other Considerations

Either excavation or grouting alternatives for the surge bed would likely be preferred by the public over a no action alternative. In general, the public favors removal of contamination rather than contaminant isolation. Alternative II.1 involves blasting and excavation in rock (tuff). Safety concerns are greater with this alternative than with the grouting alternative (II.2). The cap maintenance alternative has the fewest safety concerns, and also generates the least quantity of waste.

6.4.5 Uncertainties and Additional Data Requirements

The extent of the surge bed and the extent of the contamination require further definition. These will be addressed by the boring installations completed as part of the alternative implementation. The importance of mesa vadose-zone fracture groundwater flow into the surge bed area is also not known. Uncertainty in this flow influences the consideration of alternatives. If such flow is not present, then the existing cap

Table 6.4-1
Outfall Source Area Settling Pond 17-ft Surge Bed Alternative Costs

Site Area	Alternative Number	Description	Capital Costs	30 Year O&M Costs (NPV)	Total Cost (NPV)
Outfall source area settling pond 17-foot surge bed	II.1	Excavation and offsite disposal of the 17-ft surge bed and replacement/maintenance of the existing cap	$ 293,000	$ 105,000	$ 398,000
	II.2	In situ grouting of the surge beds and maintenance of the existing cap	$ 211,000	$ 105,000	$ 316,000
	II.3	Maintenance of existing cap and no action for the surge beds	N/A	$ 105,000	$ 105,000

N/A = not applicable

protects against infiltration from the surface, which is the only other source of groundwater, and further measures may not be required.

6.5 Canyon Springs and Alluvial System

The canyon springs and alluvial system encompass springs, surface water, alluvial sediment and alluvial groundwater in both Cañon de Valle and Martin Spring Canyon. For HE and barium, three corrective measure alternatives consisting of several technologies are proposed for these areas. These alternatives differ markedly in the aggressiveness of the approach, the time frame for effectiveness, and the impacts to the canyons.

Excavation of sediments (Alternative III.1) is an aggressive approach whose goal is to remove HE and barium contaminated sediments within either limited sections of the canyons or throughout the entire contaminated length. The advantage of excavation is that such a removal action could obviate the need for groundwater or surface water remediation. As discussed in earlier sections, however, unidentified contaminated seeps or springs may contribute contaminated water to the alluvium. Moreover, other historical sources within the drainage basin may result in the recontamination of the Cañon de Valle sediments. Given the presence of these historical sources, long-term control of groundwater and surface water in the canyon might be required even if excavation were implemented.

The disadvantage of excavation is that it would disrupt the riparian system, including wetlands, although presumably site restoration could restore wetlands damage. To permit excavation, it is likely that an EIS, as opposed to a simpler and less onerous EA, would be required. The other alternatives preserve the current state of the canyon and rely on containment and treatment of springs and groundwater, with sediment remediation by natural or induced sediment flushing, rather than removal. Inherently, these containment/treatment alternatives remove contaminated mass much more slowly than excavation.

In the sections that follow, the alternatives for the springs and the canyon alluvial system are described in greater detail and are compared using the evaluation criteria.

6.5.1 Excavation and Off-site Disposal (Alternative III.1)

In this alternative, canyon sediment, surface and alluvial soils would be excavated to the extent practical. Excavated soil and sediment would be disposed of off site. The canyons would then be restored as closely as possible to their natural condition. Either a limited or extensive excavation could be conducted. For HE and barium, however, the most recent site data (reviewed in section 3) do not support a limited excavation. Although HE and barium sediment contamination appear concentrated in the upper reach of Cañon de Valle before the floods associated with the Cerro Grande fire occurred, post-flood sampling results do not indicate such concentrations (see Figures 3.6-1 and 3.6-2). The sediment contaminant trends indicated by these sampling results, however, apply only to the upper 2 ft bgs, where all RFI sediment sampling was conducted. Deeper sampling may reveal other trends.

In the absence of sediment contaminant concentrations that would indicate a more limited excavation, Cañon de Valle alluvium would be excavated to a distance of approximately 6600 ft east from the former outfall. Assuming a cross-sectional area of 100 ft^2 gives a sediment volume of 25,000 yd^3. This volume calculation is likely to be a conservative one and is assumed to include the Martin Spring Canyon sediments and any post-excavation soil volume increase (soil swell).

Excavation would cause substantial disruption of the Cañon de Valle riparian system. A permit from the US Army Corps of Engineers would be likely to be required under the wetlands permitting process described in section 6.2. This permit may entail an EIS, rather than an EA. In addition to a factor of 10 increase in expense, an EIS would also require up an additional 2 yrs for completion. NEPA issues, such as disruption of the Mexican Spotted Owl habitat, also require consideration. These permitting issues, although potentially difficult, could be mitigated by the intended objective (remediation) and a commitment to restore wetlands destroyed by the excavation.

Upstream of the excavation, alluvial groundwater flow would be diverted around the excavation using an interceptor trench and one or more bypass pipes. Surface water and springs would be similarly diverted around the excavation. Following installation of bypass pipes, time would be required to drain as much water as possible from the soils.

Two haul roads into the Cañon de Valle would have to be constructed. Alternatively, a conveyor system could be used. Excavation would be conducted during the dry season to minimize the volume of wet soils. A staging area would be required for the stockpiling and sampling of soils. Soils with any degree of saturation would require drainage and air-drying to minimize hauling expenses for off-site disposal.

The limits of the excavation would be defined by the available sediment sampling data and by additional sediment sampling data collected along the upper reach of Cañon de Valle and Martin Spring Canyon. Currently, the data is available for sediments to approximately 2 ft bgs in depth. This limited data set indicates that barium-hazardous sediments are present, and would be shipped off-site for stabilization. For purposes of the cost estimate for this alternative, half of the soil volume is assumed to contain hazardous levels of barium. For the MDA P project, barium-hazardous soil was hauled to Texas for stabilization at a cost of approximately $250 per ton. For both the 260 IM and MDA P, nonhazardous soil was transported for disposal at an industrial landfill in Albuquerque at a cost of approximately $50 per ton.

Restoration of the site would require post-excavation sampling, importation of clean fill similar in hydraulic conductivity to the native sediments, and restoration of wetlands and vegetation. Restoration of surface water flow might present difficulties because of the unique configuration of soil and sediment types that give rise to surface water. Should these difficulties arise, installation of buried tanks at existing springs and seeps to form wildlife watering ponds could be an alternative.

Under this alternative (as well as Alternative III.2), one stormwater filter would be installed on each spring for treatment. The filter would use GAC to treat HE. A typical stormwater filter consists of a steel or pre-cast concrete tank with an inlet and outlet for the surface water and treatment modules for contaminant removal. Water flows in and out of the tank by gravity, and is treated by the treatment modules inside of the tank (see Figure 5.2.3) Two stormwater filters have already been installed in Martin Spring Canyon (see section 5.2).

Monitoring requirements for this alternative would consist of the installation and sampling of seven new alluvial wells after excavation. Five wells would be installed in Cañon de Valle (to replace the five lost to excavation) and three wells would be installed in Martin Spring Canyon (to replace the three wells lost to excavation).

6.5.2 Flushing of Sediments, PRB Groundwater Treatment, and Stormwater Filters for Springs (Alternative III.2)

Rather than excavate contaminated sediment, both Alternatives III.2 and III.3 rely on the flushing of contaminated sediment by groundwater and stormwater to remove contaminants. In the case of the PRB option, the flushing is natural and occurs as a result of precipitation events only. In the case of the groundwater recovery and central treatment option, the flushing is both natural and induced, the latter consisting of reinjection of treated spring water and groundwater.

Both of these alternatives recognize that within the Cañon de Valle drainage lie several historical sources in addition to SWMU 16-021(c)-99. Given these other sources, excavation of the Cañon de Valle sediment alone might not suffice to control potential infiltration of contaminated groundwater, and additional means of long-term groundwater control and treatment within Cañon de Valle would be necessary. Conversely, control and treatment of contaminated groundwater without excavation would be sufficient to reduce or eliminate groundwater infiltration in Cañon de Valle, and would not destroy canyon wetlands or be subject to NEPA regulations associated with excavation.

As characterized in the SCM, stormwater is a major factor in contaminant transport through the canyon alluvium. Stormwater causes the mobilization of sediment contaminants by leaching of surficial sediments and by increasing the groundwater elevation in the alluvium, both leading to subsequent downgradient transport. Stormwater also causes transport of contaminated sediments. If stormwater in the form of either surface or groundwater, can be controlled and remediated prior to infiltration to deeper underlying units, then precipitation events and ensuing stormwater can achieve alluvial sediment remediation by flushing out the water soluble contaminants. The disadvantage of natural flushing is that precipitation is less frequent under the current drought conditions.

In this alternative, the treatment technology for the remediation of groundwater is a PRB composed of either ZVI or GAC for HE such as RDX and calcium sulfate for barium stabilization. The choice between ZVI or GAC will be made as part of the CMI process and the additional testing that will be conducted as part of the CMI. To control the flushed water and prevent infiltration into the deep vadose zone, several PRBs are proposed. The PRBs would be designed to treat baseline groundwater flow and storm surges, from both hydraulic and contaminant loading standpoints.

PRBs have been developed within the last 10 years for the treatment of dissolved groundwater contaminants, particularly contaminants such as chlorinated VOCs and compounds such as HE that do not readily biodegrade. Commonly, PRBs contain zero valence metal, the oxidation of which helps to create the reducing conditions necessary for the degradation of these compounds. The exact mechanism of ZVI contaminant destruction is unknown; however, recent evidence indicates that a bioremediation component may play a stronger role. Although the proof of the concept is limited to laboratory studies, the technology is promising enough to warrant consideration, along with GAC, as a component of the PRB corrective measure alternative.

A conceptual drawing of a PRB is shown in Figure 5.3-2. PRB installation involves cutting a deep trench perpendicular to groundwater flow and then filling the trench with the active components, such as iron filings (in the case of a ZVI), and inert sand. The permeability of a PRB is designed to be higher than the native aquifer material so that groundwater will flow freely through the barrier. The installation depth of a PRB is critical to ensuring that underflow bypassing of the PRB is avoided. The thickness of the PRB also is critical because thickness relates to the residence-time required for contaminant degradation.

A ZVI PRB composed of iron filings that are exposed to groundwater will eventually rust away, requiring the replacement of the ZVI. The lifetime of the ZVI is dependent on the flow velocity through the PRB, the PRB thickness, and the geochemistry of the groundwater. In general, it is difficult to predict the lifetime of the ZVI bed. Similarly, GAC will eventually require replacement because HE, as well as naturally occurring humic organic compounds, will deplete the bed. Further testing of both GAC and ZVI will be conducted as part of the CMI. For the purposes of this CMS, ZVI or GAC bed replacement at the end of 15 years is assumed.

To treat barium contaminated groundwater, a bed of calcium sulfate can be added to the PRB, so that the barium precipitates as barium sulfate and is immobilized. Fouling of the calcium sulfate bed and a reduction in permeability and effectiveness is an operational concern, and bed replacement may be required.

PRBs are generally expensive to install, but inexpensive to operate. There are no pumps or electricity required. Groundwater flows through the PRB at rates determined by aquifer hydraulic gradients and permeability. Overall remediation rates can be slow if the groundwater flow rate and pore volume changeout rates are low. Typically, PRBs are more often employed as barriers to prevent further groundwater contaminant migration than as methods for remediating an existing groundwater plume. In Cañon de Valle, the alluvium pinches out approximately 7000 ft from the outfall. In this sense, the Cañon de Valle alluvial plume of contaminants is already self-limiting, and a PRB barrier at the end would be effective only for storm surges that advance the saturated edge. Once these storm surges are past, the saturated edge of the Cañon de Valle alluvium will retreat again.

Because the Cañon de Valle alluvium pinches out, the Cañon de Valle alluvium is essentially a fixed alluvial volume with a limited extent. Within this extent, the amount of water in storage depends on the rate of inflow and outflow (see section 3). If the leakage is constant throughout the reach, then PRBs would probably not be cost effective. If the infiltration is preferential in certain reaches of Cañon de Valle, then the strategic placement of a PRB in these areas may reduce the number of PRBs (or interceptor trenches under Alternative III.3). In fact, evidence presented in the Phase III RFI (LANL 2003, 77965) supports the presence of reaches of preferential infiltration along Cañon de Valle.

A conceptual layout of this alternative is shown in Figure 6.5-1. The system for Cañon de Valle consists of three PRBs placed in front of suspected area of enhanced groundwater infiltration and near the point of alluvium termination (the extent of alluvium is shown in Figure 3.2-1). Except for the eastern-most PRB, surface water is not treated by the PRB. A major component of surface water, spring water, is treated by stormwater filters placed on the springs. For the eastern-most PRB, an infiltration gallery would be constructed on the upgradient side of the PRB to enable the infiltration of stormwater and surface water surges into groundwater, where the waters are treated by the PRB. Without such an infiltration gallery, storm surges of contaminated surface water might bypass the PRB treatment configuration.

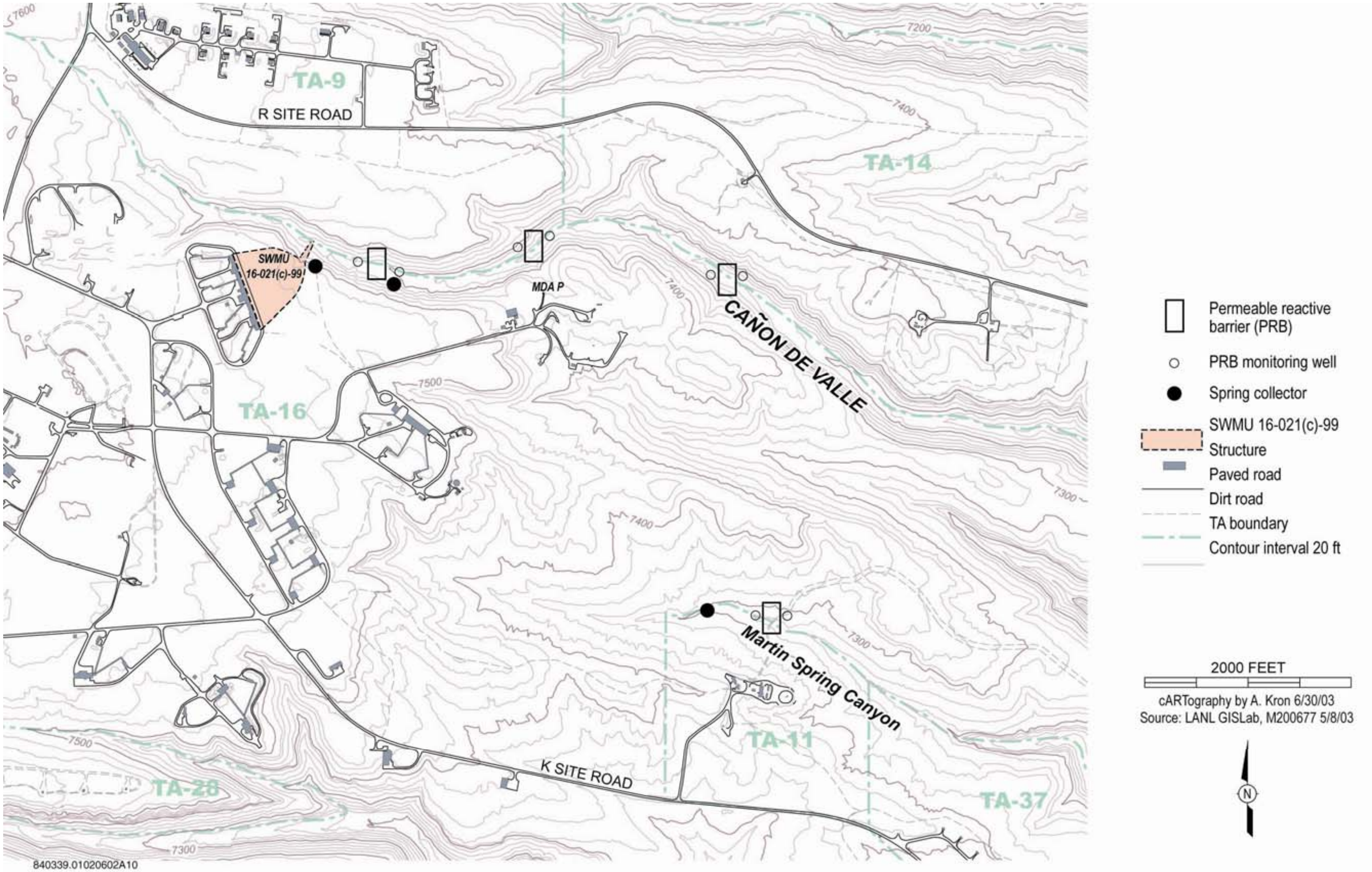

Figure 6.5-1. Conceptual layout of Alternative III.2 PRBs along Cañon de Valle and Martin Spring Canyon

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For Martin Spring Canyon, one PRB is placed downgradient from Martin Spring. The spring collectors (stormwater filters) are shown in Figure 6.5-1. Each spring collector system will consist of a stormwater filters for organic HE, such as RDX. Given the presence of the stormwater filters on Martin Spring, the purpose of the PRB in this location is to treat stormwater surges of groundwater and surface water not emanating from the spring.

Monitoring of the effectiveness of the PRB involves the installation of two monitoring wells per PRB, one upgradient and one downgradient. A total of eight new monitoring wells accompany this alternative.

6.5.3 Flushing of Sediments with Water Treatment in a Central Treatment Plant (Alternative III.3)

The third alternative (Alternative III.3) consists of a series of groundwater interceptor trenches installed in Cañon de Valle and Martin Spring Canyon for the recovery of groundwater. As in the second alternative (Alternative III.2), stormwater surges of surface water would be controlled by the final interceptor trench through use of an adjacent upgradient infiltration gallery. Otherwise, surface water is not treated. For springs, which comprise the primary source of surface water, spring collector catch basins would be installed at the spring outlet. All water would be piped and treated in a central treatment plant and returned through upstream injection wells to alluvial groundwater. Although recovery wells, rather than interceptor trenches are an option, low transmissivity, which is associated with a thin saturated groundwater alluvium and potentially low or variable hydraulic conductivity, implies that interceptor trenches would be more effective.

This alternative also relies on natural precipitation events for flushing of surficial sediments, but in contrast to the second alternative (Alternative III.2), natural flushing is supplemented by induced flushing consisting of the upstream reinjection of treated water into alluvial groundwater. In this manner, flushing of the groundwater horizon is enhanced. Stormwater surges, with their higher volumes for both groundwater and surface water, present an opportunity to expedite flushing because the increased volume can be recycled between interceptor trenches and injection wells. The danger of recycling a higher volume of water is that the likelihood of infiltration may be increased; however, the contaminant concentrations of the groundwater water will have been reduced by treatment. As in the first alternative, drought conditions adversely affect the rate of sediment remediation.

A conceptual layout of the system is shown in Figure 6.5-2. A series of five groundwater interceptor trenches and five injection wells are located along the Cañon de Valle. At the last (eastern-most) interceptor trench, an infiltration gallery captures storm surges of surface water, causing infiltration to groundwater and capture in the interceptor trench. Spring waters are intercepted using a spring collector catch basin at spring outlets. All intercepted water is pumped to a central treatment plant located adjacent to MDA P, where it is treated by GAC and ion exchange (either resin or zeolite), followed by discharge to a series of injection wells. Injection wells will consist of 12- or 24- in. wells that will be installed using a backhoe or bucket rig. Injection flow rates to the injection wells can be balanced to allow for a natural flux of groundwater and surface water through the entire system, or injected water can be focused on a specific interceptor trench/injection well pair in an attempt to concentrate the flushing action along a particular reach.

As part of this alternative, two alluvial groundwater monitoring wells would be installed for each interceptor trench, one upgradient and one downgradient. These well would be used to determine the effectiveness of the interceptor trench with regard to hydraulic control of groundwater. The monitoring plan for this alternative consists of the sampling of these twelve new wells (ten in Cañon de Valle and two

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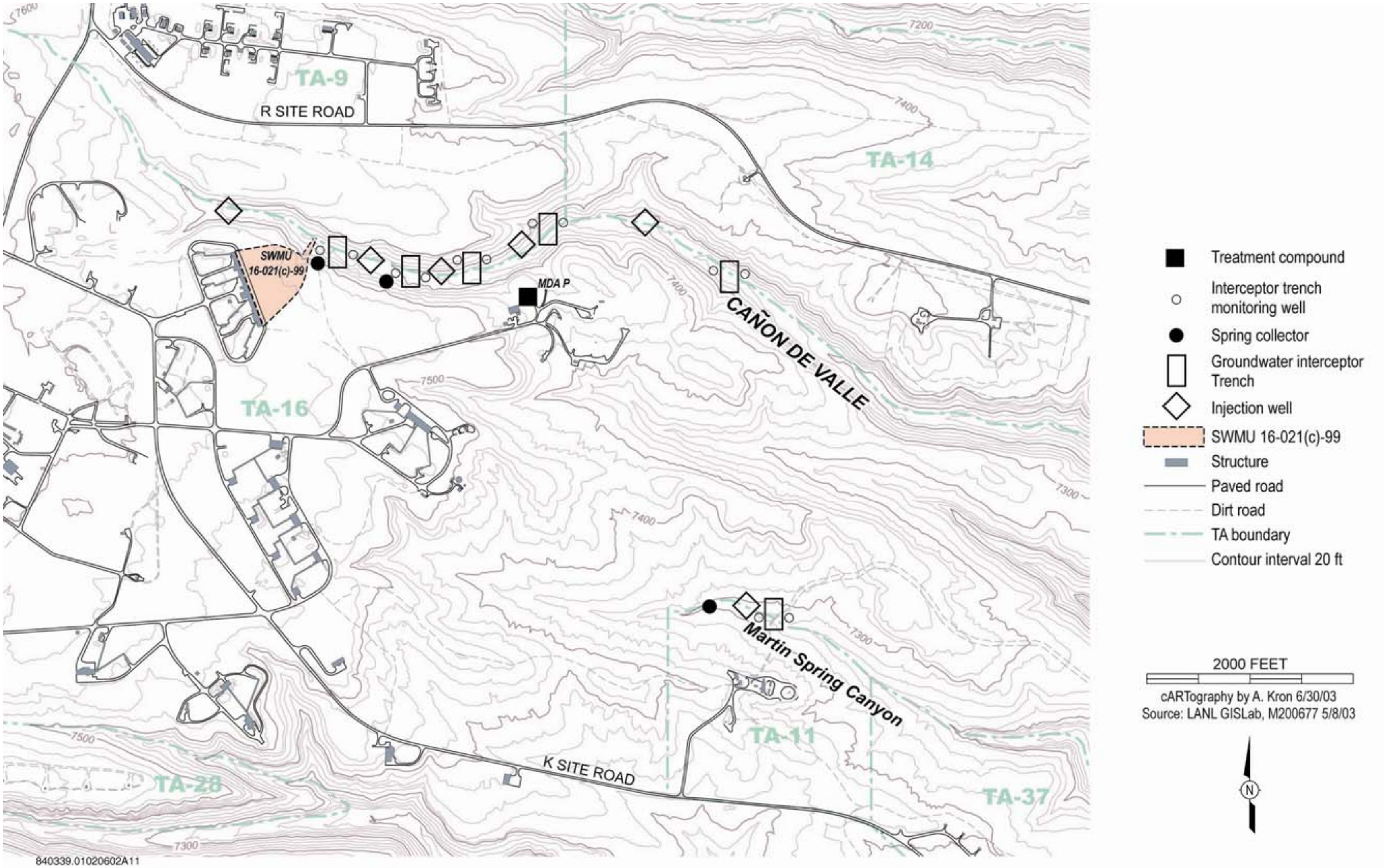

Figure 6.5-2. Conceptual layout of Alternative III.3, groundwater interceptor trenches and injection wells

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in Martin Spring Canyon). Monthly sampling will also be required for the treated groundwater discharged to the injection wells.

In a typical GAC treatment system, spent GAC is replaced with fresh GAC by a GAC vendor, who then removes the spent GAC from the site and regenerates it by thermal treatment, which destroys RDX. For barium, the spent ion exchange resin or natural zeolite bed is disposed of by landfilling, rather than regenerated on-site. Because of the strong affinity of barium for ion exchange, regeneration will not be cost effective.

Permit requirements include groundwater discharge permit and NEPA and wetlands assessments. Intrusive activities include interceptor trench installation, injection well installation, utility trench installation to the interceptor trenches and injection wells (for power and piping), and installation of spring collector catchbasins.

The treatment system would consist of two 5000-lb pound carbon adsorbers (for organic HE), followed by two 5000-lb ion exchange or zeolite adsorbers for barium. The treatment compound would consist of a building (approximately 30 ft by 30 ft) to house the treatment system. Before installation of the treatment system, a lift station with a surge tank would be constructed at the bottom of the outfall. This surge tank would be equipped with a level control to maintain a constant level in the surge tank and a pump for pumping of water to the treatment system. After treatment, the water would be discharged to a series of five injection wells along the length of Cañon de Valle and one well in Martin Spring Canyon. Power would be distributed to the interceptor trenches by direct burial-underground power cables. Piping for treated and untreated groundwater would consist of 2-in. HDPE piping laid in a shallow trench below the frost line (approximately 2 ft below grade)

A concern with this approach is that the baseline groundwater flow into Cañon de Valle is uncertain, having been estimated only through the conceptual water balance performed as part of the Phase III RFI (LANL 2003, 77965). In addition, Martin Spring, the primary source of alluvial groundwater in Martin Spring Canyon, is now dry. For Cañon de Valle, the estimated flow rate is approximately 30,000 gal./yr. However, storm surges were not accurately captured by the water balance, which relied on average measurements of saturated thickness. In addition, the springs water component of flow was much higher, which would provide additional water for the system. Under the assumptions of the water balance, all baseline water flows contribute approximately 10 gal. per minute (gpm) of water. Because of recycle, the baseline flow rate of the treatment system would be higher, as high as 20 gpm. Storm surges may increase this flow rate to a range of 100 to 200 gpm for short periods. As part of the design of such an alternative, in situ permeability measurements and a test interceptor trench are recommended to ascertain permeabilities, the flow rate of treated water, and the capacities of interceptor trenches and injection wells. As discussed earlier, current drought conditions may reduce these assumed flow rates.

6.5.4 Focused Investigation and Limited Excavation of SWSC Cut (Alternative III.4)

The fourth alternative (Alternative III.4) consists of a focused investigation and possible limited excavation in SWSC cut, site of a failed ecotox sample (sample 16-06709, LANL 2003, 77965). Five sediment samples, located approximately 5 meters apart, will be analyzed for silver, followed by one sediment chironomus test in the area of high silver concentration, if found. If the chironomus test fails and elevated concentrations of silver above background are found, a limited excavation action consisting of the removal of approximately 50 yd^3 of sediment may be conducted after consultations with NMED. The sediment volume is an estimate that will be modified based on the results of the testing. The silver contaminated sediment will be disposed of as nonhazardous soil. For site restoration, clean fill dirt will be imported.

6.56.4 Evaluation of Alternatives

6.56.4.1 Performance and Reliability

Performance and reliability are assessed relative to the achievement of MCSs for alluvial groundwater and sediment. Excavation of canyon alluvial sediments (Alternative III.1) would remove a substantial mass of HE and barium contamination. Removal of the sediment (the upper 2 ft of which contain an estimated 21,000 kg of barium, 50 kg of HMX and 5 kg of RDX) would remove a contaminant mass similar to the estimated mass of 8,500 kg of HE removed from the outfall source area during the IM. Moreover, the estimates of the mass of HE and barium that would be removed using this alternative are potentially low, given that the sample depth was limited to 2 ft bgs.

An important difference between the outfall source area and alluvial sediment, however, is that while there may be more barium in alluvial sediments, there is also less HE in alluvial sediments. For the IM, excavation was effective (and cost-effective), because of the quantity of HE removed, the fact that the outfall soils acted as an HE source, and, in general, the greater threat posed by HE to regional groundwater quality. In contrast, the excavation of Cañon de Valle for the purpose of removing substantially less HE (a quantity that potentially poses a much smaller risk to the regional aquifer) may not be cost effective.

Removal of an estimated 21,000 kg of barium in Cañon de Valle sediments would seem critical to achieving the MCS for water. However, although barium mass appears high, a substantial fraction of the barium mass is likely adsorbed to sediment clays and minerals, thereby retarding both its dissolution and transport in groundwater. If this adsorption is irreversible, the barium is unavailable for contaminant transport. As pointed out in section 3, the dynamics of barium adsorption and its irreversibility are not currently known, but are deserving of study. The low barium groundwater concentrations in R-25, despite its overall significant mass and extent, indicates that this retardation may be occurring. In summary, the amount of barium that is available in sediment and that is capable of causing alluvial/groundwater contamination in excess of the barium MCS may be less than the amount indicated by the estimate of barium mass.

Other important factors in the evaluation of the criteria for performance and reliability are the presence of historical sources along the canyon drainages as well as the unknown seeps and springs which may be contributing contamination to the alluvium. As hydrologic low points, both Cañon de Valle and Martin Spring Canyon are susceptible to additional contaminant fluxes from unknown seeps, springs and stormwater run-off, all of which may be intermittent. Given this circumstance, removal of the sediments by excavation without groundwater treatment may not be as reliable an alternative as groundwater treatment without excavation (Alternatives III.2 or III.3); long-term groundwater treatment, using either a PRB or interceptor trenches, captures and treats canyon alluvial groundwater, regardless of its point of origin.

The estimated soil volume of 25,000 yd^3, representing an excavation distance of approximately 6600 ft, is not prohibitive. The soil volume removed by the IM from the outfall source area was approximately 1300 yd^3 (LANL 2002, 73706), and the soil volume removed from MDA P was approximately 50,000 yd^3 (LANL 2003, 76876).

Flushing of surface and alluvial soils, the primary sediment remediation mechanism for both Alternatives III.2 and III.3 would be much slower than excavation in attaining the MCSs. The exact amount of time required to attain the MCSs cannot be predicted. Moreover, long-term forecasts indicate a high probability of drought, which reduces the frequency of natural flushing, although drought would also reduce the potential for infiltration and potential contamination of regional groundwater, as discussed previously.

Because of soil and sediment heterogeneities, flushing might not be as effective in attaining the MCSs as excavation. In addition, a portion of the barium sediment inventory may not be removable by flushing because of the high ion exchange affinity of barium for the clay matrix of these soils. Regulatory and public acceptance that this barium is inaccessible for further transport may be required under Alternatives III.2 and III.3.

Comparing Alternatives III.2 and III.3, the performance and reliability of attaining the MCSs for waters relies on the ability of the groundwater and surface water treatment systems, either PRBs or the central treatment plant, to treat contaminated waters, both surface water and groundwater. Storm surges would lead to surges in groundwater, which either a PRB or a treatment system would be required to capture and remediate to below the MCSs. With a PRB, operational reliability depends in part upon breakthrough and ease of bed replacement. In a treatment plant, breakthrough of either a GAC or ion exchange system is handled by simply replenishing the treatment system with fresh GAC or ion exchange media. Moreover, the treatment system offers operational redundancy by using two GAC and ion exchange treatment vessels in series, so that if breakthrough occurs in the lead vessel, the lead vessel can be changed, thus ensuring that the discharge water meets the MCSs and the requirements of the groundwater discharge permit. In contrast, breakthrough of the PRB media, either of the ZVI, GAC, or calcium sulfate bed would require replacement of the respective bed within the PRB, a process which requires excavation.

Another advantage of central treatment over PRBs is its expandability. Although additional PRBs can be added to the canyons in response to further characterization, their relatively higher expense and difficulty of installation compared with interceptor trenches offer less performance flexibility.

Reliability arguments can also be applied to spring treatment by stormwater filter, which Alternatives III.1 and III.2 use, but Alternative III.3 does not. With a central water treatment plant (Alternative III.3), the performance of the treatment system can be easily monitored. Monitoring and replacement of stormwater filters, however, involve inspection and possibly entry into the stormwater filter via a manhole, which is a confined-space entry procedure.

In general, among the last two alternatives, a central, above-groundwater treatment system is more reliable than a PRB. Further, PRBs are an innovative technology without a long track record, whereas a central treatment plant for water treatment uses mature technologies. The attractiveness of PRBs lies in their potential for cost-savings over the project lifetime because of their potentially low O&M costs.

Alternative III.4, unlike the other alternatives, ~~it~~ does not address sediment throughout Cañon de Valle. Rather, this alternative focuses on a specific area of Cañon de Valle, SWSC cut. With respect to potential silver sediment contamination at~~l~~ SWSC cut, the other alternatives are not effective. Though silver may be mobilized by sediment flushing or groundwater recovery, silver is not treated by these ~~system~~alternatives. Limited excavation is expected to be effective and reliable if the area for limited excavation is defined by the focused investigation.

In terms of performance and reliability, interceptor trenches and a central treatment system (Alternative III.3) and PRBs (Alternative III.2) rank highest, primarily because they provide for the long-term treatment of groundwater within Cañon de Valle and Martin Spring Canyon. If historical sources and the potential for contaminated groundwater inflow from unseen springs and seeps within Cañon de Valle were not present, and the depth of contamination in sediment could be shown to be limited, excavation as a one-time action would be ranked highest.

6.56.4.2 Reduction of Toxicity, Mobility, or Volumes of Contaminants or Wastes

In general, preference is given to alternatives that destroy, rather than transfer, contaminants (including all byproducts) because destruction of contaminants destroys toxicity and liability. Use of ZVI in a PRB, for example reductively destroys RDX. Use of GAC in a PRB, by contrast, transfers RDX to the carbon, where it is immobilized and its volume is reduced. With regard to barium, use of calcium sulfate in a PRB immobilizes, but does not necessarily eradicate, barium, making it inaccessible for further environmental transport.

Excavation of the sediments moves the contaminants from one location to another, with the second location presumably posing less of an environmental and human health threat. Under the restriction of LDR disposal for sediments under the excavation alternative, land disposal of excavated sediments is assumed to be safe.

Within a central treatment system (Alternative III.3) using GAC and ion exchange, contaminants are transferred and their volume is reduced in the carbon adsorption process, but they are not destroyed. However, with off-site thermal regeneration of spent carbon, a common allowable process for GAC vendors, RDX is subsequently destroyed. Flushing of the contaminants by stormwater and groundwater surges would not in itself reduce the toxicity of the contaminants, but because the resulting groundwater water and surface water would be contained and treated, a reduction of mobility and contaminant volume would occur. In summary, the extent of reduction of toxicity and mobility depends on the completeness of groundwater and surface water treatment. Actual toxicity reductions are possible in the treatment system. For example, a ZVI PRB reductively degrades and destroys RDX and other HE such as TNT, whereas a GAC PRB adsorbs HE, but eventually the GAC will require replacement, with spent GAC either land-filled or thermally regenerated in a process that destroys HE. Similarly, a groundwater and surface water treatment system transfers RDX to GAC, after which the GAC is disposed of or regenerated by the GAC vendor.

For this criterion, treatment by PRB (Alternative III.2) is rated higher than either excavation (Alternative III.1) or interceptor trenches and central treatment (Alternative III.3) primarily because it potentially destroys RDX and other HE (in a ZVI PRB) and immobilizes barium through the formation of barium sulfate. Alternative III.4 is not ranked with respect to the other alternatives because its purpose is narrower in scope (confined to SWSC cut). By removal of sediments high in silver concentration, silver mobility and toxicity to the local riparian system will be reduced.

6.65.4.3 Effectiveness of Remedy in Achieving Target Concentrations

Related to performance and reliability, this criterion directly addresses the alternative's capability to meet MCSs. As discussed previously, excavation of sediments with springs treatment by stormwater filters (Alternative III.1) might yield an immediate attainment of the MCSs in groundwater in Cañon de Valle. The presence of historical sources within the Cañon de Valle drainage, however, may cause recontamination of sediments. Because these other historical sources are located on the edge of the mesa, outside of the saturated alluvium, transport into Cañon de Valle would occur by stormwater. Given the prediction of a long-term drought in the area, this recontamination of Cañon de Valle sediments would be slow, but the potential remains. Furthermore, the presence of unknown springs and seeps may cause additional recontamination of sediments. For these reasons, both Alternatives III.2 and III.3 offer better long-term potential for attaining the MCSs than does excavation (Alternative III.1).

For the first two alternatives, stormwater filters are used for spring remediation. For the third alternative, spring water is recovered and treated. All three alternatives are capable of attaining the MCSs for spring water, although a central treatment plant is more effective, primarily because the treatment systems are above-ground and more frequently monitored as part of general plant operations. For Alternative III.4, limited excavation of silver containing sediments will reduce overall sediment silver concentrations to below the ecological MCS.

6.6~~5~~.4.4 Time Required for Implementation

This criterion involves not only the time required for implementation, but the time required for the alternative to reach full effectiveness.

The advantage of excavation (Alternative III.1) is that it is immediately effective as a source removal action; once implemented, however, the long-term reliability of excavation is questionable given the presence of other historical sources within the Cañon de Valle drainage. Moreover, the excavation alternative would require more time to implement because of extensive permitting requirements, possibly including an EIS.

Permitting lead-time for the other two alternatives (Alternatives III.2 and III.3) would be roughly equivalent, with the exception that a groundwater discharge permit would be required for the central treatment plant alternative. This alternative would also be more intrusive than the PRB alternative, because of its use of a greater number of interceptor trenches and injection wells. As for the time required for effectiveness, the central treatment alternative and its greater number of interceptor trenches, as well as its ability to recycle water (thereby increasing the flux of water through contaminated sediment horizons), offers superior effectiveness in a shorter time than the PRB alternative. However, the time required for installation of the central treatment alternative is potentially greater than for the PRB alternative because of more construction, both subsurface and aboveground. For Alternative III.4, implementation of a focused investigation and limited excavation would require approximately six months to complete. Regulatory requirements will include a NEPA evaluation, which will likely consist of an EA, and a Section 404 permit (see Figure 6.2-1).

6.6~~5~~.4.5 Ease of Installation

This criterion is limited to the difficulty of the actual installation, or in the case of excavation, completion of the excavation, including site restoration. Permitting and other institutional concerns are covered under the institutional criterion.

All of the alternatives have been completed at other sites. While site-specific logistical difficulties may be present, excavation of the canyon sediments is straightforward. Bypassing of the groundwater and springs involves installation of bypass pipes. Preferably, the excavation would be conducted during the dry part of the year to avoid undue soil saturation. Moreover, excavation on this scale has been completed at MDA P, although the area for the excavation was not linear and was not obstructed by trees and other obstacles.

The PRB (Alternative III.2) and central treatment (Alternative III.3) with interceptor trenches would involve subsurface excavation (for PRB and interceptor trench installation) and well installation. In addition, the central treatment alternative would involve installation of subgrade utility lines, including power and piping to both the interceptor trenches and injection wells. A treatment system building and associated equipment would also have to be installed. In general, the central treatment alternative would be more difficult to install than the PRB alternative. Alternative III.4 is relatively easy to implement. Following an evaluation of the focused sampling results in SWSC cut, an evaluation of the necessity for limited excavation will be conducted. If warranted, limited excavation in this area would follow. Access to the area by heavy equipment does not pose a problem.

6.~~5~~6.4.6 Long-Term Reliability

For groundwater contamination sites in general, source excavation of the contaminated soil or sediment offers better long-term reliability than alternatives that involve the control of the resulting groundwater. This principle was applied to the outfall source area IM excavation, where source removal was more expedient and reliable than any attempts to control the resulting contaminated groundwater or stormwater.

Within the Cañon de Valle drainage, however, the presence of multiple historical sources and the possibility of unknown spring or seep discharges of contaminated water to the canyon alluvial system make this generalization less valid. Although known springs are treated by stormwater filters, excavation alone, without long-term groundwater control and treatment, may be less reliable than long-term groundwater control and treatment without excavation.

Of the groundwater control and treatment alternatives, the recovery of canyon waters and treatment in a central plant (Alternative III.3) offers slightly better long-term reliability than a PRB system (Alternative III.2). First, PRBs have not been installed long enough to assess their long-term reliability. Potential problems include fouling of the PRB, with a resulting decrease in treatment effectiveness. Second, an aboveground, central treatment system allows near real-time monitoring of reliability. Moreover, a central treatment system can be easily modified to enhance the performance. With a PRB, this operational flexibility is not present. For Alternative III.4, excavation of silver containing sediments is expected to be a reliable solution because the sediments are physically removed from the site.

6.~~5~~6.4.7 Institutional Constraints

A number of institutional constraints are associated with the excavation alternative (Alternative III.1), particularly in Cañon de Valle, where NEPA and wetlands issues, the latter potentially including an EIS, predominate. As part of the NEPA-permitting public involvement process, stakeholders must weigh the relative merits of excavation versus the potential adverse impacts excavation would have on the riparian system of Cañon de Valle.

Institutional constraints associated with the other alternatives are fewer than for excavation. Potential NEPA and wetlands issues include installation of trenches for PRBs, groundwater recovery, installation of stormwater filters, and piping and electrical runs for a water treatment system. Rather than an EIS, an EA process is likely for either of these alternatives. For Alternative III.4, institutional constraints consist of the requirements for a NEPA EA and a Section 404 permit.

6.~~5~~6.4.8 Mitigation of Human Health and Environmental Exposures

Based on the results of the Phase III RFI ecological risk assessment, site conditions do not pose a risk to the environment (LANL 2003, 77965).

For canyon springs and alluvial systems, the MCSs (both the proposed MCS for barium and future MCSs to be developed as part of the regional groundwater CMS) have as their goal the protection of regional groundwater as a drinking water resource. As discussed above, Alternatives III.2 and III.3 are superior with respect to Alternative III.1, excavation. Although excavation removes a substantial mass of barium, the estimated RDX inventory in the upper 2 ft of sediment is only 5 kg. Moreover, additional contaminant transport from historical sources or unknown seeps along the Cañon de Valle drainage may re-contaminate clean, back-filled sediment.

If groundwater control is not comprehensive under either Alternatives III.2 or III.3, however, contaminated groundwater may still infiltrate into the deep vadose zone and potentially affect the regional aquifer. In these alternatives, placement of the PRBs or interceptor trenches was optimized with respect to reaches of enhanced infiltration, as inferred from Phase III RFI geophysical results. However, these areas of suspected enhanced infiltration have not been confirmed by borings or wells in the field. Moreover, there may be other areas that have not been identified. If areas of enhanced infiltration are not present, and there is a fairly constant rate of infiltration along the entire reach of the alluvium, PRBs or interceptor trenches may be less protective than excavation.

The comparison of the alternatives for this criterion rests in an evaluation and weighing of the relative uncertainties. With excavation, there is the uncertainty regarding continuing alluvial groundwater contamination from other historical sources following excavation, which, under this alternative, would not be controlled. For either the PRBs or interceptor trench alternative, uncertainties are present with regard to the location and nature of infiltration. If infiltration is widespread and diffuse, neither PRBs nor interceptor trenches offer complete control.

For Alternative III.4 removal of silver contaminated sediments is expected to mitigate potential environmental exposure to the local riparian environment at SWSC cut.

6.65.4.9 Costs

Capital and installation and 30 year O&M costs for the alternatives are shown in Table 6.56-1.

6.56.4.10 Other Considerations

In general, the public prefers contaminant removal to in-situ treatments. Excavation is generally viewed as aggressive action that eliminates contamination from the area. Given the lack of public access to Cañon de Valle, the public appreciation of the aesthetic and ecological value of the canyon, which might otherwise preclude excavation is low, although an extended permitting process involving an EIS would doubtless increase public awareness. Given geological uncertainty and heterogeneity, in-situ treatments often require years to attain standards, and this length of time tends to decrease public acceptance. With regard to pollution prevention and waste minimization, excavation of sediments generates more waste, in the form of excavated sediment, than does natural or induced flushing, which separates contaminants from soil. For Alternatives III.2 and III.3, generated wastes are essentially equivalent, although a ZVI PRB degrades HE in-situ, as opposed to central treatment, which generates spent GAC, which then may be regenerated to destroy HE. With regard to safety, success implementing these alternatives at other sites

Table 6.~~5~~6-1
Canyon Springs and Alluvial System Alternative Costs

Site Area	Alternative Number	Description	Capital Costs	30 Year O&M Costs (NPV)	Total Cost (NPV)
Canyon springs and alluvial system	III.1	Sediment excavation and offsite disposal, with storm water filters for springs	$ 8,899,000	$ 626,000	$ 9,525,000
	III.2	Natural flushing of sediments coupled with PRB (ZVI and calcium sulfate) alluvial groundwater treatment and storm water filter treatment for springs	$ 2,069,000	$ 1,597,000	$ 3,666,000
	III.3	Natural/induced flushing of sediments and recovery of spring and groundwater (by interceptor trenches) and treatment in a central treatment system	$ 1,115,000	$ 2,640,000	$ 3,755,000
	III.4	Resampling of SWSC Cut for silver to define extent of silver sediment contamination, followed by limited excavation	$ 192,000	N/A	$ 192,000

N/A = not applicable

indicates that all alternatives can be performed safely. The disadvantage of central treatment (Alternative III.3) with respect to safety, is that a dedicated staff is required for O&M over 30 yr, which raises the potential for safety problems.

6.~~6~~7 Uncertainties and Additional Data Requirements

The vertical distribution of contaminants within the sediments and vadose zone has only been characterized to a depth of approximately 2 ft below grade. If contaminants are limited to this depth, a limited rather than a full excavation of canyon sediments could be considered.

The nature of barium adsorption on sediments is not currently known, particularly with regard to the potential irreversibility of the adsorption. If adsorption is irreversible, than total barium loadings in the sediment are not a true indication of the potential for groundwater transport of barium.

Further definition of the nature and areas of possible groundwater infiltration from the alluvial system to the deep vadose zone would improve the placement of PRBs or interceptor trenches.

As part of alternative III.4, a focused sediment investigation for silver will be conducted in SWSC cut to better define potential silver contamination in that area.

7.0 DESCRIPTION AND JUSTIFICATION OF THE PREFERRED ALTERNATIVES

7.1 Outfall Source Area Soils

Soil removal with off-site disposal is proposed as the preferred alternative for the outfall source area soils outside the settling pond. Soil removal will achieve the risk-based MCSs for this area. Under this alternative, soils will be removed from this area through a combination of manual and machine excavation.

7.2 Outfall Source Area Settling Pond and Surge Bed

Alternative II.2, grouting of the surge beds and maintenance of the existing cap, is proposed as the preferred alternative for this area. Although grouting does not remove HE and barium, the clay-based grout isolates contamination from contact with groundwater. In combination with maintenance of the cap system in the settling pond, grouting attains isolation of the HE and barium. Grouting offers more flexibility than excavation. This flexibility will be useful if surge bed contamination is found to exceed the immediate area of the settling pond during the investigative phase of this alternative. Finally, grouting is generally safer than excavation in terms of implementation and is the most cost-effective alternative. To demonstrate that this BMP is effective, a monitoring well would be installed on the downgradient edge of the grout mass. This well would be checked for groundwater quarterly and sampled if groundwater was found. Quarterly monitoring would continue for a period of 3 yr. Thereafter, monitoring would be conducted twice per yr.

7.3 Canyon Alluvial Systems

Because of a lack of risk associated with the exposure pathways determined by the Phase III RFI risk assessment (LANL 2003, 77965), no risk-based MCSs for the alluvial systems in Cañon de Valle and Martin Spring canyon are identified at the present time. Calculation of risk-based MCSs for regional groundwater is deferred to the regional groundwater CMS. An MCS was identified for barium and manganese (section 4). As discussed in section 3.0, it is not known whether manganese present in alluvial groundwater is natural or related to the presence of HE.

For the canyon alluvial systems, including springs, surface water, groundwater, and sediment, Alternative III.2, PRBs with spring water collection by stormwater filter, is proposed as the preferred alternative. This alternative is best able to attain the MCSs and cost-effectively protect regional groundwater. PRBs would be placed strategically in areas of suspected infiltration along the Cañon de Valle to treat groundwater before it infiltrates the deep vadose zone.

Excavation of Cañon de Valle and Martin Spring Canyon is not justified by the contaminant sediment loadings and the presence of historical sources within the Cañon de Valle drainage. Substantial inventories of contaminants have been recorded for these historical sources. Although contaminants have not been identified within the saturated alluvium, their identification within the Cañon de Valle drainage indicates that stormwater could potentially carry them into Cañon de Valle, where, without groundwater treatment, infiltration to the deep vadose zone and regional groundwater could occur. Such flows could also recontaminate the clean backfilled sediment that would be placed as a part of an excavation alternative.

Excavation is not economically justified. Because the contaminant mass of RDX is estimated to be approximately 5 kg within Cañon de Valle sediment, excavation would not be cost-effective. Although the barium sediment inventory appears high, barium has not been detected in R-25, despite detections of elevated concentrations along the entire saturated alluvium of Cañon de Valle. Whether or not the substantial quantity of barium in the upper 2 ft of sediment is available for dissolution in groundwater is unclear at present. As discussed earlier, a portion of the COPCs inventoried may be bound in either insoluble sulfate or irreversible adsorption.

Excavation might also entail considerable NEPA permitting difficulties that might preclude implementation even if excavation were proposed. By contrast, construction and operation of the proposed preferred alternative, which minimally impacts sensitive wetlands and the Mexican Spotted Owl, should encounter less permitting complexity.

The groundwater recovery and treatment alternative, although at least as effective as the PRB alternative, incurs high O&M costs and requires a dedicated staff to maintain and operate. In addition, drought conditions may reduce the volume of water available for recovery and treatment.

The proposed alternative relies on natural flushing of alluvial sediments and treatment of the resulting groundwater. Under the drought conditions that are anticipated, this process will be slow, and the possibility exists that the alluvial groundwater will dry up. If the alluvial groundwater dries up, the potential for infiltration of contaminated groundwater from the canyon alluvium will be reduced. When the groundwater returns, the PRBs will function to treat groundwater.

The conceptual design of the proposed alternative consists of three PRBs installed in Cañon de Valle and one installed in Martin Spring Canyon. The design for the, eastern-most PRB in Cañon de Valle includes an infiltration gallery and small retention area on the upgradient side to allow stormwater surges to infiltrate groundwater and be treated by the PRB. In this manner, contaminated stormwater surges will not overrun the treatment system. The PRBs use ZVI or GAC for the treatment of HE, and calcium sulfate for the immobilization of barium. An identical infiltration gallery will be installed on the upgradient side of the Martin Spring Canyon PRB. Because of the stormwater filters on Martin Spring, the PRB in Martin Spring Canyon will serve primarily to treat stormwater surges of surface water and groundwater. Martin Spring is now dry. For the springs, the design installs stormwater filters for the treatment of HE and barium. This conceptual design will be finalized during the CMI phase.

Under the proposed alternative, the perennial reach of surface water in Cañon de Valle is not disturbed. Springs water, which is the principle component of surface water flow, is treated by stormwater filters. In addition, the perennial reach of surface water is encompassed by the system of PRBs, so that groundwater resulting from infiltrated surface water, at the end of the surface water reach, is treated. Surface water quality will improve under the proposed alternative.

Contaminant transport both to and within regional groundwater will be studied as part of the regional groundwater CMS. This study will incorporate the findings for the regional groundwater wells to be installed. The findings for these new wells may require changes to the proposed alternative.

To further characterize possible silver contamination in SWSC cut, site of a failed ecotox sample, a focused investigation is justified. Data from the focused investigation will be analyzed and ~~the~~ the need for excavation will be determined.

7.4 Monitoring Plan

The monitoring plan for the proposed alternative would consist of new monitoring well installation and of sampling of new and existing wells and surface water. As part of the installation, a pair of monitoring wells will be installed upgradient and downgradient from each PRB. These wells will be used to assess PRB effectiveness. Proposed points of compliance are five existing alluvial groundwater monitoring wells in Cañon de Valle and two existing monitoring wells in Martin Spring Canyon. These wells would be sampled quarterly for the first three~~3~~ yr~~r~~s and twice per yr thereafter. During twice per year sampling, if concentrations appear to be close to attainment of the MCS, quarterly sampling would resume with the goal of demonstrating eight consecutive quarters of compliance. As part of the monitoring plan, two surface water samples from Cañon de Valle and Well would also be sampled at the same frequency.

7.5 Schedule

Task VIII of Module VIII of the Hazardous Waste Facility Permit for Los Alamos National Laboratory (NM0890010515) (EPA 1994, 44146) specifies requirements for the completion of CMS activities, including a schedule. Table 7.5-1 presents a schedule of CMS and CMI activities.

Table 7.5-1
Schedule of CMS/CMI Activities[a]

Activity	Schedule
CMS Report	November 2003
Draft Statement of Basis (SOB) Issued by NMED	90 days after submittal of CMS Report
Public Comment Period (SOB)	60 days
Final SOB Issued by NMED	~~60~~ 90 days after end of public comment period
Submit CMI Plan to NMED	120 days after NMED issues final SOB
NMED Approves CMI Plan	~~90~~ 120 days after submittal of CMI plan to NMED
Submit CMI Engineering Design to NMED	90 days after NMED approves CMI Plan
NMED Approves CMI Engineering Designs	90 days after submittal of CMI Engineering Design
CMI Implementation–begin soil removal	60 days after NMED approves CMI Engineering design
CMI Implementation–begin water treatment systems	60 days after NMED approves CMI Engineering Design
CMI Implementation–soil removal complete	180 days after beginning CMI implementation
CMI Implementation–water treatment systems complete	1 year after beginning CMI implementation
Initial monitoring for CMI Performance	1 year after completion of CMI implementation

Submit CMI Report	90 days after completion of initial monitoring for CMI implementation
Monitoring for CMI Performance	Continuing until CMI cleanup criteria are met

[a] NMED Consent Order schedule will take precedence over the schedule outlined here.

8.0 REFERENCES

The following list includes all documents cited in the main body of this report. The parenthetical information following each reference provides the author, publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the RRES-RS Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the RRES-RS project reference library titled "Reference Set for Operable Unit 1082."

Copies of the reference library are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Site Office; the US Environmental Protection Agency, Region 6; and RRES-RS. This library is a living collection of documents that was developed to ensure that the administrative authority has all material needed to review the decisions and actions proposed in this document. However, documents previously submitted to the administrative authority are not included.

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Appendix A

Acronyms and Glossary

A-1.0 LIST OF ACRONYMS AND ABBREVIATIONS

AOC	area of concern
A-DNT	amino-dinitrotoluene
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BH	borehole
BMP	best management practice
BV	background value
CA	corrective action
CAMU	corrective action management unit
CdV	Cañon de Valle
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMI	corrective measures implementation
CMS	corrective measures study
COPC	chemical of potential concern
CSAMT	controlled-source audio-frequency magneto-telluric
CWA	Clean Water Act
CWM	Chemical Waste Management
DNT	dinitrotoluene
DHS	Department of Health Services
DNX	hexahydro-1,3-dinitroso-5-nitro-1,3,5-triazine
DoD	US Department of Defense
DOE	US Department of Energy
EA	environmental assessment
EIS	environmental impact statement
EPA	US Environmental Protection Agency
ER	environmental restoration
ES&H	environmental safety and health
ESH	Environment, Safety, & Health (a former Laboratory Division)
FOC	fraction organic compound
GAC	granular activated charcoal
HE	high explosive(s)
HI	hazard index
HMX	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclo-octane (cyclotetramethylenetetranitramine)
HSWA	Hazardous and Solid Waste Amendments of 1984
ITRD	Innovative Treatment Remediation Demonstration
IM	interim measure
LANL	Los Alamos National Laboratory
LDR	land disposal restriction
LTTD	low temperature thermal destruction
MCL	maximum contaminant level
MCS	media cleanup standards
MDA	material disposal area
MNA	monitored natural attenuation

MSC	Martin Spring Canyon
MNX	hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine
NEPA	National Environmental Policy Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NPDES	national pollutant discharge elimination system
NPV	net present value
NWP	nationwide permit
OU	operable unit
PCB	polychlorinated biphenyl
POC	point of compliance
PRB	permeable reactive barrier
RCRA	Resource Conservation and Recovery Act
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA	RCRA facility assessment
RFI	RCRA facility investigation
RRES-RS	Risk Reduction & Environmental Stewardship–Remediation Services
SAL	screening action level
SCM	site conceptual model
SSAL	specific screening action level
SVOC	semivolatile organic compound
SWMU	solid waste management unit
SWQB	state water quality bureau
SWSC	sanitary wastewater system consolidation
TA	technical area
TCLP	toxicity characteristic leaching procedure
TNB	1,3,5-trinitrobenzene
TNT	trinitrotoluene[2,4,6-]
TNX	hexahydro-1,3,5-trinitroso-1,3,5-triazine
TOSS	two-stage solid-phase
TSCA	Toxic Substances Control Act
US	United States
USACE	United States Army Corps of Engineers
VCA	voluntary corrective action
VOC	volatile organic compound
ZVI	zero-valent iron

A-2.0 GLOSSARY

absorption — The penetration of substances into the bulk of a solid or liquid.

adsorption — The surface retention of solid, liquid, or gas molecules, atoms, or ions by a solid or a liquid.

alluvial — Relating to geologic deposits or features formed by running water.

alluvium — Clay, silt, sand, and gravel transported by water and deposited on streambeds, flood plains, and alluvial fans.

analysis — Includes physical analysis, chemical analysis, and knowledge-of-process determinations. (Laboratory Hazardous Waste Facility Permit)

aquifer — Body of permeable geologic material whose saturated portion is capable of readily yielding groundwater to wells.

area of concern (AOC) — Areas at the Laboratory that might warrant further investigation for releases based on past facility waste-management activities.

background level — Naturally occurring concentrations (levels) of an inorganic chemical and naturally occurring radionuclides in soil, sediment, and tuff.

barrier — Any material or structure that prevents or substantially delays movement of solid-, liquid-, or gaseous-phase chemicals in environmental media.

baseline risk assessment (also known as risk assessment) **—** A site-specific analysis of the potential adverse effects of hazardous constituents that are released from a site in the absence of any control or mitigation actions. A baseline risk assessment consists of four steps: data collection and analysis, exposure assessment, toxicity assessment, and risk characterization.

bentonite — A clay composed of the mineral montmorillonite and variable amounts of magnesium and iron, formed over time by the alteration of volcanic ash. As bentonite can *adsorb* large quantities of water and expand to several times its normal volume, it is a common additive to drilling mud.

chemical — Any naturally occurring or man-made substance characterized by a definite molecular composition, including molecules that contain radionuclides.

chemical analysis — Process used to measure one or more attributes of a sample in a clearly defined, controlled, systematic manner. Often requires treating a sample chemically or physically before measurement.

chemical of potential concern (COPC) — A chemical, detected at a site, that has the potential to adversely affect human receptors due to its concentration, distribution, and mechanism of toxicity. A COPC remains a concern until exposure pathways and receptors are evaluated in a site-specific human health risk assessment.

cleanup levels — Media-specific contaminant concentration levels that must be met by a selected corrective action. Cleanup levels are established by using criteria such as protection of human health and the environment; compliance with regulatory requirements; reduction of toxicity, mobility, or volume through treatment; long- and short-term effectiveness; implementability; cost; and public acceptance.

Code of Federal Regulation (CFR) — A codification of all regulations developed by federal government agencies and finalized by publication in the Federal Register.

conceptual hydrogeologic model — Mathematical approximation of the occurrence, movement, and quality of groundwater in a given area and the relationship of that groundwater to the surface water, soil water, and geologic framework in that area.

confluence — Place where two or more streams meet; the point where a tributary meets the main stream.

contaminant — Any chemical (including radionuclides) present in environmental media or on structural debris.

corrective action — Action to rectify conditions adverse to human health or the environment.

corrective measures implementation (CMI) plan — A detailed plan and specifications to implement the approved remedy at the facility. It is the third step of the corrective-action process. It includes design, construction, maintenance, and monitoring of the chosen remedy.

corrective measures study (CMS) — A formal process to identify and evaluate remedy alternatives for releases at the facility (55 Federal Register 30798).

dilution attenuation factor — Ratio of contaminant concentration in soil leachate to the concentration in groundwater at the receptor point and is used to account for dilution of soil leachate in an aquifer.

discharge — Accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water. (RCRA, 40 CFR 260.10)

disposal — The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. (40 CFR Part 260.10)

DOE — See US Department of Energy

ecological screening level (ESL) — An organism's exposure-response threshold for a given chemical constituent. The concentration of a substance in a particular medium corresponds to a hazard quotient (HQ) of 1.0 for a given organism below which no risk is indicated.

effluent — Liquid discharged as a waste, such as contaminated water from a factory or the outflow from a sewage works; water discharged from a storm sewer or from land after irrigation.

environmental assessment (EA) — A report that identifies potentially significant environmental impacts from any federally approved or federally funded project that may change the physical environment. If an EA shows significant impact, an environmental impact statement (EIS) is required.

environmental impact statement (EIS) — Detailed report, required by federal law, on the significant environmental impacts that proposed major federal projects would have on the environment.

EPA — See US Environmental Protection Agency

ephemeral — Said of a stream or spring that flows only during and immediately after periods of rainfall or snowmelt.

evapotranspiration — The combined discharge of water from the earth's surface to the atmosphere by evaporation from lakes, streams, and soil surfaces, and by transpiration from plants.

exposure pathway — Mode by which a receptor may be exposed to contaminants in environmental media (e.g., drinking water, ingesting food, or inhaling dust).

fault — A fracture, or zone of fractures, in rock along which there has been vertical or horizontal movement; adjacent rock layers or bodies are displaced.

Federal Register — The official daily publication for Rules, Proposed Rules, and Notices of federal agencies and organizations, as well as Executive Orders and other Presidential Documents.

flood plain — The portion of a river valley that is built of overbank sediment deposited when the river floods.

geohydrology — The science that applies hydrologic methods to the understanding of geologic phenomena.

groundwater — Water in a subsurface saturated zone; water beneath the regional *water table*.

Hazardous and Solid Waste Amendments (HSWA) — The Hazardous and Solid Waste Amendments of 1984 (Public Law No. 98-616, 98 Stat. 3221), which amended the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 et seq.

hazardous constituent — Those constituents listed in Appendix VIII to 40 CFR Part 261.

hazardous waste — Any solid waste is generally a hazardous waste if it

- is not excluded from regulation as a hazardous waste,
- is listed in the regulations as a hazardous waste,
- exhibits any of the defined characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity), or
- is a mixture of solid waste and hazardous waste.

See 40 CFR 261.3 for a complete definition of hazardous waste.

HSWA module — Module VIII of the Laboratory's Hazardous Waste Facility Permit. This permit allows the Laboratory to operate as a treatment, storage, and disposal facility.

hydraulic conductivity — The rate at which water moves through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow.

hydraulic gradient — The rate of change of hydraulic head per unit of distance in the direction of groundwater flow.

hydraulic head — Elevation of the water table or potentiometric surface as measured in a well.

Hydrogeologic Workplan — The document that describes activities planned by the Laboratory to characterize the hydrologic setting beneath the Laboratory and to enhance the Laboratory's groundwater monitoring program.

hydrogeology — The science that applies geologic methods to the understanding of hydrologic phenomena.

hypothesis — A proposition stated as a basis for further investigation.

industrial-use scenario — Industrial use is the scenario in which current Laboratory operations continue. Any necessary remediation involves cleanup to standards designed to ensure a safe and healthy work environment for Laboratory workers.

infiltration — Entry of water into the ground.

injection well — A well into which fluids are injected (40 CFR 260.10). It should be noted that the ER Project is not using this term in its RCRA context (i.e., the injection of hazardous-waste liquid into the well under specific, approved conditions) but for adding water and/or tracers to the saturated zone during well tests of hydrologic behavior.

interim measure — Short-term actions taken to respond to immediate threats to human health or to prevent damage or contaminant migration to the environment.

interflow — A runoff process that involves lateral subsurface flow in the soil zone.

intermittent stream — A stream that flows only in certain reaches due to losing and gaining characteristics of the channel bed.

land disposal restrictions (LDR) — Requirements in 40 CFR 268 that specify treatment standards that are protective of human health and the environment when hazardous waste is land disposed.

leachate — Any liquid, including any suspended components in the liquid that has percolated through or drained from hazardous waste (40 CFR 260.10).

leaching — The separation or dissolving out of soluble constituents of a solid material by the natural action of percolating water or by chemicals.

medium (environmental) **—** Any media capable of absorbing or transporting constituents. Examples of media include tuffs, soils and sediments derived from these tuffs, surface water, soil water, groundwater, air, structural surfaces, and debris.

medium (geological) **—** The solid part of the hydrogeological system; may be unsaturated or saturated.

migration — The movement of inorganic and organic species through unsaturated or saturated materials.

migration pathway — A route (e.g., a stream or subsurface flow path) that controls the potential movement of contaminants to environmental receptors (plants, animals, humans).

mixed waste — Waste that contains both hazardous waste (as defined by RCRA) and radioactive waste (as defined by the Atomic Energy Act [AEA] and its amendments).

model — A mathematical approximation of a physical, biological, or social system.

monitoring well — A well or borehole drilled for the purpose of yielding groundwater samples for analysis.

National Pollutant Discharge Elimination System (NPDES) — The national program for both issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing requirements under Sections 307, 318, 402, and 405 of the Clean Water Act.

operable unit (OU) — At the Laboratory, one of 24 areas originally established for administering the ER Project. Set up as groups of potential release sites, the OUs were aggregated based on geographic proximity for the purpose of planning and conducting RCRA facility assessments and RCRA facility investigations. As the project matured, it became apparent that 24 were too many to allow efficient communication and to ensure consistency in approach. Therefore, in 1994, the 24 OUs were reduced to six administrative “field units.”

outfall — The vent or end of a drain, pipe, sewer, ditch, or other conduit that carries wastewater, sewage, storm runoff or other effluent into a stream.

perched groundwater — Groundwater that lies above the regional water table and is separated from it by one or more unsaturated zones.

percolation — Gravity flow of soil water through the pore spaces in soil or rock below the ground surface.

perennial stream — A stream or reach that flows continuously throughout the year.

piezometer — A tightly cased well drilled for the purpose of measuring hydraulic head or water level at a discrete depth; ideally only open at the bottom but usually constructed with a very short screen interval.

piezometric surface — The surface that represents the static head in an aquifer: applies to both confined and unconfined aquifers (also called potentiometric surface).

polychlorinated biphenyls (PCBs) — Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substances. PCBs are colorless, odorless compounds that are chemically, electrically, and thermally stable and have proven to be toxic to both humans and animals.

porosity — The ratio of the volume of interstices in a soil or rock sample to its total volume expressed as a percentage or as a fraction.

preliminary remediation goal (PRG) — Acceptable exposure levels, protective of human health and the environment, that are used as a risk-based tool for evaluating remedial alternatives.

RCRA facility investigation (RFI) — The investigation that determines if a release has occurred and the nature and extent of the contamination at a hazardous waste facility. The RFI is generally equivalent to the remedial investigation portion of the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) process.

receptor — A person, plant, animal, or geographical location that is exposed to a chemical or physical agent released to the environment by human activities.

recharge — The process by which water is added to the zone of saturation, either directly from the overlying unsaturated zone or indirectly by way of another material in the saturated zone.

regional aquifer — Geologic material(s) or unit(s) of regional extent whose saturated portion yields significant quantities of water to wells, contains the regional zone of saturation, and is characterized by the regional water table or potentiometric surface.

regulatory standard — Media-specific contaminant concentration levels of potential concern that are mandated by federal or state legislation or regulation (e.g., the Safe Drinking Water Act, New Mexico Water Quality Control Commission regulations).

release — Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous waste or hazardous constituents into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles that contain any hazardous wastes or hazardous constituents).

remediation — The process of reducing the concentration of a contaminant (or contaminants) in air, water, or soil media to a level that poses an acceptable risk to human health and the environment; the act of restoring a contaminated area to a usable condition based on specified standards.

residential-use scenario — The standards for residential use are the most stringent of the three current- and future-use scenarios being considered by the ER Project and is the level of cleanup the EPA is currently specifying for SWMUs located off the Laboratory site and for those released for non-Laboratory use.

Resource Conservation and Recovery Act (RCRA) — The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976. (40 CFR 270.2)

retardation — The act or process that reduces the rate of movement of a chemical substance in water relative to the average velocity of the water. The movement of chemical substances in water can be retarded by adsorption and precipitation reactions, and by diffusion into the pore water of the rock matrix.

risk assessment — See *baseline risk assessment.*

risk characterization — The summarization and integration of the results of toxicity and exposure assessments into quantitative and qualitative expressions of risk. The major assumptions, scientific judgments, and sources of uncertainty related to the assessment are also presented.

screening action level (SAL) — Medium-specific concentration level for a chemical derived using conservative criteria below for which it is generally assumed that there is no potential for unacceptable risk to human health. The derivation of a SAL is based on conservative exposure and land-use assumptions. However, if an applicable regulatory standard exists that is less than the value derived by risk-based computations, it will be used for the SAL.

screening assessment — A process designed to determine whether contamination detected in a particular medium at a site may present a potentially unacceptable human-health and /or ecological risk. The assessment utilizes screening levels that are either human-health or ecologically based concentrations derived by using chemical-specific toxicity information and standardized exposure assumptions below which no additional actions are generally warranted.

sediment — (1) A mass of fragmented inorganic solid that comes from the weathering of rock and is carried or dropped by air, water, gravity, or ice; or a mass that is accumulated by any other natural agent and that forms in layers on the earth's surface such as sand, gravel, silt, mud, fill, or loess. (2) A solid material that is not in solution and either is distributed through the liquid or has settled out of the liquid.

site characterization — Defining the pathways and methods of migration of the hazardous waste or constituents, including the media affected, the extent, direction and speed of the contaminants, complicating factors influencing movement, concentration profiles, etc. (US Environmental Protection Agency, May 1994. "RCRA Corrective Action Plan, Final," Publication EPA-520/R-94/004, Office of Solid Waste and Emergency Response, Washington, DC)

site conceptual model — A qualitative or quantitative description of sources of contamination, environmental transport pathways for contamination, and biota that may be impacted by contamination (called receptors) and whose relationships describe qualitatively or quantitatively the release of contamination from the sources, the movement of contamination along the pathways to the exposure points, and the uptake of contaminant by the receptors.

soil gas — Those gaseous elements and compounds that occur in the void spaces in unsaturated rock or soil. Such gases can move through or leave the rock or soil, depending on changes in pressure.

soil water — Water in the unsaturated zone, regardless of whether it occurs in soil or rock.

solid waste — Any garbage; refuse; sludge from a waste treatment plant, water-supply treatment plant, or air-pollution-control facility; and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities.

solid waste management unit (SWMU) — Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. This definition includes regulated units (i.e., landfills, surface impoundments, waste piles, and land treatment units) but does not include passive leakage or one-time spills from production areas and units in which wastes have not been managed (e.g., product-storage areas).

spring — The site where groundwater discharges to the ground surface.

stakeholder — As used in this document, stakeholder refers to any party or agency, whether inside or outside the Laboratory, interested in or affected by Environmental Restoration Project issues and activities.

technical area (TA) — The Laboratory established technical areas as administrative units for all its operations. There are currently 49 active TAs spread over approximately 40 square miles.

tracer — A substance, usually a radioactive isotope, added to a sample to determine the efficiency (chemical or physical losses) of the chemical extraction, reaction, or analysis. The tracer is assumed to behave in the same manner as that of the target radionuclides. Recovery guidelines for tracer results are 30% to 110% under the current contract laboratory statement of work and will be 40% to 105% under the new statement of work. Correction of the analytical results for the tracer recovery is performed for each sample. The concentration of the tracer added needs to be sufficient to result in a maximum of 10% uncertainty at the 95% confidence level in the measured recovery.

transmission loss — Reduction in surface water flow by seepage into the channel bed.

transmissivity — A measure of the rate at which water is transmitted through a cross section of aquifer having the dimensions unit width and total saturated thickness as height, under a unit hydraulic gradient; also hydraulic conductivity times aquifer thickness.

transport or transportation — The movement of a hazardous waste by air, rail, highway, or water. (40 CFR 260.10)

treatment — Any method, technique, or process, including elementary neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste; recover energy or material resources from the waste; or so as to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery or storage; or reduced in volume.

treatment, storage, and disposal (TSD) facility — An interim status or permitted facility in which hazardous waste is treated, stored, or disposed.

tuff — A compacted deposit of volcanic ash and dust that contains rock and mineral fragments accumulated during an eruption.

underflow — Groundwater flow beneath the bed of a non-flowing stream; such water is often perched in the channel alluvium atop the bedrock surface.

unsaturated zone — The zone between the land surface and the regional water table and between perched zones of saturation. Generally, fluid pressure in this zone is less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure.

US Department of Energy (DOE) — Federal agency that sponsors energy research and regulates nuclear materials for weapons production.

US Environmental Protection Agency (EPA) — Federal agency responsible for enforcing environmental laws. While state regulatory agencies may be authorized to administer some of this responsibility, the EPA retains oversight authority to ensure protection of human health and the environment.

vadose zone — The unsaturated zone. Portion of the subsurface above the regional water table in which pores are not fully saturated.

water balance — The relationship between water input (precipitation) and output (runoff, evapotranspiration, and recharge) in a hydrological system; the partitioning of precipitation among these components of the hydrological cycle.

water content — (Also gravimetric moisture content) The amount of water in an unsaturated medium, expressed as the ratio of the weight of water in a sample to the weight of the oven-dried sample; often expressed as a percent.

water table — The top of the regional saturated zone; the piezometric surface associated with an unconfined aquifer.

A-3.0 METRIC TO US CUSTOMARY UNIT CONVERSION TABLE

Multiply SI (Metric) Unit	by	To Obtain US Customary Unit
kilometers (km)	0.622	miles (mi)
kilometers (km)	3281	feet (ft)
meters (m)	3.281	feet (ft)
meters (m)	39.37	inches (in.)
centimeters (cm)	0.03281	feet (ft)
centimeters (cm)	0.394	inches (in.)
millimeters (mm)	0.0394	inches (in.)
micrometers or microns (µm)	0.0000394	inches (in.)
square kilometers (km^2)	0.3861	square miles (mi^2)
hectares (ha)	2.5	acres
square meters (m^2)	10.764	square feet (ft^2)
cubic meters (m^3)	35.31	cubic feet (ft^3)
kilograms (kg)	2.2046	pounds (lb)
grams (g)	0.0353	ounces (oz)
grams per cubic centimeter (g/cm^3)	62.422	pounds per cubic foot (lb/ft^3)
milligrams per kilogram (mg/kg)	1	parts per million (ppm)
micrograms per gram (µg/g)	1	parts per million (ppm)
liters (L)	0.26	gallons (gal.)
milligrams per liter (mg/L)	1	parts per million (ppm)
degrees Celsius (°C)	9/5 + 32	degrees Fahrenheit (°F)

Appendix B

Supporting Information for CMS COPC Identification

Appendix B
List of Tables

B1 Purpose and Data Sources

The purpose of this appendix is to identify CMS COPCs from tables of RFI Phase III COPCs. This process involves evaluating the RFI COPCs with respect to the regulatory standards (NMWQCC groundwater standards) and advisory screening limits (EPA Region 6 tap water screening levels and EPA Region 9 tap water preliminary remediation goals). Standards and screening limits are given in the tables of this appendix. RFI COPCs that exceed a standard or screening limit because the upper detection limit exceeds a CMS COPC screening limit are not included, if the maximum detected value did not exceed a screening limit. In addition, COPCs are evaluated with respect to prevalence of detection, association with known anthropogenic sources, and potential to adversely affect regional groundwater (R-25). In addition, a distinction is drawn between filtered and unfiltered samples; unfiltered samples overestimate the concentration of contaminants available for transport to regional groundwater.

The CMS COPCs identified for Cañon de Valle and Martin Spring Canyon groundwater, surface water, and springs are also carried over to alluvial sediment in these locations, if they were detected in sediment. Such a translation recognizes that alluvial sediment is an integral part of the hydrogeologic system.

Supporting data are available in the accompanying tables and supporting text in the Phase III RFI report, Appendix G (LANL 2003, 77965). All data for R-25 are available at http://wqdbworld.lanl.gov/ and cover the period from approximately November 2000 to September 2004. Unless otherwise stated, frequency of detect data refer to RFI Phase III data from 1998-2002 summarized in Appendix B tables. More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

B~~1~~2 Cañon de Valle CMS COPCs

Cañon de Valle surface water CMS COPCs are barium, manganese, silver, RDX, DNX, MNX and TNT. For alluvial groundwater the CMS COPCs are barium, manganese, RDX, MNX and TNT. For alluvial sediment, the CMS COPCs are barium, manganese, silver, RDX, and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in this section, and is developed using the CMS COPC screening criteria presented in section 3.2.

~~Supporting data are available in the accompanying tables and supporting text and supporting text and in the Phase III RFI report, Appendix G (LANL 2003, 77965).~~

B~~1~~2.1 Cañon de Valle Surface Water

Cañon de Valle surface water inorganic RFI COPCs that exceed their CMS COPC standards and screening limits include ~~antimony~~arsenic, barium, iron, lead, manganese, nitrate-nitrite as N, perchlorate, silver, and thallium~~, and uranium~~. Organic RFI COPCs that exceeded their CMS COPC screening limits are RDX, DNX, MNX, TNT, tetrachloroethene, and trichloroethene. Supporting data are available in Tables B-1 and B-2 and from Appendix G of the Phase III RFI report (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

~~On the basis of frequency of detection and distribution, antimony is not a CMS COPC. The percentage of total samples containing detectable antimony was 13 percent; of 20 samples with detectable antimony, only one antimony sample exceeded the screening limit in surface water. Moreover, based on regional groundwater sampling results from R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), antimony did not exceed a screening limit.~~

Arsenic exceeded the EPA Region 6 and 9 screening limits (both 0.045 µg/L) but not the NMWQCC standard (100 µg/L) or the MCL (10 µg/L). It was detected in 24 percent of surface water samples (Table

B-1). The maximum concentration of 8.3 µg/L was for an unfiltered sample from Fishladder Seep. The maximum filtered sample concentration is 4.7 µg/L. Arsenic was not listed as an RFI COPC in Cañon de Valle alluvial sediment because there were no concentrations above the background value. Based on R-25 data from November 2000 to November 2004 arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. For these reasons arsenic is not a CMS COPC.

Barium ~~is a CMS COPC. It~~ was detected in 100 percent of surface water samples; of 151 detections, 81 exceeded the CMS standard~~screening limit~~. In R-25 data from 2000-2004, barium has been detected, but all results were below screening limits and standards. Barium is a CMS COPC primarily because of the prevalence of detections above the groundwater standard in Cañon de Valle surface water.

Iron~~.~~ was detected in 75 percent of surface water samples and showed a marked difference in concentration between filtered and unfiltered samples, indicating the presence of iron containing particulates in site water. The maximum concentration was from an unfiltered sample from Fishladder Seep. The maximum filtered sample concentration was located in Water Canyon (ESH-18 weir), and was below both the EPA Region 6 and 9 screening levels. Cañon de Valle iron concentrations in filtered samples are all below the NMWQCC standard (1000 µg/L). In R-25 results for filtered samples (from 2002-2004), two results were above the NMWQCC standard and the MCL (300 µg/L). For unfiltered samples, 30 results exceeded the MCL and 15 results exceeded the NMWQCC standard. One unfiltered sample result was above EPA Region 6 and 9 screening levels (11,000 µg/L). Results for R-25 do not indicate that iron is a contaminant. For these reasons, iron is not a CMS COPC.

Lead was detected in 34 percent of surface water samples. The maximum concentration, from an unfiltered sample taken from Cañon de Valle, exceeded the EPA Region 6 screening limit (15 µg/L) and the MCL (15 µg/L), but not the NMWQCC standard (50 µg/L). Of 54 detections, five samples exceeded the MCL, all unfiltered samples. No results from filtered samples exceeded screening limits or standards. Two unfiltered sample results from R-25 exceeded the MCL for lead during the period from September 2000 to November 2004. No filtered sample exceeded standards. No R-25 sample, filtered or unfiltered, result exceeded the NMWQCC standard. For these reasons, lead is not a CMS COPC.

Manganese was detected in 96 percent of surface water samples, with the maximum concentration exceeding both the NMWQCC standard (200 µg/L) and the MCL (50 µg/L). Approximately 40 percent and 13 percent of detects (filtered and unfiltered samples) exceeded the MCL and NMWQCC standard, respectively. Results from R-25 regional groundwater (2000-2004) show 33 sample results greater than the MCL, of which 16 exceed the NMWQCC standard (including filtered and unfiltered samples). It is not known whether manganese is related to naturally occurring or manmade reducing conditions. Given this uncertainty and the prevalence of manganese, it is retained as a CMS COPC.

Nitrate-nitrite as N was detected in 61 percent of surface water samples, but exceeded the ~~screening limit~~NMWQCC standard (10,000 µg/L) in only 1 of 39 samples showing detectable nitrate-nitrite as N. The remaining sample results were at least a factor of 10 below the ~~screening limit~~standard. Nitrate-nitrite as N did not exceed the NMWQCC standard in ~~a screening limit in~~ R-25 regional groundwater (~~LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5~~2000-2004). For these reasons nitrate-nitrite as N is excluded as a CMS COPC.

Perchlorate was detected in 8% of Cañon de Valle surface water samples. For the RFI Phase III data set for perchlorate (March 2000 to August 2002), four samples showed detectable perchlorate, all above the screening limits (3.60 and 3.70 µg/L) and all from 2000; all other RFI Phase III sample results (through August 2002) did not detect perchlorate (method detection limit was 4 µg/L). More recent results from

September 2002 to March 2003 also do not show detectable perchlorate concentrations above a detection limit of 4 µg/L. Results from September 2003 to January 2005, using a detection limit as low as 0.05 µg/L, show that perchlorate was detected in 90 percent of samples, but all sample results were below screening limits. In summary, the only results above the screening limits are from 2000. In R-25 results (2000-2004), perchlorate was detected in two of 59 sampling events, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle surface water.

Silver was detected in 15 percent of surface water samples, but only two surface water samples of 23 samples showing detectable silver exceeded the NMWQCC~~screening limit~~ standard (50 µg/L). ~~In addition, silver present in sediment and surface water did not cause unacceptable risks in the Phase III RFI risk assessment.~~In the RFI Phase III, a silver bearing sediment sample from SWSC cut failed a chironomus ecotox test, indicating that sediment may have the potential for adverse surface water effects; however, a second test from this location passed. In R-25 data from 2000-2004, silver was detected in eight samples, but at levels less than the NMWQCC standard. ~~Finally, elevated silver concentrations have not been detected in R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).~~ These results show that silver is not a concern with respect to regional groundwater; however, because of the failed chironomus ecotox test, silver is retained as a ~~For these reasons, silver is not included as a~~ Cañon de Valle surface water CMS COPC.

~~Perchlorate was detected in 8% of Cañon de Valle surface water samples. All samples showing detectable perchlorate are from 2000; recent sample results (through March 2002) have not detected perchlorate. Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle surface water.~~

Thallium was detected in 18 percent of surface water samples in the RFI Phase III data set (March 1998 - August 2002), but exceeded the MCL in only three unfiltered samples out of 29 detections. No filtered samples exceeded the screening limit or standard. In more recent data (September 2002 – February 2005), thallium was detected in approximately 70% of samples, but did not exceed a screening limit or standard (approximately 150 samples, including QA duplicates). In regional groundwater (R-25), two sets of analytical methods were used, SW-846-6010 and SW 846-6020 (ICP-MS), the latter more sensitive. Using the former method, the MCL was exceeded multiple times (range = 2.2 µg/L to 5.2 µg/L); however, all of these results were J flagged as estimated values. Using the more sensitive analytical method, screening limits and the MCL were not exceeded over the period November 2000 to September 2004. Based on these reasons, thallium is not a CMS COPC.

Uranium was included as an RFI COPC because its maximum detection limit exceeded the screening limit. For samples with detectable uranium, the maximum concentration fell below the screening limit.

In R-25 (2000-2004), one sample result was above the EPA Region 9 screening limit, but no sample result exceeded the MCL or NMWQCC standards. Uranium is not sufficiently prevalent as a contaminant, and is not a CMS COPC.

RDX was detected in 74 percent of surface water samples. Of 67 samples showing detectable RDX, 65 exceeded the screening limit. TNT was detected in 15 percent of samples. Of 14 samples showing detectable TNT, five exceeded the screening limit. RDX breakdown products DNX and MNX have been detected in surface water. In R-25 results from 2000 to 2004, MNX, RDX, and TNT have been detected, with RDX and TNT detected above the screening limit. For these reasons these compounds are included as CMS COPCs.

Table B-1
Phase III RFI Cañon de Valle Surface Water Inorganic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	6.4	(J)[b]	15	15	4300	na[c]	na	6	No	13
	Max. Undetected Value	33	(U)[d]	15	15	4300	na	na	6	Yes	
Arsenic	Max. Detected Value	8.3	(J)	0.045	0.045	24.2	340[e]	100[f]	10	Yes	24
	Max. Undetected Value	5	(U)	0.045	0.045	24.2	340[e]	100[f]	10	Yes	
Barium	Max. Detected Value	16,300		2600	2600	na	na	1000[f]	2000	Yes	100
Cesium	Max. Detected Value	800		na	na	na	na	na	na	na	n/a[g]
Iron	Max. Detected Value	17,700		11,000	11,000	na	na	1000[h]	300	Yes	75
	Max. Undetected Value	406	(U)	11,000	11,000	na	na	1000[h]	300	No	
Lead	Max. Detected Value	24.1		15	na	-66,600[e,i]	na	50[f]	15	Yes	34
	Max. Undetected Value	4.2	(U)	15	na	-66,600[e,i]	na	50[f]	15	No	
Manganese	Max. Detected Value	2290		1700	880	na	na	200[h]	50	Yes	96
	Max. Undetected Value	8.8	(U)	1700	880	na	na	200[h]	50	No	
Nitrate-Nitrite as N	Max. Detected Value	49,200		na	na	na	na	10,000	na	Yes	61
	Max. Undetected Value	1110	(U)	na	na	na	na	10,000	na	No	
Perchlorate	Max. Detected Value	17.1		3.70	3.60	na	na	4[j]	na	Yes	8
	Max. Undetected Value	20	(U)	3.70	3.60	na	na	4[j]	na	Yes	

Table B-1 (concluded)

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Silver	Max. Detected Value	1380		180	180	na	311,000[e]	50[f]	100	Yes	15
	Max. Undetected Value	10	(U)	180	180	na	311,000[e]	50[f]	100	No	
Thallium	Max. Detected Value	5.9	(J)	2.90[k]	2.40	6.3	na	na	2	Yes	18
	Max. Undetected Value	5.6	(U)	2.90[k]	2.40	6.3	na	na	2	Yes	
Uranium	Max. Detected Value	1.91		na	7.30	na	na	5000[f]	30	No	59
	Max. Undetected Value	126	(U)	na	7.30	na	na	5000[f]	30	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = Not available.

[d] (U) = The chemical is classified "undetected."

[e] Calculated using the minimum hardness determined, 76,000 µg/L.

[f] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[g] n/a = Not Applicable. Less than 20 samples.

[h] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[i] Negative value is an artifact of hardness correction calculation.

[j] California DHS 2003, 76862.

[k] Denotes Thallium Carbonate was used.

Table B-2
Phase III RFI Cañon de Valle Surface Water Organic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Bis(2-ethylhexyl)phthalate	Max. Detected Value	1.6	(J)[b]	4.80	4.80	59	na[c]	na	6	No	n/a[d]
	Max. Undetected Value	12	(U)[e]	4.80	4.80	59	na	na	6	Yes	
DNX	Max. Detected Value	1.3	(J-)[f]	0.61	0.61	na	na	na	na	Yes	n/a
	Max. Undetected Value	0.5	(U)	0.61	0.61	na	na	na	na	No	
Methylene Chloride	Max. Detected Value	1.1	(J)	4.30	4.30	16,000	na	100[g]	5	No	3
	Max. Undetected Value	38	(U)	4.30	4.30	16,000	na	100[g]	5	Yes	
MNX	Max. Detected Value	1	(J-)	0.61	0.61	na	na	na	na	Yes	n/a
	Max. Undetected Value	0.5	(U)	0.61	0.61	na	na	na	na	No	
Naphthalene	Max. Detected Value	0.7	(J)	6.20	6.20	na	na	30[g]	na	No	3
	Max. Undetected Value	15	(U)	6.20	6.20	na	na	30[g]	na	Yes	
Nitroglycerin	Max. Detected Value	1.1	(J)	na	4.80	na	na	na	na	No	4
	Max. Undetected Value	5	(U)	na	4.80	na	na	na	na	Yes	

Table B-2 (concluded)

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
RDX	Max. Detected Value	290	_	0.61	0.61	na	na	na	na	Yes	74
	Max. Undetected Value	0.9	(U)	0.61	0.61	na	na	na	na	Yes	
Tetrachloroethene	Max. Detected Value	42	_	0.10	0.66	88.5	na	20[g]	5	Yes	12
	Max. Undetected Value	5	(U)	0.10	0.66	88.5	na	20[g]	5	Yes	
Trichloroethene	Max. Detected Value	10	_	0.028	0.028	810	na	100[e]	5	Yes	9
	Max. Undetected Value	5	(U)	0.028	0.028	810	na	100[e]	5	Yes	
Trinitrotoluene[2,4,6-]	Max. Detected Value	6.2	_	2.20	2.20	na	na	na	na	Yes	15
	Max. Undetected Value	5	(U)	2.20	2.20	na	na	na	na	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = Not available.

[d] n/a = Not Applicable. Less than 20 samples.

[e] (U) = The chemical is classified "not detected."

[f] (J-) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential negative bias.

[g] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

~~Moreover, uranium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, uranium is not included as a CMS COPC.~~

~~RDX was detected in 74 percent of surface water samples. Of 67 samples showing detectable RDX, 65 exceeded the screening limit. TNT was detected in 15 percent of samples. Of 14 samples showing detectable TNT, 5 exceeded the screening limit. RDX breakdown products DNX and MNX have been detected in surface water. Finally, MNX, RDX, and TNT have been detected in deep groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons these compounds are included as CMS COPCs.~~

Tetrachloroethene and trichloroethene were detected in 12 percent and 9 percent of surface water samples, respectively. Of 4 samples showing detectable tetrachloroethene, 3 results exceeded the screening limit. Of 3 samples showing detectable trichloroethene, 1 result exceeded the screening limit. All samples exceeding the screening limits were from Fishladder Canyon. With the exception of a sample taken from Peter Seep, these compounds were not detected in other surface water samples. These compounds have o~~O~~ccasionally~~, these compounds have~~ been detected in deep groundwater in R-25 (2000-2004), though not at levels above standards~~screening limits (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5)~~. These compounds are not retained as CMS COPCs for this CMS. Fishladder Canyon will be investigated in 2004 and 2005 as part of a separate investigation (LANL 1993, 20948).

B~~1~~2.2 Cañon de Valle Alluvial Groundwater

The Cañon de Valle alluvial groundwater inorganic RFI COPCs that exceed their CMS COPC standards and screening limits are~~ antimony~~ aluminum, arsenic, barium, ~~cadmium,~~iron, lead, manganese, perchlorate, ~~and~~ thallium, uranium, and vanadium. The organic RFI COPCs are chloromethane, dinitrobenzene, MNX, RDX, trichloroethene, and TNT. Supporting data are available in Tables B-3 and B-4 and from Appendix G of the Phase III RFI report (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

~~Antimony was detected in 32 percent of samples, but of 29 samples showing detectable antimony, no filtered samples and only one unfiltered sample had results that exceeded the screening limit. Moreover, as discussed in section 3.2.1.1, antimony is not a CMS COPC in regional groundwater at R-25. For these reasons, antimony is not a CMS COPC for Cañon de Valle alluvial groundwater.~~

Aluminum was detected in 90 percent of groundwater samples, with the maximum concentration detected at 16-02655, upgradient of the 260 outfall. Moreover, the highest 13 detected concentrations (of 146) were from well 16-02655, with concentrations ranging from 30,000 to 151,000 µg/L, well above the NMWQCC standard. There are no soil samples with aluminum above soil background at T-site, located upgradient of well 16-02655 (LANL, 1997, 56660~~,289~~). For R-25 data between November 2000 and September 2004, no sample results exceeded the NMWQCC standard. Approximately 45% and 24% of unfiltered and filtered samples results, respectively, exceeded the MCL. These data support the conclusion that aluminum is naturally occurring and is not a CMS COPC.

Arsenic was detected in 53 percent of groundwater samples. Of the nine (of 83) samples that exceeded the MCL, seven samples were from well 16-02655, located upgradient of the 260 outfall. The only SWMU upstream of 2655 is T-Site. There are no soil samples with arsenic above soil background at T-site (LANL, 1997, 56660). These observations strongly indicate that arsenic is naturally occurring. Based on R-25 data from November 2000 to November 2004 arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. For these reasons, arsenic is not a CMS COPC.

Barium was detected in 100 percent of groundwater samples, with 140 of 154 sample results exceeding the screening limit. In R-25 data from 2000-2004, barium has been detected, but all results were below screening limits and standards. Barium is a CMS COPC primarily because of the prevalence of detections above the standard in Cañon de Valle groundwater. Barium has been detected in R-25, though concentrations are at least a factor of 10 lower than the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).

Cadmium was detected in 54 percent of samples, but only 9 samples of 88 samples showed results that exceeded the screening limit; all but one were unfiltered samples. Moreover, cadmium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as CMS COPC.

Iron was detected in 93 percent of groundwater samples. Nine of the ten highest detects for iron were in well 16-02655, upgradient of the 260 outfall. Iron was not found above background in T-site soils, the SWMU upstream from this well (LANL, 1997, 56660). In R-25 results for filtered samples (from 2002-2004), two results were above the NMWQCC standard and the MCL (300 µg/L). For unfiltered samples, 30 results exceeded the MCL and 15 results exceeded the NMWQCC standard. One unfiltered sample result was above EPA Region 6 and 9 screening levels (11,000 µg/L) . Results for R-25 do not indicate that iron is a contaminant. For these reasons, iron is not a CMS COPC. For these reasons, iron is not a CMS COPC.

Lead was detected in 67 percent of groundwater samples, Five of 108 detections exceeded the MCL, all in unfiltered samples. Two unfiltered sample results from R-25 exceeded the MCL for lead during the period from September 2000 to November 2004. No filtered sample exceeded standards. No R-25 sample, filtered or unfiltered, result exceeded the NMWQCC standard. Lead does not meet the prevalence requirement, and is not a CMS COPC.

Manganese was detected in 98 percent of Cañon de Valle groundwater samples, of which 115 of 158 sample results exceeded the MCLscreening limit. Manganese was not listed as an RFI COPC for Cañon de Valle surface water. Manganese in sediment from Cañon de Valle was not listed as RFI COPCs because manganese was not present above background concentrations. Alluvial groundwater data sorted by distance from the outfall indicate that manganese concentrations uniformly increase with distance. Its presence within alluvial groundwater, which is in intimate contact with sediment containing manganese within background, strongly indicates that manganese is most likely naturally occurring. However, the

increasing trend with distance from the outfall indicates that manganese has been leached from naturally occurring manganese in sediment by reducing conditions caused by the presence of organic material. It is not known whether this organic material is naturally occurring (organic humus) or HE.

Results from R-25 regional groundwater (2000-2004) show 33 sample results greater than the MCL, of which 16 exceed the NMWQCC standard. For these reasons, manganese is included as a CMS COPC for Cañon de Valle alluvial groundwater.

Perchlorate was detected in 10 percent of groundwater samples from the RFI Phase III data set (March 2000 to June 2002), with all detections coming in 2000. In 2000 all detections (four in number) were above the screening limit. All other samples (45 in number) during this timeframe were below the detection limit. In results from September 2002 to March 2003, perchlorate was not detected above the detection limit of 4 µg/L. In subsequent data (up to July 2004January 2005), perchlorate was detected above the detection limit (as low as 0.05 µg/L), but all results were below screening limits. In R-25 results (2000-2004), perchlorate was detected in two of 59 sampling events, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle alluvial groundwater.

Table B-3
Phase III RFI Cañon de Valle Alluvial Groundwater Inorganic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Aluminum	Max. Detected Value	151,000		37,000	36,000	5000[b,c]	50	Yes	90
	Max. Undetected Value	320	(U)[d]	37,000	36,000	5000[b,c]	50	No	
Antimony	Max. Detected Value	10.9	(J)[e]	15	15	na[f]	6	No	32
	Max. Undetected Value	20	(U)	15	15	na	6	Yes	
Arsenic	Max. Detected Value	19		0.045	0.045	100[g]	10	Yes	53
	Max. Undetected Value	9.3	(U)	0.045	0.045	100[g]	10	Yes	
Barium	Max. Detected Value	18,000		2600	2600	1000[g]	2000	Yes	100
Cesium	Max. Detected Value	1300		na	na	na	na	na	n/a[h]
Iron	Max. Detected Value	93,900		11,000	11,000	1000[i]	300	Yes	93
	Max. Undetected Value	253	(U)	11,000	11,000	1000[i]	300	No	
Lead	Max. Detected Value	109		15	na	50[g]	15	Yes	67
	Max. Undetected Value	3.2	(U)	15	na	50[g]	15	No	
Manganese	Max. Detected Value	4340		1700	880	200[i]	50	Yes	98
	Max. Undetected Value	10	(U)	1700	880	200[i]	50	No	
Perchlorate	Max. Detected Value	19.1		3.70	3.60	4[j]	na	Yes	10
	Max. Undetected Value	4.79	(U)	3.70	3.60	4[j]	na	Yes	

Table B-3 (continued)

Chemical	Sample Concentration (μg/L)			EPA Region 6 Tap Water Screening Level (μg/L)	EPA Region 9 Tap Water PRG (μg/L)	NMWQCC Standard (μg/L)	EPA MCL (μg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Rubidium	Max. Detected Value	900	_	na	na	na	na	na	n/a
	Max. Undetected Value	50	(U)	na	na	na	na	na	
Thallium	Max. Detected Value	7.6	(J)	2.90[k]	2.40	na	2	Yes	29
	Max. Undetected Value	9.1	(U)	2.90[k]	2.40	na	2	Yes	
Uranium	Max. Detected Value	8.38	_	na	7.30	5000[g]	30	Yes	49
	Max. Undetected Value	126	(U)	na	7.30	5000[g]	30	Yes	
Vanadium	Max. Detected Value	132	_	37	260	100[c]	na	Yes	69
	Max. Undetected Value	12.3	(U)	37	260	100[c]	na	No	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] NMWQCC Groundwater Standard for Irrigation Use (20 NMAC 6.2.3103).

[c] NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900).

[d] (U) = The chemical is classified "undetected."

[e] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[f] na = Not available.

[g] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[h] n/a = Not Applicable. Less than 20 samples

[i] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[j] California DHS 2003, 76862.

[k] Denotes Thallium Carbonate value was used.

Table B-4
Phase III RFI Cañon de Valle Alluvial Groundwater Organic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Chloromethane	Max. Detected Value	44	(J)[b]	1.50	1.50	na[c]	na	Yes	5
	Max. Undetected Value	10	(U)[d]	1.50	1.50	na	na	Yes	
Dinitrobenzene[1,3-]	Max. Detected Value	12		3.70	3.60	na	na	Yes	1
	Max. Undetected Value	13	(U)	3.70	3.60	na	na	Yes	
MNX	Max. Detected Value	0.65		0.61	0.61	na	na	Yes	n/a[e]
	Max. Undetected Value	0.5	(U)	0.61	0.61	na	na	No	
Nitrobenzene	Max. Detected Value	0.36	(J-)[f]	3.40	3.40	na	na	No	1
	Max. Undetected Value	50	(U)	3.40	3.40	na	na	Yes	
RDX	Max. Detected Value	759		0.61	0.61	na	na	Yes	73
	Max. Undetected Value	1	(UJ)[g]	0.61	0.61	na	na	Yes	
Trichloroethene	Max. Detected Value	1.1	(J)	0.028	0.028	100[h]	5	Yes	8
	Max. Undetected Value	5	(U)	0.028	0.028	100[h]	5	Yes	
Trinitrotoluene[2,4,6-]	Max. Detected Value	46.6		2.20	2.20	na	na	Yes	3
	Max. Undetected Value	13	(U)	2.20	2.20	na	na	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = Not available.

[d] (U) = The chemical is classified "not detected."

Table B-4 (continued)

[e] n/a = Not Applicable. Less than 20 samples.

[f] (J-) = The chemical is classified “detected,” but the reported concentration value is expected to be more uncertain than usual with a potential negative bias.

[g] (UJ) = The chemical is classified "not detected" with an expectation that the reported result is more uncertain than usual.

[h] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

~~increasing trend with distance from the outfall indicates that manganese has been leached from naturally occurring manganese in sediment by reducing conditions caused by the presence of organic material. It is not known whether this organic material is naturally occurring (organic humus) or HE.~~

~~Manganese is occasionally detected above the screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against background have not been completed. For these reasons, manganese is included as a CMS COPC for Cañon de Valle alluvial groundwater.~~

~~Perchlorate was detected above its screening limit in Cañon de Valle alluvial groundwater during 2000, but it has not been detected above the screening limit in later results (through March 2002). Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). Due to the low concentration and infrequent detection in alluvial groundwater, it does not likely pose a contaminant risk to regional groundwater. For these reasons, perchlorate is not included as a CMS COPC for Cañon de Valle alluvial groundwater.~~

Thallium was detected in 29 percent of groundwater samples from the RFI Phase III data set (March 1998 to June 2002), but of 158 samples showing detectable thallium only 2 sample results exceeded the MCL. In more recent data (September 2002 – January 2005), approximately 45% of samples showed detectable thallium, but all results were below the MCL (in approximately 80 samples, including duplicates). In regional groundwater (R-25), two sets of analytical methods were used, SW-846-6010 and SW 846-6020 (ICP-MS), the latter more sensitive. Using the former method, the MCL was exceeded multiple times (range = 2.2 µg/L to 5.2 µg/L); however, all of these results were J flagged as estimated values. Using the more sensitive analytical method, screening limits and the MCL were not exceeded over the period November 2000 to September 2004. Based on these considerations, thallium is not a CMS COPC.

Uranium was detected in 49 percent of groundwater samples. No sample results were above the NMWQCC standard or MCL. Two of 29 samples were above the EPA Region 9 screening limit (7.30 µg/L). In R-25 (2000-2004), one sample result was above the EPA Region 9 screening limit, but no sample results exceeded the MCL or NMWQCC standards. Uranium is not sufficiently prevalent as a contaminant, and is not a CMS COPC.

Vanadium was detected in 69 percent of groundwater samples, with the maximum value detected at well 16-02655, located upgradient from the 260 outfall. Of the ten highest concentrations, nine were detected at this well. One sample result~~s~~ exceeded the NMWQCC standard. Thirteen sample results (of 111 detects) exceeded the EPA Region 9 standard. These results indicate that vanadium is naturally occurring. In R-25 data (2000-2004), all vanadium results were below standards and screening levels. For these reasons, vanadium is not a CMS COPC.

Chloromethane was detected in only 5 percent of groundwater samples in Cañon de Valle. A single sample exceeded the CMS COPC screening ~~level~~limit. All other sample results fell below the screening limit. In R-25 data (2000-2004), c~~C~~hloromethane has not been detected~~ in deep groundwater in R-25~~. For these reasons, it is not included as a CMS COPC.

RDX was detected in 73 percent of groundwater samples, with 66 of 69 of samples exceeding the screening limit. TNT was detected in 3 percent of samples. Trichloroethene was detected in 8 percent of samples; detected concentrations were below both the NMWQCC standard and the MCL. In R-25 (2000-2004) trichloroethene has occasionally been detected at approximately 1 µg/L, which is below the standards. Of 14 samples with detectable TNT, five~~5~~ exceeded the screening limit. MNX was detected in four samples. In R-25 results from 2000 to 2004, MNX, RDX, and TNT have been detected, with RDX and TNT detected above the screening limit., has been detected in deep groundwater in R-25 (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), along with RDX and TNT. For these reasons, RDX, MNX and TNT are CMS COPCs.

B12.3 Cañon de Valle Alluvial Sediment

In accordance with the CMS COPCs screening criteria set forth in section 3.2, sediment RFI COPCs are CMS COPCs if the sediment RFI COPCs are either groundwater or surface water CMS COPCs. On this basis, the alluvial sediment CMS COPC are barium, manganese, silver, RDX and TNT. Supporting data are available in Tables B-5 and B-6 and from Appendix G of the Phase III RFI report (LANL 2003, 77965).

B23 Martin Spring Canyon CCMS COPCs

In Martin Spring Canyon surface water, RDX and manganese are CMS COPCs. Alluvial groundwater CMS COPCs are barium, manganese, and RDX. Martin Spring alluvial groundwater and aAlluvial sediment CMS COPCs are barium, manganese, and RDX. RDX is a CMS COPC for Martin Spring Canyon surface water. In addition, manganese is a CMS COPC for Martin Spring Canyon alluvial groundwater. The selection of CMS COPCs from Phase III RFI COPCs is described in this section. Supporting data are available in the accompanying tables and supporting text and in the Phase III RFI report, Appendix G (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

Table B-5
Phase III RFI Inorganic COPCs in ~~the~~ Cañon de Valle Alluvial Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	BV (mg/kg)	Number of Detects Above BV	Number of Nondetects Above BV	Percent Detected for 20 Samples or Greater[a]
Antimony	46	12	[0.032][b] to 2.6	0.83	7	16	26
Barium	46	46	34.9 to 37300	127	43	0	100
Boron	46	18	0.799 to 10.6	na[c]	na	na	39
Cadmium	46	19	[0.04] to 1.98	0.4	4	4	41
Chromium	46	46	3.5 to 33.1	10.5	7	0	100
Cobalt	46	46	1.5 to 17.5	4.73	26	0	100
Copper	46	46	2.84 to 232	11.2	32	0	100
Iron	46	46	6400 to 15490	13800	2	0	100
Lead	46	46	5.08 to 163	19.7	32	0	100
Mercury	46	42	[0.0038] to [0.2]	0.1	0	1	91
Nickel	46	46	2.34 to 40.3	9.38	22	0	100
Selenium	46	12	0.289 to 2.02	0.3	11	34	26
Silver	46	44	0.125 to 167	1	40	0	96
Thallium	46	16	0.0392 to [1.4]	0.73	0	30	35
Vanadium	46	46	8.9 to 33.7	19.7	7	0	100
Zinc	46	46	20 to 259	60.2	8	0	100

Sources: LANL 1998, 59730 and EPA 1989, 08021.
[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.
[b] Values in brackets are below detection limits, although some chemicals may be detected at values within this range.
[c] na = Not available.

Table B-6
Phase III RFI Organic COPCs in Cañon de Valle Alluvial Sediment

Chemical	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	Percent Detected for 20 Samples or Greater[a]
Amino-2,6-dinitrotoluene[4-]	46	22	[0.08][b] to [5]	48
Amino-4,6-dinitrotoluene[2-]	46	22	0.0393 to [5]	48
Benzo(a)pyrene	16	1	[0.0339] to [0.93]	n/a[c]
Benzoic Acid	16	3	0.23 to [2.3]	n/a
Di-n-butylphthalate	16	1	[0.058] to [0.93]	n/a
Fluoranthene	16	2	0.0177 to [0.91]	n/a
Hexachlorobenzene	16	1	0.0756 to [0.93]	n/a
HMX	46	33	[0.08] to 290	72
Indeno(1,2,3-cd)pyrene	16	1	[0.0339] to [0.93]	n/a
Methylphenol[4-]	16	2	0.141 to [0.93]	n/a
Naphthalene	16	1	[0.0339] to [0.93]	n/a
Pyrene	16	3	0.0187 to [0.91]	n/a
Pyridine	16	1	0.16 to [0.93]	n/a
RDX	46	27	0.0615 to [20]	59
Trinitrotoluene[2,4,6-]	46	20	[0.08] to [5]	43

Source: EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] Values in brackets are below detection limits, although some chemicals may be detected at values within this range.

[c] n/a = Not applicable.

B23.1 Martin Spring Canyon Surface Water

Martin Spring Canyon surface water RFI COPCs that exceed their CMS COPC screening limits are aluminum, arsenic, barium, iron, lead, manganese, uranium, vanadium, and RDX. Supporting data are available in Tables B-7 and B-8 and from Appendix G of the Phase III RFI report (LANL 2003, 77965). Supporting data are available from Appendix B and Appendix G of the Phase III RFI report (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

Aluminum was detected in 81 percent of samples, of which all 21 samples exceeded the screening limit. Aluminum was eliminated as an RFI COPC in Cañon de Valle surface water because it is likely to be naturally occurring (LANL 2003, 77965). A similar analysis for Martin Spring surface water could not be completed because of a lack of data (number of analyses). Aluminum is listed as an RFI COPC for Martin Spring sediment; however, only one sample at a concentration of 17,000 mg/kg exceeded the background concentration of aluminum (15,400 mg/kg). Given that surface water is derived primarily from Martin Spring spring water, and that aluminum is not a RFI COPC in spring water indicate surface water is picking up aluminum from sediment, where it only slightly exceeds background.

Aluminum has occasionally been detected above a CMS COPC standard in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but a comparison against background values has not been completed. Aluminum is a constituent of clays and tuff, which likely serves as a natural source. For these reasons aluminum is eliminated as a CMS COPC for Martin Spring Canyon surface water and groundwater.

Arsenic was detected in 27 percent of surface water samples, of which 1 one unfiltered of 7 samples showed results above the screening limitMCL. In addition, aArsenic in Martin Spring Canyon surface water did not exceed the MCLa screening limit for filtered samples. A lack of data quantity (number of analyses) precluded a geochemical analysis against background for arsenic in Martin Spring Canyon surface water. A geochemical analysis against background eliminated arsenic from Cañon de Valle surface water, groundwater and all springs, including Martin Spring, which is a primary source of Martin Spring Canyon surface water. Arsenic is listed as a Martin Spring Canyon sediment RFI COPC, where 7 samples exceeded the background concentration of 4 mg/kg and the maximum detected arsenic concentration was 10 mg/kg. There are no known anthropogenic sources for arsenic. In Cañon de Valle alluvial groundwater, the highest arsenic concentrations were detected in an alluvial well upgradient of the 260 outfall, indicating that arsenic in site waters is probably naturally elevated. Based on R-25 data from November 2000 to November 2004 arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. For these reasons aFinally, arsenic on occasion exceeds the CMS COPC groundwater standard in regional groundwater, but not consistently (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon surface water.

Barium was detected in 100 percent of surface water samples, but only 1 sample exceeded the screening limit. Other results, which are below the barium screening limit, are consistent with Martin Spring barium concentrations, from which Martin Spring Canyon surface water is primarily derived. In R-25 data from 2000-2004, barium has been detected, but all results were below screening limits and standards. For these reasons, barium is not included as a CMS COPC for surface water in Martin Spring Canyon.

Iron was detected in 92 percent of surface water samples, with 54 percent of detections exceeding the NMWQCC standard. The highest concentration was detected in an unfiltered sample, and eight of the ten highest concentrations were from unfiltered samples. In Cañon de Valle groundwater, the highest iron concentrations were detected in an alluvial well that is upgradient of the 260 outfall, indicating that iron in site waters is probably naturally occurring. In R-25 results for filtered samples (from 2002-2004), two results were above the NMWQCC standard and the MCL (300 µg/L). For unfiltered samples, 30 results exceeded the MCL and 15 results exceeded the NMWQCC standard. One unfiltered sample result was above EPA Region 6 and 9 screening levels (11,000 µg/L) . Results for R-25 do not indicate that iron is a contaminant. For these reasons, iron is not a CMS COPC. For these reasons, iron is not a CMS COPC.

Lead was detected in 54 percent of surface water samples. Of samples with detectable lead, three of 14 samples exceeded the screening limit. Only one filtered sample for lead exceeded a screening limit for surface water. Two A lack of data quantity (number of analyses) precluded a geochemical analysis against background for lead in Martin Spring Canyon surface water. unfiltered sample results from R-25 exceeded the MCL for lead during the period from September 2000 to November 2004. No filtered sample exceeded standards. No R-25 sample, filtered or unfiltered, result exceeded the NMWQCC standard. Lead does not meet the prevalence requirement, and is not a CMS COPC. A geochemical analysis against background eliminated lead from Cañon de Valle surface water. Lead did not exceed a screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, lead is excluded as a CMS COPC.

Table B-7
Phase III RFI Martin Spring Canyon Surface Water Inorganic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	5.3	(J)[b]	15	15	4300	na[c]	na	6	No	12
	Max. Undetected Value	33	(U)[d]	15	15	4300	na	na	6	Yes	
Arsenic	Max. Detected Value	75.1		0.045	0.045	24.2	340	100[e]	10	Yes	27
	Max. Undetected Value	4.5	(U)	0.045	0.045	24.2	340	100[e]	10	Yes	
Barium	Max. Detected Value	8560		2600	2600	na	na	1000[e]	2000	Yes	100
Iron	Max. Detected Value	98,800	(J+)[f]	11,000	11,000	na	na	1000[g]	300	Yes	92
	Max. Undetected Value	159	(U)	11,000	11,000	na	na	1000[g]	300	No	
Lead	Max. Detected Value	46.1		15	na	na	-66,600[h,i]	50[e]	15	Yes	54
	Max. Undetected Value	2.3	(U)	15	na	na	-66,600[h,i]	50[e]	15	No	
Manganese	Max. Detected Value	66,800		1700	880	na	na	200[g]	50	Yes	92
	Max. Undetected Value	3.7	(U)	1700	880	na	na	200[g]	50	No	

Table B-7 (concluded)

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Thallium	Max. Detected Value	0.0819	(J)	2.90[j]	2.40	6.3	na	na	2	No	8
	Max. Undetected Value	45	(U)	2.90[j]	2.40	6.3	na	na	2	Yes	
Uranium	Max. Detected Value	8.15	_	na	7.30	na	na	5000[e]	30	Yes	n/a[k]
Vanadium	Max. Detected Value	111	_	37	260	na	na	100[l]	na	Yes	85
	Max. Undetected Value	3.91	(U)	37	260	na	na	100[l]	na	No	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = Not available.

[d] (U) = The chemical is classified "undetected."

[e] NMWQCC Groundwater Human Health Standards (20 NMAC 6.2.3103).

[f] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential positive bias.

[g] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[h] Calculated using the minimum hardness determined, 76,000.

[i] Negative value is an artifact of hardness correction calculation.

[j] Denotes Thallium Carbonate value was used.

[k] n/a = Not Applicable. Less than 20 samples

[l] NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900).

Table B-8
Phase III RFI Martin Spring Canyon Surface Water Organic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
RDX	Max. Detected Value	200		0.61	0.61	na[b]	na	na	na	Yes	n/a[c]
	Max. Undetected Value	1	(U)[d]	0.61	0.61	na	na	na	na	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] na = Not available.

[c] n/a = Not Applicable. Less than 20 samples.

[d] (U) = The chemical is classified "not detected."

Manganese was detected in all surface water samples and exceeded standards~~its screening limit~~ in 13 of 24 samples from Martin Spring Canyon surface water. The presence of manganese in surface water above ~~the screening limit~~standards is likely related to the dissolution of manganese as a result of the reducing conditions caused by organic material, either naturally occurring or HE. The situation is similar to that found for Cañon de Valle alluvial groundwater, but the percentage of samples showing detectable manganese that exceed the screening limit was much higher for Cañon de Valle alluvial groundwater. Results from R-25 regional groundwater (2000-2004) show 33 (including filtered and unfiltered) sample results greater than the MCL, of which 16 exceed the NMWQCC standard. ~~Occasionally, manganese is detected above the CMS COPC screening limit in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against BVs have not been completed.~~ For these reasons, manganese is ~~not included~~ retained as a CMS COPC for Martin Spring Canyon surface water.

For uranium, no sample result exceeded the NWQCC standard or the MCL. All but one sample result was below the EPA Region 9 screening limit. In R-25 (2000-2004), one sample result was above the EPA Region 9 screening limit, but no sample results exceeded the MCL or NMWQCC standards. Uranium is not sufficiently prevalent as a contaminant, and is not a CMS COPC.

Vanadium was detected in 85 percent of surface water samples, with one (unfiltered) sample of 22 sample results exceeding the NMWQCC standard. In R-25 data (2000-2004), all vanadium results were below standards and screening levels. For these reasons, vanadium is not a CMS COPC.

RDX was detected in 12 of 15 surface water samples. Of the 12 samples showing detectable RDX, all samples exceeded the screening limit. In R-25 results from 2000 to 2004, RDX, has been detected above the screening limit. For this reason, RDX is a CMS COPC.

B~~2~~3.2 Martin Spring Alluvial Groundwater

The Martin Spring Canyon groundwater RFI COPCs that exceed their CMS COPC screening limits are aluminum, arsenic, beryllium, cadmium, chromium, iron, lead, manganese, perchlorate, thallium, uranium, vanadium, and RDX. ~~are aluminum, arsenic, barium, beryllium, cadmium, chromium, lead, manganese, mercury, perchlorate, thallium, zinc, and RDX.~~ Supporting data are available in Tables B-9 and B-10 and in Appendix G of the Phase III RFI (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

Aluminum and lead have previously been eliminated as CMS COPCs in Martin Spring surface water in the previous section; these elements are also likely to be naturally occurring in Martin Spring alluvial groundwater, given that groundwater and surface water are primarily derived from Martin Spring water. As discussed in the previous section, these elements are not CMS COPCs with respect to R-25 regional groundwater. For these reasons, they are eliminated as alluvial groundwater CMS COPCs in Martin Spring Canyon.

Arsenic was detected in 32 percent of groundwater samples. Of 22 samples showing detectable arsenic, five~~5~~ samples results exceeded the EPA MCL, and two samples exceeded the NMWQCC standard~~screening limit~~. Based on R-25 data from November 2000 to November 2004 arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. ~~Arsenic on occasion exceeds the CMS COPC groundwater standard in regional groundwater, but not consistently (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).~~ For these reasons, arsenic is eliminated as a CMS COPC in Martin Spring Canyon alluvial groundwater.

Barium was detected in 100 percent of groundwater samples, of which 5 of 30 samples exceeded the screening limit. In R-25 data from 2000-2004, barium has been detected, but all results were below screening limits and standards. Barium is a CMS COPC primarily because of the prevalence of detections above the standard in Martin Spring alluvial groundwater.

~~Barium is included as a CMS COPC on this basis.~~

Beryllium was detected in 63 percent of groundwater samples, of which three of 19 samples detections exceeded the MCL~~screening limit~~. In R-25 data (2000-2004), b~~B~~eryllium has been detected only once (in a filtered sample) above the MCL~~screening limit in R-25 regional groundwater ((LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5)~~. For these reasons beryllium is not a CMS COPC.

Cadmium was detected in 37 percent of samples, of which ~~4~~ four of 11 sample results exceeded the MCL~~screening limit~~. All filtered sample results were below the MCL~~CMS COPC screening limit~~. In R-25 data (2000-2004), c~~C~~admium was not detected above the MCL~~is not a CMS COPCs with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5)~~. For these reasons cadmium is not included as a CMS COPC.

Chromium was detected in 83 percent of groundwater samples, of which ~~2~~two of 25 exceeded the ~~screening limit~~NMWQCC standard.

All filtered chromium groundwater sample results were below the NMWQCC standard. In R-25 data (2000-2004), one chromium result from an unfiltered sample exceeded the NMWQCC standard. For these reasons, it is excluded as a CMS COPC.

Iron was detected in 100 percent of groundwater samples, with the highest ten results coming from unfiltered samples. In Cañon de Valle groundwater, the highest iron concentrations were detected in an alluvial well that is upgradient of the 260 outfall, indicating that iron in site waters is probably naturally occurring. In R-25 results for filtered samples (from 2002-2004), two results were above the NMWQCC standard and the MCL (300 µg/L). For unfiltered samples, 30 results exceeded the MCL and 15 results exceeded the NMWQCC standard. One unfiltered sample result was above EPA Region 6 and 9 screening levels (11,000 µg/L) . Results for R-25 do not indicate that iron is a contaminant. For these reasons, iron is not a CMS COPC. For these reasons, iron is not a CMS COPC.

Lead was detected in 83 percent of groundwater samples, with three of 25 and seven of 25 sample results exceeding the NMWQCC standard and the MCL, respectively. All results above standards were from unfiltered samples. Two unfiltered sample results from R-25 exceeded the MCL for lead during the period from September 2000 to November 2004. No filtered sample exceeded standards. No R-25 sample, filtered or unfiltered, result exceeded the NMWQCC standard. For these reasons, lead is not a CMS COPC.

Manganese was detected in 100 percent of groundwater samples. Of 30 samples with detectable manganese, 24 sample results exceeded the screening limit. Its presence within alluvial groundwater, which is in intimate contact with sediment containing manganese within background, strongly indicates that manganese is most likely naturally occurring; however, the high fraction of sample results that exceed the screening limit suggest that manganese has dissolved from sediments as a results of reducing conditions caused by organic material, either naturally occurring or HE. Results from R-25 regional groundwater (2000-2004) show 33 sample results greater than the MCL, of which 16 exceed the NMWQCC standard. For these reasons, manganese is included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

In 2000, perchlorate was detected once above the screening limit in the RFI Phase III data set (March 2000 – July 2001). All other sample results from this period were below the detection limit. In results from October 2002 to March 2003, perchlorate was not detected above the detection limit of 4 µg/L. In subsequent data (December 2003 to ~~July 2004~~January 2005), perchlorate was detected above ~~a~~the lower detection limit (as low as 0.05 µg/L), but all results were below screening limits. In R-25 results (2000-2004), perchlorate was detected in two of 59 samples, with both results below screening limits. For these reasons perchlorate is not a CMS COPC.

Thallium was detected in 23 percent of alluvial groundwater samples from the RFI Phase III data set (March 2000 – July 2001). Three of seven sample results from this period exceeded the MCL; however, no filtered sample results exceeded the MCL. In results from October 2002 to January 2005, thallium was detected in approximately 77 % of more than 30 samples, but all results were below the MCL. In regional groundwater (R-25), two sets of analytical methods were used, SW-846-6010 and SW 846-6020 (ICP-MS), the latter more sensitive. Using the former method, screening limits and the MCL were exceeded multiple times (range = 2.2 µg/L to 5.2 µg/L); however, all of these results were J flagged as estimated values. Using the more sensitive analytical method, screening limits and the MCL were not exceeded over the period November 2000 to September 2004. For these reasons, thallium is not included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

Table B-9
Phase III RFI Martin Spring Canyon Alluvial Groundwater Inorganic COPCs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Aluminum	Max. Detected Value	530,000	(J)[b]	37,000	36,000	5000[c,d]	50	Yes	100
Arsenic	Max. Detected Value	132		0.045	0.045	100[e]	10	Yes	73
	Max. Undetected Value	4	(U)[f]	0.045	0.045	100[e]	10	Yes	
Barium	Max. Detected Value	38,000	(J)	2600	2600	1000[e]	2000	Yes	100
Beryllium	Max. Detected Value	78		73	73	na[g]	4	Yes	63
	Max. Undetected Value	0.22	(U)	73	73	na	4	No	
Boron	Max. Detected Value	2250		3300	7300	750[c]	na	No	93
	Max. Undetected Value	500	(U)	3300	7300	750[c]	na	No	
Cadmium	Max. Detected Value	70	(J+)[h]	18	18	10[e]	5	Yes	37
	Max. Undetected Value	0.92	(U)	18	18	10[e]	5	No	
Chromium	Max. Detected Value	1200		110[i]	110[i]	50[e]	100	Yes	83
	Max. Undetected Value	4	(U)	110[i]	110[i]	50[e]	100	No	
Iron	Max. Detected Value	1,100,000	(J-)[j]	11,000	11,000	1000[k]	300	Yes	100
Lead	Max. Detected Value	995		15	na	50[e]	15	Yes	83
	Max. Undetected Value	3.53	(U)	15	na	50[e]	15	No	
Manganese	Max. Detected Value	37,000	(J)	1700	880	200[k]	50	Yes	100

Table B-9 (continued)

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Perchlorate	Max. Detected Value	17	_	3.70	3.60	4[l]	na	Yes	n/a[m]
	Max. Undetected Value	4.16	(U)	3.70	3.60	4[l]	na	Yes	
Thallium	Max. Detected Value	6.16	_	2.90[n]	2.40	na	2	Yes	23
	Max. Undetected Value	3.8	(U)	2.90[n]	2.40	na	2	Yes	
Uranium	Max. Detected Value	20.4	_	na	7.30	5000[e]	30	Yes	n/a
Vanadium	Max. Detected Value	1100	_	37	260	100[d]	na	Yes	93
	Max. Undetected Value	8.4	(U)	37	260	100[d]	na	No	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] NMWQCC Groundwater Standard for Irrigation Use (20 NMAC 6.2.3103).

[d] NMWQCC Surface Water Standard for Livestock Watering (20 NMAC 6.4.900).

[e] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[f] (U) = The chemical is classified "undetected."

[g] na = Not available.

[h] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential positive bias.

[i] Denotes Chromium VI value was used.

[j] (J-) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential negative bias.

[k] NMWQCC Groundwater Other Standards for Domestic Water Supply (20 NMAC 6.2.3103).

[l] California DHS 2003, 76862.

[m] n/a = Not Applicable. Less than 20 samples

[n] Denotes Thallium Carbonate value was used.

Table B-10
Phase III RFI Martin Spring Canyon Alluvial Groundwater Organic COPCs

Chemical	Sample Concentration (µg/L)		EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
RDX	Max. Detected Value	23	0.61	0.61	na[b]	na	Yes	n/a[c]
	Max. Undetected Value	1 (U)[d]	0.61	0.61	na	na	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] na = Not available.

[c] n/a = Not Applicable. Less than 20 samples.

[d] (U) = The chemical is classified "not detected."

Moreover, all filtered chromium groundwater sample results were below the CMS COPC screening limit. Finally, chromium did not exceed the screening limit in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as a CMS COPC.

Manganese was detected in 100 percent of samples. Of 30 samples with detectable manganese, 24 sample results exceeded the screening limit. Its presence within alluvial groundwater, which is in intimate contact with sediment containing manganese within background, strongly indicates that manganese is most likely naturally occurring; however, the high fraction of sample results that exceed the screening limit suggest that manganese has dissolved from sediments as a results of reducing conditions caused by organic material, either naturally occurring or HE. Occasionally, manganese is detected above the CMS COPC screening limit in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), but comparisons against background has not been completed. For these reasons, manganese is included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

Mercury was detected in 40 percent of samples, of which 2 samples of 12 exceeded the screening limit. All filtered sample results were below the screening limit. Mercury is not a CMS COPC with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons mercury is excluded as a CMS COPC.

In 2000, perchlorate was detected once above the screening limit. All other sample results were below the detection limit. Perchlorate has not been detected in R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, it is excluded as a CMS COPC.

Thallium was detected in 23% of alluvial groundwater samples, of which 3 of 7 sample results exceeded the screening limit; no filtered sample results exceeded the screening limit. One sample result from R-25 regional groundwater sampling results exceeded the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5); all other results fell below the screening limit. For these reasons, thallium is not included as a CMS COPC for Martin Spring Canyon alluvial groundwater.

Zinc was detected in 80 percent of samples, of which 1 of 24 sample results exceeded its screening limit in one sample. All filtered sample results fell below the screening limit. Moreover, zinc is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, zinc is excluded as a CMS COPC for Martin Spring Canyon alluvial groundwater.For uranium, there were no sample results that exceeded standards. One results exceeded the EPA Region 9 screening limit. In R-25 (2000-2004), one sample result was above the EPA Region 9 screening limit, but no sample results exceeded the MCL or NMWQCC standards. For these reasons, uranium is not a CMS COPC.

Vanadium was detected in 93 percent of groundwater samples, with two of 28 and four of 28 sample results exceeding the NMWQCC standard and EPA Region 6 screening level, respectively. In R-25 data (2000-2004), all vanadium results were below standards and screening levels. For these reasons, vanadium is not a CMS COPC.

RDX was detected in 4four of 14 groundwater samples, of which two exceeded the screening limit. In R-25 results from 2000 to 2004, RDX has been detected above the screening limit. For these reasons, RDXRDX is a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5), and is included as a CMS COPC.

B23.3 Martin Spring Canyon Alluvial Sediment

Martin Spring Canyon sediment RFI COPCs that are included as Martin Spring groundwater and surface water CMS COPCs are barium, manganese, and RDX. These are also Martin Spring Canyon alluvial sediment CMS COPCs Supporting data are available in Tables B-11 and B-12 and in Appendix G of the Phase III RFI (LANL 2003, 77965).

B.34 Springs

CMS COPCs for springs in Cañon de Valle and Martin Spring Canyon are RDX and TNT. The selection of CMS COPCs from Phase III RFI COPCs is described in this section. Supporting data are available in the accompanying tables and in the Phase III RFI report, Appendix G (LANL 2003, 77965). More recent data (from 2002–2005), including data for perchlorate and thallium, are provided on the attached CD.

Table B-11
Phase III RFI Inorganic COPCs in
Martin Spring Alluvium, Sediment, and Tuff

Chemical	Media Code	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	BV (mg/kg)	Number of Detects Above BV	Number of Non-Detects Above BV	Percent Detected for 20 Samples or Greater[a]
Aluminum	Sed	20	20	8500 to 17000	15400	1	0	100
Antimony	Qbt 4	3	0	[0.52 to 0.56][b]	0.5	0	3	n/a[c]
Arsenic	Sed	20	20	2.6 to 10	3.98	7	0	100
Barium	Sed	20	20	86 to 1700	127	10	0	100
Boron	Qal	3	0	[27 to 30]	na[d]	na	na	n/a
	Qbt 4	3	0	[26 to 28]	na	na	na	n/a
	Sed	20	18	[0.0726] to 43	na	na	na	90
Cadmium	Sed	20	20	0.048 to 1	0.4	5	0	100
Chromium	Qbt 4	3	3	1.5 to 14	7.14	1	0	n/a
	Sed	20	20	5.2 to 30	10.5	7	0	100
Cobalt	Sed	20	20	2.9 to 5.8	4.73	2	0	100
Copper	Sed	20	20	4.9 to 100	11.2	7	0	100
Lead	Sed	20	20	11 to 120	19.7	9	0	100
Mercury	Qbt 4	3	0	[0.1 to 0.11]	0.1	0	2	n/a
	Sed	20	20	0.042 to 2.3	0.1	18	0	100
Selenium	Sed	20	20	0.258 to 1.58	0.3	19	0	100
Silver	Qal	3	3	5.1 to 7.1	1	3	0	n/a
	Qbt 4	3	3	5.1 to 6	1	3	0	n/a
	Sed	20	20	1.3 to 2.2	1	20	0	100
Vanadium	Sed	20	20	9.1 to 36	19.7	3	0	100

Sources: LANL 1998, 59730 and EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] Values in brackets are below detection limits, although some chemicals may be detected at values within this range.

[c] n/a = Not applicable.

[d] na = Not available.

Table B-12
Phase III RFI Organic COPCs ~~in~~
Martin Spring Canyon Alluvium, Sediment, and Tuff

Chemical	Media Code	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	Percent Detected for 20 Samples or Greater[a]
Amino-2,6-dinitrotoluene[4-]	Sed	20	6	0.12 to 0.36	30
Amino-4,6-dinitrotoluene[2-]	Sed	20	10	0.039 to 0.37	50
Benzo(a)anthracene	Sed	5	3	[0.0373][b] to 0.31	n/a[c]
Benzo(a)pyrene	Sed	5	3	[0.0336] to 0.39	n/a
Benzo(b)fluoranthene	Sed	5	3	[0.0362] to 0.43	n/a
Benzo(g,h,i)perylene	Sed	5	2	[0.0476] to 0.15	n/a
Benzo(k)fluoranthene	Sed	5	2	[0.0439] to 0.37	n/a
Benzoic Acid	Sed	5	1	[0.0253] to [0.0438]	n/a
Bis(2-ethylhexyl)phthalate	Qbt 4	3	2	0.025 to [0.37]	n/a
	Sed	5	1	0.041 to [0.0886]	n/a
Chrysene	Sed	5	2	[0.0526] to 0.37	n/a
Fluoranthene	Sed	5	2	[0.0367] to 0.69	n/a
Indeno(1,2,3-cd)pyrene	Sed	5	2	[0.0466] to 0.16	n/a
Phenanthrene	Sed	5	2	[0.0564] to 0.4	n/a
Pyrene	Sed	5	3	[0.0395] to 0.89	n/a
RDX	Sed	20	4	0.13 to 0.92	20
Trinitrotoluene[2,4,6-]	Sed	20	8	0.14 to 1	40

Source: EPA 1989, 08021.

[a] The percent detection value is calculated based on all analyses taken for a chemical. Resulting values might therefore appear less than expected due to the inclusion of undetects not reported by this table.

[b] Values in brackets are below detection limits, although some chemicals may be detected at values within this range.

[c] n/a = Not applicable.

The RFI COPCs that exceed their CMS COPC screening limit are arsenic, lead, ~~barium, mercury,~~ nitrate-nitrite as N, perchlorate, thallium, uranium, RDX, tetrachloroethene, trichloroethene, and TNT. Supporting data are available in Tables B-13 and B-14 and in Appendix G of the Phase III RFI (LANL 2003, 77965).

The springs Phase III data set covers all springs in Cañon de Valle and Martin Spring Canyon, including SWSC Spring, Burning Ground Spring, and Martin Spring. Currently, only Burning Ground Spring is flowing.

Arsenic was detected in 28 percent of spring samples, with one sample result of 54 detections exceeding the MCL. No samples results exceeded the NMWQCC standard. Based on R-25 data from November 2000 to November 2004 arsenic has not exceeded either the NMWQCC standard (100 µg/L) or the MCL (10 µg/L) in R-25 regional groundwater. Arsenic has been detected above standards in other regional groundwater wells, such as R-19, but not in R-25. For these reasons arsenic is eliminated as a CMS COPC in spring water.

Lead was detected in 26 percent of spring samples, with one sample result of 51 detections exceeding the MCL and the Region 6 screening level. Two unfiltered sample results from R-25 exceeded the MCL for lead during the period from September 2000 to November 2004. No filtered sample exceeded standards. No R-25 sample, filtered or unfiltered, result exceeded the NMWQCC standard. For these reasons, lead is not a CMS COPC.

~~Barium exceeded the CMS COPC screening limit (1000 µg/L) only once in 193 sample results. Concentrations of barium in springs have been relatively consistent, in the 100 to 300 µg/L range. Barium has been detected in R-25, though concentrations are at least a factor of 10 lower than the screening limit (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons it is not included in the list of CMS COPCs for springs.~~

~~Mercury was detected in 6 percent of samples, of which 1 of 12 exceeded the screening limit. Mercury is not a CMS COPC with respect to R-25 regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons mercury is excluded as a CMS COPC for springs.~~

All analytical results for nitrate-nitrite as N fell below the NMWQCC standard~~screening limit~~ at Burning Ground Spring. At Martin Spring, ~~2~~two of 31 sample results exceeded the NMWQCC standard~~screening limit~~. At SWSC Spring, ~~2~~ two of 23 samples exceeded the NMWQCC standard~~screening limit~~. Nitrate-nitrite as N did not exceed the NMWQCC in standard R-25 regional groundwater (2000-2004). ~~In addition, nitrate-nitrite as N is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).~~ For these reasons, it is therefore eliminated as a CMS COPC.

Perchlorate was detected in 11 percent of spring samples collected from March 2000 to August 2002. All detections in this period were from 2000-2001, and all detections exceeded the screening limits.   From September 2002 to March 2003, nine samples were collected, and two results were above the detection limit of 4 µg/L. All subsequent sample analyses used a lower detection limit as low as 0.05. All subsequent samples (December 2003 – January 2005) showed detectable perchlorate; however, all results were below screening limits. In R-25 results (2000-2004), perchlorate was detected in two of 59 samples, with both results below screening limits. For these reasons, perchlorate is not included as a CMS COPC for springs.

Thallium was detected in 28 percent of spring samples collected between March 1998 and August 2002, of which five of 56 samples with detectable thallium exceeded the MCL. In subsequent data collected up February 2005, thallium was detected in approximately 50% of more than 60 samples (including duplicates), but all fell below the screening limits. In regional groundwater (R-25), two sets of analytical methods were used, SW-846-6010 and SW 846-6020 (ICP-MS), the latter more sensitive. Using the former method, the MCL was exceeded multiple times (range = 2.2 µg/L to 5.2 µg/L); however, all of these results were J flagged as estimated values. Using the more sensitive analytical method, screening limits and the MCL were not exceeded over the period November 2000 to September 2004. For these reasons, thallium is eliminated as a CMS COPC for springs.

Uranium was detected in 69 percent of spring samples. One sample (of 43) was equal to the screening limit, with all others below the screening limit. In R-25 (2000-2004), one sample result was above the EPA Region 9 screening limit, but no sample results exceeded the MCL or NMWQCC standards. Uranium is not sufficiently prevalent as a contaminant, and is not a CMS COPC. ~~Uranium is not a CMS COPC with respect to regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5). For these reasons, uranium is excluded as a CMS COPC.~~

Both RDX and TNT are present in springs water, although TNT exceeded its screening limit only once in springs water. RDX exceeded its screening limit in all sample results. In R-25 results from 2000 to 2004, RDX and TNT have been detected, with RDX detected above the screening limit. ~~Both compounds are present in regional groundwater (LANL 2001, 70295.5; LANL 2001, 71368.5; and LANL 2002, 73712.5).~~ For these reasons, RDX and TNT are included as CMS COPCs.

Tetrachloroethene was detected in 43 percent of spring samples, but no sample result exceeded the NMWQCC standard or the MCL. In R-25 (2000-2004), tetrachloroethene has been occasionally detected at approximately 1 µg/L, but all detections were below standards. For these reasons, tetrachloroethene is not a CMS COPC.

Trichloroethene was detected in 60 percent of spring samples, but no sample results exceeded standards. In R-25 (2000-2004) trichloroethene has occasionally been detected at approximately 1 µg/L, which is below standards, For these reasons, trichloroethene is not a CMS COPC.

Table B-13
Phase III RFI Inorganic COPCs in Springs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Antimony	Max. Detected Value	4.7	(J)[b]	15	15	4300	na[c]	na	6	No	16
	Max. Undetected Value	20	(U)[d]	15	15	4300	na	na	6	Yes	
Arsenic	Max. Detected Value	10.1	_	0.045	0.045	24.2	340[e]	100[f]	10	Yes	28
	Max. Undetected Value	5	(U)	0.045	0.045	24.2	340[e]	100[f]	10	Yes	
Cesium	Max. Detected Value	500	_	na	na	na	na	na	na	na	n/a[g]
	Max. Undetected Value	500	(U)	na	na	na	na	na	na	na	
Cyanide (Total)	Max. Detected Value	3.2	(J)	6.2[h]	6.2[h]	220,000	22	5.2[i]	200	No	n/a
	Max. Undetected Value	13	(U)	6.2[h]	6.2[h]	220,000	22	5.2[i]	200	Yes	
Lead	Max. Detected Value	20.2	_	15	na	na	-66,600[e,j]	50[f]	15	Yes	26
	Max. Undetected Value	2	(U)	15	na	na	-66,600[e,j]	50[f]	15	No	

Table B-13 (continued)

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Nitrate-Nitrite as N	Max. Detected Value	3,800,000		na	na	na	na	10,000[f]	10,000	Yes	97
	Max. Undetected Value	1000	(U)	na	na	na	na	10,000[f]	10,000	No	
Perchlorate	Max. Detected Value	17.5		3.70	3.60	na	na	4[k]	na	Yes	11
	Max. Undetected Value	958	(U)	3.70	3.60	na	na	4[k]	na	Yes	
Rubidium	Max. Detected Value	7000		na	na	na	na	na	na	na	n/a
	Max. Undetected Value	500	(U)	na	na	na	na	na	na	na	
Thallium	Max. Detected Value	7.1	(J)	2.90[l]	2.40	6.3	na	na	2	Yes	28
	Max. Undetected Value	7.6	(U)	2.90[l]	2.40	6.3	na	na	2	Yes	
Uranium	Max. Detected Value	60		na	7.30	na	na	5000[f]	30	Yes	69
	Max. Undetected Value	126	(U)	na	7.30	na	na	5000[f]	30	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867; and California DHS 2003, 76862.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (U) = The chemical is classified "undetected."

[c] na = Not available.

[d] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[e] Calculated using the minimum hardness determined, 76,000.

[f] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

[g] n/a = Not Applicable. Less than 20 samples.

Table B-13 (continued)

[h] Hydrogen cyanide value was used.

[i] NMWQCC Surface Water Standard for Wildlife Habitat (20 NMAC 6.4.900).

[j] Negative value is an artifact of hardness correction calculation.

[k] 2003 California DHS Action Level.

[l] Denotes Thallium Carbonate was used.

Table B-14
Phase III RFI Organic COPCs in Springs

Chemical	Sample Concentration (µg/L)			EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Dichlorobenzene[1,4-]	Max. Detected Value	0.41	(J)[b]	0.47	0.50	2600	na[c]	na	75	No	1
	Max. Undetected Value	20	(U)[d]	0.47	0.50	2600	na	na	75	Yes	
Dinitrobenzene[1,3-]	Max. Detected Value	1.1		3.70	3.60	na	na	na	na	No	5
	Max. Undetected Value	20	(U)	3.70	3.60	na	na	na	na	Yes	
Nitrobenzene	Max. Detected Value	2.4	(J)	3.40	3.40	1900	na	na	na	No	3
	Max. Undetected Value	200	(U)	3.40	3.40	1900	na	na	na	Yes	
RDX	Max. Detected Value	330	(J+)[e]	0.61	0.61	na	na	na	na	Yes	98
	Max. Undetected Value	91.3	(UJ)[f]	0.61	0.61	na	na	na	na	Yes	

Table B-14 (continued)

Chemical	Sample Concentration (µg/L)		EPA Region 6 Tap Water Screening Level (µg/L)	EPA Region 9 Tap Water PRG (µg/L)	NMWQCC Human Health SW Standard (µg/L)	NMWQCC Aquatic Life (Acute) SW Standard (µg/L)	NMWQCC Standard (µg/L)	EPA MCL (µg/L)	Exceeds Screening Limit	Percent Detected for 20 Samples or Greater[a]
Tetrachloroethene	Max. Detected Value	3.9 (J)	0.10	0.66	88.5	na	20[g]	5	Yes	43
	Max. Undetected Value	5 (U)	0.10	0.66	88.5	na	20[g]	5	Yes	
Trichloroethene	Max. Detected Value	3.7 (J)	0.028	0.028	810	na	100[g]	5	Yes	60
	Max. Undetected Value	5 (U)	0.028	0.028	810	na	100[g]	5	Yes	
Trinitrotoluene[2,4,6-]	Max. Detected Value	3	2.20	2.20	na	na	na	na	Yes	5
	Max. Undetected Value	20 (U)	2.20	2.20	na	na	na	na	Yes	

Sources: 20 NMAC 6.2.3103 "Standards for groundwater of 10,000 mg/l TDS concentration or less," Parts A, B, and C; 20 NMAC 6.4.900 "Standards applicable to attainable or designated uses unless otherwise specified in 20.6.4.101 through 20.6.4.899 NMAC," Parts K, L, and M; EPA 2002, 76871; EPA 2003, 76867.

[a] The percent detection value is calculated based on all analyses taken for a chemical.

[b] (J) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual.

[c] na = Not available.

[d] (U) = The chemical is classified "not detected."

[e] (J+) = The chemical is classified "detected," but the reported concentration value is expected to be more uncertain than usual with a potential negative bias.

[f] (UJ) = The chemical is classified "undetected" with an expectation that the reported result is more uncertain than usual.

[g] NMWQCC Groundwater Human Health Standard (20 NMAC 6.2.3103).

Appendix C

Corrective Measure Alternative Cost Estimates

Appendix D

Public Involvement Plan

Los Alamos
NATIONAL LABORATORY

Corrective Measures Study
SWMU 16-021(c)-99, TA-16
Public Involvement Plan
15 June 2005

RRES

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Public Involvement Plan

Purpose of Public Involvement

As described in Section Q, Task II, Section D of Module VIII of the Laboratory's Hazardous Waste Facility permit, the Laboratory is required to incorporate community relations planning into the Corrective Measures Study process. Risk Reduction and Environmental Stewardship–Remediation Services (RRES-RS) has developed an outreach program to provide the public timely and complete access to information and the decision-making process.

This public involvement plan identifies specific activities that the Laboratory will undertake to disseminate information and facilitate public involvement during the CMS project at Solid Waste Management Unit (SWMU) 16-021(c)-99. This plan is considered a working document; therefore some of the processes or schedule may change throughout the duration of the project. The objectives of the plan are to:

- provide the public/stakeholders with timely and objective information to assist them in understanding the potential risks associated with the site, the proposed remediation alternatives, and solutions;
- provide interpretations of data
- ensure that the public/stakeholders concerns are understood and considered in the decision-making process;
- provide the surrounding communities with public access to RRES-RS program technical staff; and,
- increase RRES-RS contact with the public/stakeholders in ways that encourage interaction and involvement in the corrective action process.
- The RRES-RS Program is accountable to:
- anyone who resides in the communities surrounding the Laboratory or has an interest in the activities of the Resource Conservation and Recovery Act (RCRA) corrective action process at the Laboratory,
- organizations representing or protecting specific groups or interests in our region, and
- public agencies including local, state, federal, and tribal governments.

Project Description

TA-16 was established during World War II for the development of explosive formulations, production and machining of explosive charges, and the assembly and testing of explosive components for the U.S. nuclear weapons program. Present-day use of this site is essentially unchanged, although facilities have been upgraded and expanded as explosive and manufacturing technologies have advanced.

The TA-16-260 facility is a high explosive- (HE) machining building that processes large quantities of HE. Machine turnings and HE wastewater were routed as waste to 13 sumps associated with the building. Historically, discharge from the sumps was routed to an outfall that was permitted to operate by the EPA as EPA 05A056 under the Laboratory's National Pollution Discharge Elimination System (NPDES) permit. The last NPDES permitting effort for this outfall occurred in 1994. The NPDES outfall was deactivated in November 1996, and it was officially removed from the Laboratory's NPDES permit by the EPA in January 1998.

The outfall, drainage channel below the outfall, and underlying alluvium and vadose zone are contaminated with the primary chemicals of potential concern, primarily HE wastes and barium. The combined areas of the outfall, pond area, and drainage are designated as SWMU 16-021(c)-99. Potential exposure pathways to human and ecological receptors include ingestion of groundwater and surface water, soil and sediment inhalation of suspended particulate matter, adsorption through dermal contact with affected soils or water, and ingestion related to food chain effects.

TA-16 is located in the southwest corner of the Laboratory. It covers 2410 acres, or 3.8 square mi. The land is a portion of that acquired by the Department of Army for the Manhattan Project in 1943. TA-16 is bordered by Bandelier National Monument along State Road 4 to the south and by the Santa Fe National Forest along State Road 501 to the west. To the north and east, it is bordered by TA-8, -9, -14, -15, and -49. TA-16 is fenced and posted along State Road 4. Water Canyon, a 200-ft-deep ravine with steep walls, separates State Road 4 from active sites at TA-16. Cañon de Valle forms the northern border of TA-16. Security fences surround the production facilities.

The Laboratory has implemented a phased corrective action program for SWMU 16-021(c)-99 in accordance with the requirements of Module VIII of the HSWA permit. The corrective action process, including those phases currently being implemented, include the following:

- RCRA facility assessment (RFA),
- Phase I RFI,
- RFI Phase II,
- Interim measure (IM) of source removal,
- RFI Phase III,
- CMS (current), and,
- Corrective Measure Implementation (CMI) (future).

Target Audience

For the purposes of this plan, the public includes all individuals, organizations, or public agencies potentially affected by the CMS phase of the project. Surrounding communities potentially affected by the CMS include Los Alamos County, San Ildefonso Pueblo, Santa Clara Pueblo, Cochiti Pueblo, Santa Fe, and Espanola and smaller communities.

Project Objectives

The purpose of the CMS is to evaluate the alternatives for remediation, and propose corrective measures, media cleanup standards, and a long–term monitoring program for SWMU 16-021(c)-99 and nearby Cañon de Valle and Martin Spring Canyon.

Proposed activities, purpose and date

Activity	Purpose	Projected Date
Mailer to Laboratory's mailing list, composed of individuals, organizations, and government and tribal officials in northern New Mexico	Introduce RRES-RS program, the SWMU-021(c)-99 High Performing Team, the RCRA corrective action process and the current RFI/CMS phases of the project. Notify public of planned open house.	December 2003, and every 6 months throughout the CMS/CMI.
Information Sheet to be posted on-line and made available in public reading room	Highlight the history and current activities at SWMU-16-021(c)-99 site. Provide update of CMS status.	January 2003, and every 6 months throughout the CMS/CMI.
Newspaper notice informing the public about SWMU-021(c)-99 activities	Placed in the Albuquerque Journal North, Santa Fe New Mexican, Rio Grand Sun, and the Los Alamos Monitor to advise the public on general project activities. Notify public of planned open house.	January 2003, and every 6 months throughout the CMS/CMI.
Open house hosted at Los Alamos Area Office or elsewhere	Provide informal overview through posters, handouts, and provide for interaction/Q&A with RRES-RS program staff.	January 2003, and every 6 months throughout the CMS/CMI.
Web Site at http://erproject.lanl.gov/	Access to all RFI and CMS documentation on the RRES-RS virtual library web site, and available at the Laboratory's Public Reading Room. Documents posted will include the CMS Plan and the CMS Report.	January 2003, and every 6 months throughout the CMS/CMI.
Tour of Cañon de Valle	Tour to view site setting, site habitat, and other site conditions.	May, 2003
Public comments to be maintained and made available on-line	Comments will be solicited throughout the project via all mechanisms listed above. The RRES-RS project staff will identify major public concerns.	January 2003, and every 6 months throughout the CMS/CMI.

Key Messages

The CMS process proposes preferred alternatives for site remediation. The choice of a preferred alternative involved criteria such as effectiveness, reliability, safety, ability to meet the remediation objectives, institutional constraints, and cost. At this site, additional important factors for consideration include the presence of wetlands and Mexican Spotted Owl habitat in Canon de Valle. The proposed preferred alternatives are the result of a balanced approach that considers these criteria and factors.

Key Contacts

Name	Organization	Phone	Email	Role
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David Gregory	DOE	667-5808	dgregory@lanl.gov	DOE ER Project Lead

URI	QUEST_I	SAMPLE_ID	XCAV_FL	OS_TYPE	LE_TECH	LE_USG	IELD_PRE	PRS	LOCATION_ID	DEPTH	MATRIX	EDIA_CO	RFI_CLASS	ALYTE_C	ANALYTE_NAM	ENT_MO	MDL	MDA	UTION_FA	SAMPLE_	UNCERT	EPORTIN	LAB_QUA	QC_TYPE	LE_TYPE	ANALYTICAL_SUITE	NYL_METH_CO	LAB_NAME	ALYSIS_D	LECTION_DATE
30903722	1270S	RE16-02-49456	N	NA	BA	INV	Unfiltered		16-02658	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	16-Oct-02	########
30903732	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered		16-02659	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	16-Oct-02	########
30921922	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	16-Oct-02	########
30927282	1315S	RE16-02-49468	N	NA	BA	INV	Unfiltered		16-06295	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	21-Oct-02	08-Oct-02
31279232	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered		16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	09-Jan-03	########
31279242	1481S	RE16-03-49940	N	NA	BA	INV	Unfiltered		16-02658	6.3-10.24 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	09-Jan-03	########
31279252	1481S	RE16-03-49941	N	NA	BA	INV	Unfiltered		16-02659	8.1-10.1 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	09-Jan-03	########
31281892	1493S	RE16-03-49945	N	NA	BA	INV	Unfiltered		16-06294	6.1-10.8 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	10-Jan-03	########
31281902	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered		16-06295	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	10-Jan-03	########
31618192	1662S	RE16-03-50801	N	NA	BA	INV	Unfiltered		16-02656	6.51-6.51 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	22-Apr-03	########
31626162	1641S	RE16-03-50799	N	NA	BA	INV	Unfiltered		16-02655	7.66-7.66 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	########	########
31626182	1641S	RE16-03-50805	N	NA	BA	INV	Unfiltered		16-02659	7.06-7.06 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	########	########
31638792	1677S	RE16-03-50795	N	NA	BA	INV	Unfiltered		16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	22-Apr-03	########
31638812	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered		16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	FD	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	22-Apr-03	########
31642242	1644S	RE16-03-50817	N	NA	BA	INV	Unfiltered		16-06294	5.17-5.17 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	########	########
31642262	1644S	RE16-03-50819	N	NA	BA	INV	Unfiltered		16-06295	3.75-3.75 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	########	########
32472962	1970S	RE16-04-52892	N	NA	BA	INV	Unfiltered		16-02656	7.25-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.1		2	1		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	########
32472972	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered		16-02658	6.2-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.0595		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	########
32472982	1970S	RE16-04-52898	N	NA	BA	QC	Unfiltered		16-02658	6.2-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.065		UG/L	J	FD	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	########
32472992	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered		16-02659	8.25-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.197		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	########
32473002	1970S	RE16-04-52910	N	NA	BA	INV	Unfiltered		16-06295	6.2-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.0938		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	########
32657382	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered		16-02658	6.06-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.382		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Apr-04	06-Apr-04
32657392	2083S	RE16-04-53138	N	NA	BA	INV	Unfiltered		16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.353		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Apr-04	06-Apr-04
32657402	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered		16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.365		UG/L		FD	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Apr-04	06-Apr-04
32680072	2105S	RE16-04-53140	N	NA	BA	INV	Unfiltered		16-06293	8.03-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.269		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Apr-04	12-Apr-04
32680372	2052S	RE16-04-53130	N	NA	BA	INV	Unfiltered		16-02655	7.08-10.01 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.275		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Apr-04	########
32708042	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered		16-02656	4.9-10.3 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.1		2	1.02		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	13-Apr-04
32708052	2120S	RE16-04-53134	N	NA	BA	INV	Unfiltered		16-02657	0.9-5.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.228		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	########	13-Apr-04
32710652	2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered		16-06294	4.9-10.88 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.0629		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	21-Apr-04	07-Apr-04
32710662	2093S	RE16-04-53144	N	NA	BA	INV	Unfiltered		16-06295	3.75-9.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.254		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Apr-04	07-Apr-04
33153722	2195S	RE16-04-53401	N	NA	BA	INV	Unfiltered		16-02656	5.9-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.592		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Jul-04	10-Jul-04
33153732	2195S	RE16-04-53403	N	NA	BA	INV	Unfiltered		16-02657	3.2-5.8 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.601		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Jul-04	10-Jul-04
33153742	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered		16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.145		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Jul-04	10-Jul-04
33153752	2195S	RE16-04-53407	N	NA	BA	INV	Unfiltered		16-02659	8.74-10.11 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.162		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Jul-04	11-Jul-04
33153762	2195S	RE16-04-53413	N	NA	BA	INV	Unfiltered		16-06295	7.35-9.55 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.127		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	23-Jul-04	10-Jul-04
33153772	2195S	RE16-04-53415	N	NA	BA	QC	Unfiltered		16-02659	8.74-10.11 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.172		UG/L	J	FD	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	26-Jul-04	11-Jul-04
33604402	2450S	RE16-04-53826	N	NA	BA	INV	Unfiltered		16-06295	3.73-9.6 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.0517		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	12-Oct-04
33630342	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered		16-02656	6.48-10.66 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.548		UG/L		NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04
33630352	2472S	RE16-04-53816	N	NA	BA	INV	Unfiltered		16-02657	1.95-5.55 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.174		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04
33630362	2472S	RE16-04-53818	N	NA	BA	INV	Unfiltered		16-02658	6.15-10.13 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.103		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04
33630372	2472S	RE16-04-53820	N	NA	BA	INV	Unfiltered		16-02659	6.15-10.13 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.185		UG/L	J	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04
33630382	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered		16-06294	5.09-10.06 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.2		UG/L	U	NA	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04
33630392	2472S	RE16-04-53828	N	NA	BA	QC	Unfiltered		16-02659	6.15-10.13 FT	WG	WGA	INORGANIC	CLO4	Perchlorate		0.05		1	0.179		UG/L	J	FD	CS	PERCHLORATE	SW-846:8321A	General Engineering Laboratories, Inc., Historical	19-Oct-04	14-Oct-04

32654492	2143S	RE16-04-53172	N	NA	DC	INV	Unfiltered		16-05969	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	16-Apr-04
32654732	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered		16-05970	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.121		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	16-Apr-04
32654972	2143S	RE16-04-53173	N	NA	DC	INV	Filtered		16-05969	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.057		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	16-Apr-04
32655212	2143S	RE16-04-53175	N	NA	DC	INV	Filtered		16-05970	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.041		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	16-Apr-04
32660172	2139S	RE16-04-53148	N	NA	DC	INV	Unfiltered		16-05600	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.347		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32660412	2139S	RE16-04-53150	N	NA	DC	INV	Unfiltered		16-05601	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.122		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32660652	2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered		16-05928	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.065		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32660892	2139S	RE16-04-53166	N	NA	DC	INV	Unfiltered		16-05929	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.043		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32661132	2139S	RE16-04-53168	N	NA	DC	INV	Unfiltered		16-05930	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.033		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32661372	2139S	RE16-04-53196	N	NA	DC	INV	Unfiltered		16-05999	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.02		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32661612	2139S	RE16-04-53149	N	NA	DC	INV	Filtered		16-05600	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32661852	2139S	RE16-04-53151	N	NA	DC	INV	Filtered		16-05601	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32662092	2139S	RE16-04-53165	N	NA	DC	INV	Filtered		16-05928	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32662332	2139S	RE16-04-53167	N	NA	DC	INV	Filtered		16-05929	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32662572	2139S	RE16-04-53169	N	NA	DC	INV	Filtered		16-05930	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32662812	2139S	RE16-04-53197	N	NA	DC	INV	Filtered		16-05999	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	15-Apr-04
32663722	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered		16-05920	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.11		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32663972	2102S	RE16-04-53156	N	NA	DC	INV	Unfiltered		16-05921	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.121		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32664212	2102S	RE16-04-53176	N	NA	DC	INV	Unfiltered		16-05988	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.138		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32664452	2102S	RE16-04-53155	N	NA	DC	INV	Filtered		16-05920	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.079		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32664692	2102S	RE16-04-53157	N	NA	DC	INV	Filtered		16-05921	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.107		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32664932	2102S	RE16-04-53177	N	NA	DC	INV	Filtered		16-05988	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.109		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	12-Apr-04
32665502	2090S	RE16-04-53178	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.452		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32665742	2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.141		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32665982	2090S	RE16-04-53182	N	NA	DC	INV	Unfiltered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.148		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32666222	2090S	RE16-04-53198	N	NA	DC	QC	Unfiltered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.147		UG/L	J	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32666462	2090S	RE16-04-53179	N	NA	DC	INV	Filtered		16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.13		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32666702	2090S	RE16-04-53181	N	NA	DC	INV	Filtered		16-05990	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.119		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32666942	2090S	RE16-04-53183	N	NA	DC	INV	Filtered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.103		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32667182	2090S	RE16-04-53199	N	NA	DC	QC	Filtered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.1		UG/L	J	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	20-Apr-04	07-Apr-04
32683632	2112S	RE16-04-53158	N	NA	DC	INV	Unfiltered		16-05923	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.032		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	13-Apr-04
32683872	2112S	RE16-04-53159	N	NA	DC	INV	Filtered		16-05923	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.022		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	13-Apr-04
32977552	2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered		16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.039		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	16-Jul-04	29-Jun-04
32977782	2188S	RE16-04-53478	N	NA	DC	INV	Filtered		16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	16-Jul-04	29-Jun-04
33052692	2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.37		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	10-Jul-04
33052922	2199S	RE16-04-53459	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.081		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	10-Jul-04
33053152	2199S	RE16-04-53461	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.037		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	11-Jul-04
33053382	2199S	RE16-04-53452	N	NA	DC	INV	Filtered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	10-Jul-04
33053612	2199S	RE16-04-53460	N	NA	DC	INV	Filtered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.061		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	10-Jul-04
33053842	2199S	RE16-04-53462	N	NA	DC	INV	Filtered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	22-Jul-04	11-Jul-04
33572822	2419S	RE16-04-53765	N	NA	DC	INV	Unfiltered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.28		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33573052	2419S	RE16-04-53773	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.18		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33573282	2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered		16-05826	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.097		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33573512	2419S	RE16-04-53766	N	NA	DC	INV	Filtered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.036		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33573742	2419S	RE16-04-53774	N	NA	DC	INV	Filtered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.023		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33573972	2419S	RE16-04-53778	N	NA	DC	INV	Filtered		16-05826	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.039		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	05-Nov-04	07-Oct-04
33590962	2417S	RE16-04-53775	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	UJ	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
33591192	2417S	RE16-04-53787	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.34		UG/L	J-	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
33591422	2417S	RE16-04-53799	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.28		UG/L	J-	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
33591652	2417S	RE16-04-53776	N	NA	DC	INV	Filtered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.24		UG/L	J-	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
33591882	2417S	RE16-04-53788	N	NA	DC	INV	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.2		UG/L	J-	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
33592112	2417S	RE16-04-53800	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.19		UG/L	J-	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	18-Oct-04	06-Oct-04
34130392	2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered		16-05920	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.37		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	18-Jan-05
34130632	2784S	RE16-05-57400	N	NA	DC	INV	Unfiltered		16-05988	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.18		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	18-Jan-05
34130872	2784S	RE16-05-57416	N	NA	DC	INV	Filtered		16-05920	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.056		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	18-Jan-05
34131112	2784S	RE16-05-57427	N	NA	DC	INV	Filtered		16-05988	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.076		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	18-Jan-05
34179692	2791S	RE16-05-57428	N	NA	DC	INV	Filtered		16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.093		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	19-Jan-05
34179932	2791S	RE16-05-57429	N	NA	DC	INV	Filtered		16-05990	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.067		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	19-Jan-05
34180172	2791S	RE16-05-57430	N	NA	DC	INV	Filtered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	19-Jan-05
34192272	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.33		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	26-Jan-05
34192512	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.11		UG/L	J	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	26-Jan-05
34192752	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.049		UG/L	J	FD	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	26-Jan-05
34192992	2818S	RE16-05-57436	N	NA	DC	INV	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	26-Jan-05
34195752	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.36		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	24-Jan-05	13-Jan-05
34195992	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.12		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	24-Jan-05	13-Jan-05
34196232	2773S	RE16-05-57403	N	NA	DC	INV	Unfiltered		16-05991	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.15		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	24-Jan-05	13-Jan-05
34214472	2838S	RE16-05-57398	N	NA	DC	INV	Unfiltered		16-05969	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.4		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	31-Jan-05
34214712	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered		16-05970	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.11		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	31-Jan-05
34214952	2838S	RE16-05-57425	N	NA	DC	INV	Filtered		16-05969	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.055		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	31-Jan-05
34215192	2838S	RE16-05-57426	N	NA	DC	INV	Filtered		16-05970	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.038		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	31-Jan-05
34215582	2803S	RE16-05-57388	N	NA	DC	INV	Unfiltered		16-05826	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.38		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	24-Jan-05
34215822	2803S	RE16-05-57392	N	NA	DC	INV	Unfiltered		16-05926	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.13		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	25-Jan-05
34216062	2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.079		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	25-Jan-05
34216302	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.032		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	24-Jan-05
34216542	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.028		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	24-Jan-05
34216782	2803S	RE16-05-57415	N	NA	DC	INV	Filtered		16-05826	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.02		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	24-Jan-05
34217022	2803S	RE16-05-57419	N	NA	DC	INV	Filtered		16-05926	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	25-Jan-05
34217262	2803S	RE16-05-57420	N	NA	DC	INV	Filtered		16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	25-Jan-05
34217502	2803S	RE16-05-57434	N	NA	DC	INV	Filtered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	24-Jan-05
34217742	2803S	RE16-05-57435	N	NA	DC	INV	Filtered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.5		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	25-Jan-05
34227882	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered		16-05600	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.45		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	########
34228122	2846S	RE16-05-57413	N	NA	DC	INV	Filtered		16-05600	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.12		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	########
34228362	2846S	RE16-05-57423	N	NA	DC	INV	Filtered		16-05930	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.071		UG/L	U	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	########
34237322	2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered		16-05930	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.4		UG/L	J	NA	CS	METALS	SW-846:6020	General Engineering Laboratories, Inc., Historical	########	########
31630672	1657S	RE16-03-50759	N	NA	DC	INV	Unfiltered		16-05927	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	R	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	21-Apr-03	########
31630702	1657S	RE16-03-50763	N	NA	DC	INV	Unfiltered		16-05929	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	R	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	21-Apr-03	########
31630732	1657S	RE16-03-50765	N	NA	DC	INV	Unfiltered		16-05930	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	R	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	21-Apr-03	########
31630762	1657S	RE16-03-50791	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		1.5		1	4		UG/L	R	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Laboratories, Inc., Historical	21-Apr-03	########

URI	REQUEST_NUM	SAMPLE_ID	EXCAV_FLAG	COMPOS_TYPE_CODE	SAMPLE_TECH_CODE	SAMPLE_USG_CODE	FIELD_PREP	PRS	LOCATION_ID	DEPTH	FLD_MATRIX_CODE	MEDIA_CODE	RFI_CLASS	ANALYTE_CODE	ANALYTE_NAME	PERCENT_MOISTURE	MDL	MDA	DILUTION_FACTOR	STD_SAMPLE_VALUE	STD_UNCERTAINTY	STD_REPORTING_UNITS	FU4_QUAL	FIELD_QC_TYPE_CODE	SAMPLE_TYPE_CODE	ANALYTICAL_SUITE	ANYL_METH_CODE	LAB_NAME	ANALYSIS_DATE	COLLECTION_DATE
30913052	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	AL	Aluminum		29		2	144000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30912902	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	SB	Antimony		0.28		1	6.39		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30912922	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	AS	Arsenic		2.2		1	22.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912932	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	BA	Barium		0.22		1	639		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912862	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	BE	Beryllium		0.08		1	6.22		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30913062	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	B	Boron		9.8		2	65.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30912872	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	CD	Cadmium		0.04		1	33.9		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30912942	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	CA	Calcium		5.5		1	26800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912962	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	CR	Chromium		0.5		1	80.8		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912952	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	CO	Cobalt		0.54		1	11.3		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912972	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	CU	Copper		1.4		1	59.8		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30913072	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	FE	Iron		25		2	88400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30912892	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	PB	Lead		0.05		1	45.9		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30912982	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	MG	Magnesium		5.2		1	18500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912882	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	MN	Manganese		1.6		1	684		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30913032	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	HG	Mercury		0.04		1	0.15		UG/L	J	NA	CS	METALS	SW-846:747	General Engineering Labora	10/22/02	10/3/02
30913002	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	NI	Nickel		0.69		1	52		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30913082	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	K	Potassium		33		2	21200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30913012	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	SE	Selenium		2.8		1	11.9		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30913042	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	AG	Silver		1.7		2	8.32		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30912992	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	NA	Sodium		14		1	85700		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30912912	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	TL	Thallium		0.02		1	1.04		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	10/3/02
30913092	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	V	Vanadium		1.2		2	118		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/23/02	10/3/02
30913022	1306S	RE16-02-49450	N	NA	BA	INV	Unfiltered		16-02655	5-10 FT	WG	WGA	INORGANIC	ZN	Zinc		0.88		1	547		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/22/02	10/3/02
30957762	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	83-32-9	Acenaphthene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957582	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	208-96-8	Acenaphthylene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30956932	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	67-64-1	Acetone		2.3		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/24/02
30921132	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3		0.73		1	80600		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	10/7/02	9/24/02
30921272	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	AL	Aluminum		15		1	5420		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/24/02
30972242	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]		0.04		1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/24/02
30972262	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]		0.07		1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/24/02
30957682	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	62-53-3	Aniline		1.7		1	10.5		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957452	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	120-12-7	Anthracene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30921232	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	SB	Antimony		0.28		1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/2/02	9/24/02
30921282	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	AS	Arsenic		2.2		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/24/02
30957322	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	103-33-3	Azobenzene		0		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30921302	1257S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	INORGANIC	BA	Barium		0.22		1	3060		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/24/02
30956952	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	71-43-2	Benzene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/24/02
30957652	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957602	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957552	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957532	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957572	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene		0.53		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957712	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	65-85-0	Benzoic Acid		11		1	21		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
30957302	1255S	RE16-02-49452	N	NA	BA	INV	Unfiltered		16-02656	5-10 FT	WG	WGA	ORGANIC	100-51-6	Benzyl Alcohol		0.96		1	10.5		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/24/02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

30977412	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.49	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977402	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977422	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	3		UG/L	J	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904012	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	76		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30903682	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/3/02	9/25/02
30975672	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975902	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975962	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975952	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975862	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977312	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.2	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976032	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975602	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975722	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976132	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977802	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	0.69	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904172	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.23		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904032	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	25100		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30975942	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975772	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30903652	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	15900		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/2/02	9/25/02
30977662	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.7	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977362	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	1.1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975692	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975702	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975912	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975832	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975872	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977892	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.41	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977932	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.42	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977732	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.86	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976082	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975612	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30904052	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	0.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30977592	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	218-01-9	Chrysene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904042	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	0.67		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904062	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	3.22		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
31358232	1271S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-72		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	1/31/03	9/25/02
30977622	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977522	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	132-64-9	Dibenzofuran	0.43	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976112	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975632	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975892	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976092	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977922	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.42	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975762	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977642	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.42	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975622	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977352	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977902	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.52	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976002	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975972	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975642	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975982	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975742	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975752	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977472	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.48	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976022	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975732	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975802	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975782	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975572	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975582	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977772	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	84-66-2	Diethylphthalate	0.91	1	1		UG/L	J	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977512	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	131-11-3	Dimethyl Phthalate	0.54	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977332	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.48	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977782	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977632	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976432	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30977612	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.1	1	20.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976322	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30977482	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.71	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976382	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30977672	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.51	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977432	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	117-84-0	Di-n-octylphthalate	0.89	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904732	1269S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	DNX	DNX	0.09	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/5/02	9/25/02
30975552	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977562	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	206-44-0	Fluoranthene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977812	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	86-73-7	Fluorene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30903662	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	209		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/2/02	9/25/02
30977442	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	118-74-1	Hexachlorobenzene	0.66	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977822	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977742	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977722	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	67-72-1	Hexachloroethane	0.44	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975792	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976352	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.078	1	51.6		UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/4/02	9/25/02
30976492	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.78	10	50.5		UG/L		NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/25/02
30977542	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975882	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30904072	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	FE	Iron	13	1	323		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30977752	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	78-59-1	Isophorone	0.6	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976142	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976152	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30904192	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	1.67		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904092	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	7370		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904182	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	52.4		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904152	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	10/17/02	9/25/02
30975652	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975932	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977882	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977912	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.46	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977342	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.6	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904742	1269S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	MNX	MNX	0.03	1	1.8		UG/L		NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/5/02	9/25/02
30977872	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.11	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904112	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	1.06		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30903712	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	30		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	10/17/02	9/25/02
30977852	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.65	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977962	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977282	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.68	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976402	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30977952	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.64	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977862	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	88-75-5	Nitrophenol[2-]	0.6	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977292	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	100-02-7	Nitrophenol[4-]	5.1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977692	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977702	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.77	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977492	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.81	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976392	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30976412	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30976442	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30903692	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/8/02	9/25/02
30977372	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.82	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
31358242	1271S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-10		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	1/31/03	9/25/02
30977832	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	87-86-5	Pentachlorophenol	5.1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30903732	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate	1.5	1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	10/16/02	9/25/02
30977792	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	85-01-8	Phenanthrene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977382	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-95-2	Phenol	0.31	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30904082	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	K	Potassium	17	1	4340		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30975592	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977502	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	129-00-0	Pyrene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977392	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	110-86-1	Pyridine	5.1	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976332	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.053	1	53		UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/4/02	9/25/02
30976472	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.53	10	50.4		UG/L		NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/25/02
30904122	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30903982	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904102	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	18400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30975562	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30903672	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	4970		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/2/02	9/25/02
30975812	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976062	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975712	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976372	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30904212	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.07		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904752	1269S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	TNX	TNX	0.04	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/5/02	9/25/02
30975682	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976012	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977462	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.72	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30975852	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976042	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976052	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975992	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30977942	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	0.99	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30977842	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.4	1	10.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/25/02
30976122	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976102	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30975662	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976422	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
30976312	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/25/02
31003942	1272S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	RAD	H-3	Tritium		1	0.08	3.20E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	11/6/02	9/25/02
30904132	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	2.37		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30975922	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976072	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30976162	1268S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/25/02
30904142	1270S	RE16-02-49458	N	NA	BA	INV	Unfiltered	16-02659	5-10 FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	8.82		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904472	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	33.4		UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904682	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	SB	Antimony	0.28	1	0.79		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904482	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904502	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	8250		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904642	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904492	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	73.7		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904652	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.08		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904512	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	25000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904532	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904522	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904542	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	2.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904552	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	FE	Iron	13	1	100		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904672	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904572	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	7310		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904662	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904632	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	10/17/02	9/25/02
30904592	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	0.75		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904562	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	K	Potassium	17	1	4510		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904602	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904462	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904582	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	18400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904692	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.03		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/18/02	9/25/02
30904612	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	1.59		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30904622	1270S	RE16-02-49459	N	NA	BA	INV	Filtered	16-02659	5-10 FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	6.35		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/11/02	9/25/02
30927572	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30923962	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	59900		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	10/22/02	10/8/02
30924152	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	24000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30927952	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/16/02	10/8/02
30927972	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/16/02	10/8/02
30924122	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	SB	Antimony	0.28	1	0.59		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924162	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	3.74		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924182	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	434		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30927592	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30924082	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	1.26		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924172	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	418		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30923982	1315S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/26/02	10/8/02
30927422	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30927652	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30927712	1313S	RE16-02-49466	N	NA	BA	INV	Unfiltered	16-06294	5-10 FT	WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02

30928062	1313S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/16/02	10/8/02
31784292	1320S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	RAD	H-3	Tritium		1	0.09	4.16E-03	PCI/ML		NA	CS	H3	GENERIC:Lo	University of Miami Tritium L	11/6/02	10/8/02
30925012	1315S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	14.6		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30929262	1313S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30929412	1313S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30929502	1313S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/8/02
30925022	1315S	RE16-02-49468	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	47.5		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/21/02	10/8/02
30924632	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	533		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924602	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	SB	Antimony	0.28	1	0.48		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924642	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	4.41		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924662	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	132		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924562	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.16		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924652	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	305		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924572	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.3		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924672	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	17600		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924692	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	0.86		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924682	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924702	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	8.68		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924712	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	FE	Iron	13	1	572		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924592	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	1.11		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924732	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	4340		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924582	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	183		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924792	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	10/23/02	10/8/02
30924752	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	5.11		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924722	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	K	Potassium	17	1	4640		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924762	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924622	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924742	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	18200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924612	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.03		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/8/02
30924772	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	4.48		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/8/02
30924782	1315S	RE16-02-49469	N	NA	BA	INV	Filtered	16-06295	5-10 FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	34.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/21/02	10/8/02
31347902	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31277582	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	77700		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	12/27/02	12/18/02
31277852	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	925		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/18/02
31356782	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/28/02	12/18/02
31356802	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/28/02	12/18/02
31277802	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/18/02
31277862	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/18/02
31277882	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	2800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/18/02
31347922	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31277762	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.1		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/18/02
31277872	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	7.42		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/18/02
31277622	1481S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	105		UG/L	J	NA	CS	ANION	EPA:300	General Engineering Labora	1/10/03	12/18/02
31347752	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31347982	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31348042	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31348032	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02
31347942	1479S	RE16-03-49938	N	NA	BA	INV	Unfiltered	16-02656	6.9-10.5 FT	WG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/18/02

31281272	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	220	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31240372	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31281152	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.23	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/19/02
31281262	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	266	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31280872	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/10/03	12/19/02
31240202	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240432	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240492	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240482	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240392	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240562	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240132	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240252	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240662	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31281162	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.4	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/19/02
31281282	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	16000	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31240472	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240302	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31280882	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	7470	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/10/03	12/19/02
31240222	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240232	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240442	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240362	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240402	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240612	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240142	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31281302	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	4.35	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31281292	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	1.2	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31281312	1493S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	9.98	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/9/03	12/19/02
31884222	1496S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-54	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	6/5/03	12/19/02
31240642	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240162	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240422	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240622	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240292	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240152	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240532	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240502	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240172	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240512	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240272	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240282	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240552	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240262	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240332	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
31240312	1491S	RE16-03-49946	N	NA	BA	INV	Unfiltered	16-06295	5-10 FT	WG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/31/02	12/19/02
[illegible]																										

31682052	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31681902	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31682042	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.064	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31681922	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31682062	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.064	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31681952	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31682092	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.064	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31638802	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	4/9/03	3/26/03
31638812	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	CLO4	Perchlorate	1.5	1	4		UG/L	U	FD	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	4/22/03	3/26/03
31639332	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	K	Potassium	17	1	4240		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31680962	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681842	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.05	1	4.1		UG/L	J-	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31681982	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.053	1	4.3		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31639372	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639232	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	1.51		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639352	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	21600		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31680932	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31638902	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	7180		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/26/03
31681182	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681432	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681082	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681882	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31682022	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.032	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31639212	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.06		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31682662	1676S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	TNX	TNX	0.04	1	0.5		UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/2/03	3/26/03
31681052	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681382	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681222	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681412	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681422	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681362	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681492	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681472	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681032	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681932	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31682072	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31681822	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31681962	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1		UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31749292	1679S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	RAD	H-3	Tritium		1	0.09	3.84E-03	PCI/ML		FD	CS	H3	GENERIC:Lo	University of Miami Tritium L	5/6/03	3/26/03
31639382	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	8.96		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31681292	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681442	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31681532	1675S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31639392	1677S	RE16-03-50797	N	NA	BA	QC	Unfiltered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	40.2		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639722	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	42		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639682	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	SB	Antimony	0.38	1	0.51		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/4/03	3/26/03
31639732	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	2.95		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639752	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	9640		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639642	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	4/4/03	3/26/03
31639742	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	B	Boron	4.9	1	15.2		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31639652	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.15		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	4/4/03	3/26/03
31639762	1677S	RE16-03-50798	N	NA	BA	QC	Filtered	16-02658	7.05-7.05 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	15900		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03

31679562	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31680222	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/18/03
31626602	1641S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.11		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31641532	1640S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	TNX	TNX	0.04	1	0.21		UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	3/28/03	3/18/03
31679532	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679862	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679702	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679892	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679902	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679842	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679972	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679952	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679512	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31680272	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/18/03
31680162	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/18/03
32995212	1646S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	RAD	H-3	Tritium		1	0.09	3.52E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	5/6/03	3/18/03
31626762	1641S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	V	Vanadium	0.61	1	3.11		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31679772	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31679922	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31680012	1639S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/18/03
31626772	1641S	RE16-03-50805	N	NA	BA	INV	Unfiltered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	ZN	Zinc	0.88	1	5.97		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627102	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	AL	Aluminum	15	1	131		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627072	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	SB	Antimony	0.28	1	0.51		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627112	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	AS	Arsenic	2.2	1	2.98		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627132	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	BA	Barium	0.22	1	7010		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627032	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627122	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	B	Boron	4.9	1	46.1		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627042	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.09		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627142	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	CA	Calcium	5.5	1	21800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627162	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	CR	Chromium	0.5	1	0.8		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627152	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	CO	Cobalt	0.54	1	2.14		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627172	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	CU	Copper	1.4	1	1.99		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627182	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	FE	Iron	13	1	60.4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627062	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	PB	Lead	0.05	1	0.05		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627202	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	MG	Magnesium	5.2	1	6590		UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627052	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	MN	Manganese	1.6	1	5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627022	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/4/03	3/18/03
31627222	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	NI	Nickel	0.69	1	2.58		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627192	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	K	Potassium	17	1	3640		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627232	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627092	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627212	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	NA	Sodium	14	1	18800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627082	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/18/03
31627242	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	V	Vanadium	0.61	1	2.06		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31627252	1641S	RE16-03-50806	N	NA	BA	INV	Filtered	16-02659	7.06-7.06	FTWG	WGA	INORGANIC	ZN	Zinc	0.88	1	2.68		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/18/03
31662072	1642S	RE16-03-50817	N	NA	BA	INV	Unfiltered	16-06294	5.17-5.17	FTWG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	3/26/03	3/19/03
31642282	1644S	RE16-03-50817	N	NA	BA	INV	Unfiltered	16-06294	5.17-5.17	FTWG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	36000		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	3/25/03	3/19/03
31654972	1644S	RE16-03-50817	N	NA	BA	INV	Unfiltered	16-06294	5.17-5.17	FTWG	WGA	INORGANIC	AL	Aluminum	15	1	14200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/10/03	3/19/03

[illegible]

32079992 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	74-83-9	Bromomethane
32080162 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	78-93-3	Butanone[2-]
32079732 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]
32079852 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]
32080262 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]
32080712 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CD	Cadmium
32080592 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CA	Calcium
32080072 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	75-15-0	Carbon Disulfide
32079902 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride
32078742 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CL(-1)	Chloride
32079822 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	108-90-7	Chlorobenzene
32079832 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	124-48-1	Chlorodibromomethane
32080042 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	75-00-3	Chloroethane
32079962 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	67-66-3	Chloroform
32080002 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	74-87-3	Chloromethane
32080212 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]
32079742 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]
32080612 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CR	Chromium
32080602 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CO	Cobalt
32080622 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	CU	Copper
32445192 1877S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio
32080242 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]
32079762 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]
32080022 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	74-95-3	Dibromomethane
32080222 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]
32079892 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]
32079752 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]
32080132 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane
32080102 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]
32079772 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]
32080112 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]
32079872 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]
32079882 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]
32080152 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]
32079862 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]
32079932 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]
32079912 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]
32079702 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]
32079712 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]
32079042 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]
32078932 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]
32078992 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]
32079682 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	100-41-4	Ethylbenzene
32078752 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	INORGANIC	F(-1)	Fluoride
32079922 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]
32078962 1870S	RE16-03-51733	N	NA	BA	INV	Unfiltered	16-02658	6.5-10 FT	WG	WGA	ORGANIC	2691-41-0	HMX

32473312	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	17300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32482502	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482332	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32475562	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	18600	UG/L	J+	NA	CS	ANION	EPA:300	General Engineering Labora	12/16/03	12/4/03
32467132	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.81	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466832	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	1.3	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482252	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482262	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482472	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482392	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482432	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467362	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.47	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467402	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.48	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467202	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.99	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482642	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482172	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32473332	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32467062	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	218-01-9	Chrysene	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32473322	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	2.51	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32473342	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	1.76	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32591952	1989S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-88	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	12/26/03	12/4/03
32467092	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466992	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	132-64-9	Dibenzofuran	0.49	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482672	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482192	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482452	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467392	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.48	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482652	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467112	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.48	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482322	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32466822	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.37	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482182	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467372	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.6	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482562	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482532	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482202	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482542	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482302	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482312	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32466942	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.55	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482582	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482292	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482362	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482342	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482132	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482142	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467242	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	84-66-2	Diethylphthalate	1.1	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466982	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	131-11-3	Dimethyl Phthalate	0.62	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466802	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.55	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467252	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	84-74-2	Di-n-butylphthalate	1.2	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467102	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.2	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495122	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.02	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32467082	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.9	1	23.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466952	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.82	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495012	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.04	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32467142	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.59	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495072	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.01	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32466902	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	117-84-0	Di-n-octylphthalate	1	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32431902	1969S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/15/03	12/4/03
32482112	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467032	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	206-44-0	Fluoranthene	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467282	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	86-73-7	Fluorene	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32475572	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	181	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/16/03	12/4/03
32466912	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	118-74-1	Hexachlorobenzene	0.77	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467292	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	87-68-3	Hexachlorobutadiene	0.38	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467212	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.2	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467192	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	67-72-1	Hexachloroethane	0.51	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482352	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32495042	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.03	1	0.36	UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32467012	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482442	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32473352	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	FE	Iron	13	1	741	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32467222	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	78-59-1	Isophorone	0.69	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32482702	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482712	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32473462	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	1.03	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	12/20/03	12/4/03
32473372	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	5230	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32473452	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	44.5	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	12/20/03	12/4/03
32473252	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	12/12/03	12/4/03
32482212	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32482492	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32467352	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.59	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32467382	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.53	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32466812	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.69	1	11.8	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32431912	1969S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	MNX	MNX	0.17	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/15/03	12/4/03
32467342	1970S	RE16-04-52896	N	NA	BA	INV	Unfiltered	16-02658	6.2-10 FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.13	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03

[illegible]

32483732	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32468732	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468762	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468192	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.66	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32431972	1969S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	MNX	MNX	0.17	1	0.49	UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/16/03	12/4/03
32468722	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32473882	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32475472	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	70	UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	12/30/03	12/4/03
32468702	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.71	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468812	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468132	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468802	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.7	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495352	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32468712	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	88-75-5	Nitrophenol[2-]	0.66	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468142	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	100-02-7	Nitrophenol[4-]	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468542	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468552	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.83	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468342	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.88	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495342	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32495362	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32495392	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32475642	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	12/11/03	12/4/03
32468222	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.89	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32592002	1989S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.8	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	12/26/03	12/4/03
32468682	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	87-86-5	Pentachlorophenol	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32472992	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	CLO4	Perchlorate	0.05	1	0.19	UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	12/9/03	12/4/03
32468642	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	85-01-8	Phenanthrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468232	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	108-95-2	Phenol	0.33	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32473852	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	K	Potassium	17	1	3460	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32483392	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32468352	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	129-00-0	Pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32468242	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	110-86-1	Pyridine	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32495402	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.18	10	9.08	UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32473892	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32473762	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32473872	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	17300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/4/03
32483362	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32475682	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	5690	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/16/03	12/4/03
32483612	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32483862	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32483512	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32495322	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32473972	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	12/20/03	12/4/03
32431982	1969S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	TNX	TNX	0.16	1	0.23	UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/16/03	12/4/03
32483482	1970S	RE16-04-52900	N	NA	BA	INV	Unfiltered	16-02659	8.25-10 FT	WG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03

32635552	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	4/19/04	3/30/04
32635662	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	NA	Sodium	14	1	54100	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	4/19/04	3/30/04
32635522	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.12	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	4/16/04	3/30/04
32635532	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	U	Uranium	0.02	1	0.66	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	4/16/04	3/30/04
32635692	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	V	Vanadium	0.61	1	15.7	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	4/19/04	3/30/04
32635702	2055S	RE16-04-53131	N	NA	BA	INV	Filtered	16-02655	7.08-10.01 FWG	WGA	INORGANIC	ZN	Zinc	0.88	1	30.4	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	4/19/04	3/30/04
32681442	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	83-32-9	Acenaphthene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681262	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	208-96-8	Acenaphthylene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32682612	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	3.4	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32675982	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	87500	UG/L		NA	CS	ALK	EPA:310.1 General Engineering Labora	4/26/04	4/13/04
32668292	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	AL	Aluminum	15	1	14200	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	5/4/04	4/13/04
32710402	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/13/04	4/13/04
32710422	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/13/04	4/13/04
32681362	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	62-53-3	Aniline	1.7	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681132	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	120-12-7	Anthracene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32668242	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	SB	Antimony	0.28	1	0.62	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	5/1/04	4/13/04
32668302	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	5/4/04	4/13/04
32681002	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	103-33-3	Azobenzene	0.92	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32668312	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	BA	Barium	0.22	1	4520	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	5/4/04	4/13/04
32682632	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32681332	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681282	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681232	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681212	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681252	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.53	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681392	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	65-85-0	Benzoic Acid	11	1	21.3	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32680982	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	100-51-6	Benzyl Alcohol	0.97	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32668202	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.69	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	5/1/04	4/13/04
32681092	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.51	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681082	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.5	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32681102	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32669162	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	4/20/04	4/13/04
32682462	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682692	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682752	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682742	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682652	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32680992	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32682822	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682392	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682512	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682922	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32681482	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	0.72	1	10.6	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/23/04	4/13/04
32668212	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.63	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	5/1/04	4/13/04
32668322	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	CA	Calcium	5.5	1	22700	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	5/4/04	4/13/04
32682732	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32682562	2120S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/13/04
32669202	2122S	RE16-04-53132	N	NA	BA	INV	Unfiltered	16-02656	4.9-10.3 FT WG	WGA	INORGANIC	CL(-1)	Chloride	0.06	2	22700	UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	4/26/04	4/13/04

32658322	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	84-66-2	Diethylphthalate	0.99	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658062	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	131-11-3	Dimethyl Phthalate	0.59	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657882	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.52	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658332	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	84-74-2	Di-n-butylphthalate	1.1	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658182	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.1	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657512	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32658162	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.6	1	22.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657422	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32658032	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.78	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657462	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32658222	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.56	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657982	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	117-84-0	Di-n-octylphthalate	0.97	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32687622	2084S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/23/04	4/6/04
32655522	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32658112	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	206-44-0	Fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658362	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	86-73-7	Fluorene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32650442	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	229	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/6/04
32657992	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	118-74-1	Hexachlorobenzene	0.72	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658372	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	87-68-3	Hexachlorobutadiene	0.36	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658292	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658272	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	67-72-1	Hexachloroethane	0.48	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32655762	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32657542	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	2691-41-0	HMX	0.5	10	25.8	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/6/04
32658092	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32655852	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32649132	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	FE	Iron	13	1	3700	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32658302	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	78-59-1	Isophorone	0.66	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32656112	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32656122	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32649012	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	PB	Lead	0.05	1	13.3	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/6/04
32649152	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	MG	Magnesium	5.2	1	5780	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32649002	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	MN	Manganese	1.6	1	163	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/6/04
32649212	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/29/04	4/6/04
32655622	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32655902	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32658432	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658462	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657892	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.66	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32687632	2084S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	MNX	MNX	0.17	1	0.88	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/23/04	4/6/04
32658422	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32649172	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	NI	Nickel	0.69	1	2.73	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32648952	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	10	UG/L	J	NA	CS	ANION	EPA:353.1	General Engineering Labora	4/28/04	4/6/04
32658402	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.71	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658512	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657832	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657482	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32658502	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.7	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658412	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	88-75-5	Nitrophenol[2-]	0.66	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657842	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	100-02-7	Nitrophenol[4-]	5.6	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658242	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658252	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.83	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658042	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.88	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657472	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32657492	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32657522	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32650422	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/19/04	4/6/04
32657922	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.89	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658382	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	87-86-5	Pentachlorophenol	5.6	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657382	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	CLO4	Perchlorate	0.05	1	0.38	UG/L		NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	4/19/04	4/6/04
32658342	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	85-01-8	Phenanthrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657932	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	108-95-2	Phenol	0.33	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32649142	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	K	Potassium	17	1	2720	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32655562	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32658052	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	129-00-0	Pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657942	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	110-86-1	Pyridine	5.6	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657532	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	121-82-4	RDX	0.51	10	27	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/6/04
32649182	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32649052	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32649162	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	NA	Sodium	14	1	26700	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32655532	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32650452	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	9690	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/6/04
32655782	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32656032	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32655982	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32657452	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32649032	2085S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/6/04
32687642	2084S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	TNX	TNX	0.16	1	0.3	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/23/04	4/6/04
32655652	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32655982	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32658012	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.79	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32655822	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32656012	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32656022	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32655962	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32658492	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32658392	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.43	1	11.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32656092	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32656072	2083S	RE16-04-53136	N	NA	BA	INV	Unfiltered	16-02658	6.06-10.5 FTWG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04

[illegible]

32650792 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	AL	Aluminum	15	1	21900	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/26/04	4/7/04
32710702 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/7/04
32710722 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/7/04
32700442 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	62-53-3	Aniline	2.2	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700212 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	120-12-7	Anthracene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32650762 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	SB	Antimony	0.28	1	2	UG/L	UJ	NA	CS	METALS	SW-846:602	General Engineering Labora	4/24/04	4/7/04
32650802 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	AS	Arsenic	2.2	1	4.02	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/26/04	4/7/04
32700082 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	103-33-3	Azobenzene	1.2	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32650812 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	BA	Barium	0.22	1	307	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/26/04	4/7/04
32686662 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32700412 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700362 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700312 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700292 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700332 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.68	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700472 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	65-85-0	Benzoic Acid	14	1	27	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700062 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	100-51-6	Benzyl Alcohol	1.2	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32650722 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	BE	Beryllium	0.08	1	1.06	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/24/04	4/7/04
32700172 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.65	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700162 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.9	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700182 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.8	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32650622 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/7/04
32686492 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686722 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686782 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686772 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686682 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32700072 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.7	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32686852 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686422 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686542 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686952 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32700562 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	0.92	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32650732 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.56	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/24/04	4/7/04
32650822 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	CA	Calcium	5.5	1	11800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/26/04	4/7/04
32686762 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686592 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32650632 2096S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	9050	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/7/04
32700422 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.93	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700122 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	1.5	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32686512 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686522 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686732 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686652 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32686692 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32700652 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.54	1	1.4	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700692 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.55	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32700492 2093S	RE16-04-53142	N	NA	BA	INV	Unfiltered	16-06294	4.9-10.88 FTWG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	1.1	1	13.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04

32650542	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	225	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/6/04
32659372	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	118-74-1	Hexachlorobenzene	0.71	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659752	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	87-68-3	Hexachlorobutadiene	0.35	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659672	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659652	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	67-72-1	Hexachloroethane	0.47	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657002	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32657822	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.5	10	51.4	UG/L		FD	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/6/04
32659472	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.55	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657092	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32649612	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	FE	Iron	13	1	928	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32659582	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	78-59-1	Isophorone	0.65	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657352	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32657362	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32649492	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	0.84	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/6/04
32649632	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	6040	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32649482	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	24.4	UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/6/04
32649692	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	4/29/04	4/6/04
32656862	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32657142	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/6/04
32659812	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.55	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659842	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659272	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.65	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32687692	2084S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	MNX	MNX	0.17	1	1.2	UG/L		FD	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/23/04	4/6/04
32659802	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32649652	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/6/04
32648972	2085S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	110	UG/L		FD	CS	ANION	EPA:353.1	General Engineering Labora	4/28/04	4/6/04
32659782	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.7	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659892	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32659212	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04
32657762	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/6/04
32659882	2083S	RE16-04-53146	N	NA	BA	QC	Unfiltered	16-02659	5.6-10.1 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.69	1	11	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/12/04	4/6/04

33154192	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33154092	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33154142	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33151242	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33122132	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	175	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	7/15/04	7/10/04
33151482	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33154212	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.4	8	37.2	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33151572	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33121722	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	FE	Iron	13	1	480	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33151832	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151842	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33121822	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	0.95	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/23/04	7/10/04
33121742	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	5410	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33121852	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	34.5	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/29/04	7/10/04
33121862	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/30/04	7/10/04
33151342	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151622	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33121762	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33154162	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33154152	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33154172	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33154202	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33122162	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	7/21/04	7/10/04
34296672	2229S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.7	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	12/7/04	7/10/04
33153742	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	CLO4	Perchlorate	0.05	1	0.14	UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33121732	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	K	Potassium	17	1	2610	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33151282	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33154102	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	121-82-4	RDX	0.1	2	10.2	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33121772	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33121642	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33121752	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	NA	Sodium	14	1	19500	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/22/04	7/10/04
33151252	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33122142	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	4990	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	7/15/04	7/10/04
33151502	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151752	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151402	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33154132	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33121842	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/23/04	7/10/04
33151372	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151702	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151542	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151732	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151742	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151682	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04
33151812	2195S	RE16-04-53405	N	NA	BA	INV	Unfiltered	16-02658	9.1-10.5 FT	WG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/23/04	7/10/04

33565802	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	CO	Cobalt	0.54	1	2.2
33565812	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	CU	Copper	1.4	1	8.6
33559272	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5
34708032	2474S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66 FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-77.8
33640062	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1
33639852	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1
33639742	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1
33640092	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1
33640072	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1
33640082	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1
33639482	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1
33639612	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1
33639702	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1
33639542	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1
33639632	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1
33639602	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1
33639732	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1
33639812	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1
33639642	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1
33639682	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1
33639762	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1
33639792	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1
33630712	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48
33630742	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32
33630752	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32
33639882	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1
33558982	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	148
33639822	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5
33630792	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	2691-41-0	HMX	0.1	2	0.16
33639572	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5
33565822	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	FE	Iron	13	1	10800
33639932	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1
33640042	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1
33565832	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	PB	Lead	0.05	1	8.9
33565842	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	MG	Magnesium	5.2	1	6560
33565852	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	MN	Manganese	1.6	1	580
33565862	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2
33639772	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5
33639592	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5
33565872	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	NI	Nickel	0.69	1	6.3
33558922	2473S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	38.8
33630702	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97
33630812	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48
33630822	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48
33630832	2472S	RE16-04-53814	N	NA	BA	INV	Unfiltered	16-02656	6.48-10.66	FWG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97

33641762	2472S	RE16-04-53820	N	NA	BA	INV	Unfiltered	16-02659	6.15-10.13	FWG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33641752	2472S	RE16-04-53820	N	NA	BA	INV	Unfiltered	16-02659	6.15-10.13	FWG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33566632	2473S	RE16-04-53820	N	NA	BA	INV	Unfiltered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	ZN	Zinc	0.88	1	12	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/8/04	10/14/04
33567562	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	AL	Aluminum	15	1	147	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567572	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	SB	Antimony	0.28	1	0.74	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567582	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	AS	Arsenic	2.2	1	4.8	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	11/8/04	10/14/04
33567592	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	BA	Barium	0.22	1	8440	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567602	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567612	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.87	UG/L	J+	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567622	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	CA	Calcium	5.5	1	25500	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567632	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	CR	Chromium	0.5	1	0.55	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567642	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	CO	Cobalt	0.54	1	2.6	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567652	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	CU	Copper	1.4	1	1.8	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567662	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	FE	Iron	13	1	64.1	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567672	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	PB	Lead	0.05	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567682	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	MG	Magnesium	5.2	1	7540	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567692	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	MN	Manganese	1.6	1	2.4	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567702	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	10/22/04	10/14/04
33567712	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567722	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	K	Potassium	17	1	4550	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567732	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567742	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567752	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	NA	Sodium	14	1	19700	UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567762	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33567772	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	V	Vanadium	0.61	1	1.8	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33567782	2473S	RE16-04-53821	N	NA	BA	INV	Filtered	16-02659	6.15-10.13	FWG	WGA	INORGANIC	ZN	Zinc	0.88	1	9.6	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/8/04	10/14/04
33642032	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	6	UG/L		NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33559262	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	67300	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	10/27/04	10/14/04
33566642	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	AL	Aluminum	15	1	11600	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33631332	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	10/23/04	10/14/04
33631342	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	10/23/04	10/14/04
33566652	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	SB	Antimony	0.28	1	0.31	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33566662	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	AS	Arsenic	2.2	1	4.5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	11/8/04	10/14/04
33566672	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	BA	Barium	0.22	1	394	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04
33642192	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33566682	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.97	UG/L	J+	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33559172	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	11/6/04	10/14/04
33642442	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642132	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642232	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642402	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33641992	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642102	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642532	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642512	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33642502	2472S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/28/04	10/14/04
33566692	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.47	UG/L	J+	NA	CS	METALS	SW-846:602	General Engineering Labora	11/11/04	10/14/04
33566702	2473S	RE16-04-53824	N	NA	BA	INV	Unfiltered	16-06294	5.09-10.06	FWG	WGA	INORGANIC	CA	Calcium	5.5	1	19500	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/9/04	10/14/04

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34171432	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171602	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171192	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34173362	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	2.4	1	30.1	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173372	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171302	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171732	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171712	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171702	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34173502	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	1.4	1	26.6	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173512	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	0.72	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34222392	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CD	Cadmium	0.04	1	2.9	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222402	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CA	Calcium	5.5	1	24800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34171262	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171372	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34223342	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	19500	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/11/05	1/24/05
34172942	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	1.4	1	62.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172952	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.73	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34172902	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	2.2	1	31.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172912	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171542	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171522	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171202	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171342	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171172	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34173042	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.8	1	26.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173052	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.42	1	1	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34172522	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.82	1	45.5	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172532	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.43	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34173262	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	1.7	1	27.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173272	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.88	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171662	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171692	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34222412	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CR	Chromium	0.5	1	77.8	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34173562	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	218-01-9	Chrysene	1	1	30.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173572	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	218-01-9	Chrysene	0.53	1	1	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34222422	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CO	Cobalt	0.54	1	11.2	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222432	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CU	Copper	1.4	1	40	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223302	2798S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5	UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	1/31/05	1/24/05
34488502	2799S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-89.89	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Stable Isotopes Laboratory	2/18/05	1/24/05
34173702	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	53-70-3	Dibenz[a,h]anthracene	1	1	9.1	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173712	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.53	1	1	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34173182	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	132-64-9	Dibenzofuran	0.84	1	27.7	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173192	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	132-64-9	Dibenzofuran	0.44	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171742	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171532	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171422	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171772	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172602	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.82	1	23.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172612	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.43	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171752	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172542	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.82	1	23.1	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172552	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.43	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171762	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172562	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.62	1	23.7	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172572	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.33	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34173542	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	1	1	3.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173552	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.54	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171162	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171292	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171382	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171222	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171312	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171282	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172822	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.94	1	42.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34172832	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.5	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34171412	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171492	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171322	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171362	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171442	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171472	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34173202	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	84-66-2	Diethylphthalate	1.8	1	26.6	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34173212	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FWG	WGA	ORGANIC	84-66-2	Diethylphthalate	0.94	1	10.5	UG/L	UJ	NA	RE	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/24/05
34173102	2796S	RE16-05-57438	N	NA	BA	INV	Unfiltered	16-02655	6.98-10.17 FT WG	WGA	ORGANIC	131-11-3	Dimethyl Phthalate	1.1	1	27.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05

34209442 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	CLO4	Perchlorate	0.05	1	0.39		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/26/05
34211112 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	85-01-8	Phenanthrene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34210652 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	108-95-2	Phenol	0.3	1	10.1		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34209612 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	K	Potassium	17	1	3840		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34210432 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34211152 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	129-00-0	Pyrene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34210632 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	110-86-1	Pyridine	5.1	1	10.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34211732 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	121-82-4	RDX	0.1	2	0.19		UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/26/05
34211742 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	121-82-4	RDX	0.11	2	1.78		UG/L	R	NA	RE	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/25/05	1/26/05
34209622 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34209632 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209642 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	NA	Sodium	14	1	15800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34210372 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210582 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	9700		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34210332 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210402 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210292 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34211812 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.16	2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/24/05	1/26/05
34211822 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	479-45-8	Tetryl	0.17	2	0.521		UG/L	R	NA	RE	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/25/05	1/26/05
34209652 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	TL	Thallium	0.02	1	0.03		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34135782 2815S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	TNX	TNX	0.16	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/26/05
34210242 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210022 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210842 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.72	1	10.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34210132 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210262 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210182 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34209992 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210922 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	0.98	1	10.1		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34210912 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.39	1	10.1		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34210412 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210462 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210452 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34211652 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.085	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/24/05	1/26/05
34211662 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.091	2	0.347		UG/L	R	NA	RE	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/25/05	1/26/05
34211672 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/24/05	1/26/05
34211682 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.083	2	0.347		UG/L	R	NA	RE	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/25/05	1/26/05
34296852 2821S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	RAD	H-3	Tritium		1	0.09	3.84E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	3/15/05	1/26/05
34209662 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	U	Uranium	0.02	1	0.96		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209672 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	V	Vanadium	0.61	1	7.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209962 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210362 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34210352 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34209682 2816S	RE16-05-57439	N	NA	BA	INV	Unfiltered	16-02656	5.86-10.2	FT	WG	WGA	INORGANIC	ZN	Zinc	0.88	1	134		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34219912 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	83-32-9	Acenaphthene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219902 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	208-96-8	Acenaphthylene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212242 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	67-64-1	Acetone	2.3	1	3.2		UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34224142 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	70600		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/31/05	1/26/05
34218112 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	AL	Aluminum	15	1	86800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34223592 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05
34223602 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05
34219572 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	62-53-3	Aniline	1.7	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220052 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	120-12-7	Anthracene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218122 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	SB	Antimony	0.28	1	0.87		UG/L	J-	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218132 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	AS	Arsenic	2.2	1	9.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34220012 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	103-33-3	Azobenzene	0.9	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218142 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	BA	Barium	0.22	1	14000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34212402 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34220102 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220172 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220152 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220202 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220162 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219762 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	65-85-0	Benzoic Acid	10	1	20.8		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219632 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	100-51-6	Benzyl Alcohol	0.95	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218152 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	BE	Beryllium	0.08	1	6.7		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/26/05
34219742 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219592 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220132 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34214122 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34212652 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212342 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212442 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212612 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212202 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34220022 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212312 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212742 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212722 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212712 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34220092 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	85-68-7	Butylbenzylphthalate	0.71	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218162 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CD	Cadmium	0.04	1	1.5		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218172 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CA	Calcium	5.5	1	29500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34212272 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212382 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34214142 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CL(-1)	Chloride	0.03	1	7960		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34219812 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.72	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34219792 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212552 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212532 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212212 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212352 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212182 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219862 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.42	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219602 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	95-57-8	Chlorophenol[2-]	0.43	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34219972 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.88	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212672 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212702 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34218182 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CR	Chromium	0.5	1	39.2		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34220122 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	218-01-9	Chrysene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218192 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CO	Cobalt	0.54	1	14.7		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218202 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CU	Copper	1.4	1	62		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218082 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	-0.76		UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	2/9/05	1/26/05
34488742 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	OTHER	DELTAH-2	Deuterium Ratio		1	-91.28		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Stable Isotopes Laboratory	2/18/05	1/26/05
34220192 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219932 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	132-64-9	Dibenzofuran	0.44	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212752 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212542 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212432 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212782 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219642 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.43	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212762 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219612 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.43	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212772 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219622 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220112 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212172 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212302 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212392 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212232 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212322 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212292 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219752 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34212422 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212502 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212332 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212372 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212452 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212482 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219942 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	84-66-2	Diethylphthalate	0.93	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219892 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219732 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34220062 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219982 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34223532 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05
34219922 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.8		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34220222 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.73	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34223562 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.099	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05
34220232 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.52	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34223572 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.078	2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05
34220142 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	117-84-0	Di-n-octylphthalate	0.91	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34220002 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	122-39-4	Diphenylamine	0.82	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34163672 2819S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	DNX	DNX	0.35	1	0.5		UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34163682 2819S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	DNX	DNX	0.35	1	0.5		UG/L	R	NA	RE	HEXP	SW-846:8330	Severn Trent Laboratories, Inc., St. Louis	2/17/05	1/26/05
34212572 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34220072 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	206-44-0	Fluoranthene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219962 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	86-73-7	Fluorene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34214132 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	F(-1)	Fluoride	0.05	1	134		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34220212 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	118-74-1	Hexachlorobenzene	0.68	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219802 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219832 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219692 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	67-72-1	Hexachloroethane	0.45	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212512 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34223612 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	2691-41-0	HMX	0.1	2	3		UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34220182 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212262 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34218212 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	FE	Iron	13	1	68300		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219712 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	78-59-1	Isophorone	0.62	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34212622 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212732 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34218222 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	PB	Lead	0.05	1	93.4		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218232 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	MG	Magnesium	5.2	1	15500		UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218242 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	MN	Manganese	1.6	1	1070		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/26/05
34218252 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	HG	Mercury	0.04	1	0.11		UG/L	J	NA	CS	METALS	SW-846:747	General Engineering Labora	2/2/05	1/26/05
34212462 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34212282 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34219822 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219662 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.47	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34219682 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.62	1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/3/05	1/26/05
34163692 2819S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	MNX	MNX	0.17	1	3.1		UG/L	J-	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34163702 2819S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	MNX	MNX	0.17	1	5.2		UG/L	R	NA	RE	HEXP	SW-846:8330	Severn Trent Laboratories, Inc., St. Louis	2/17/05	1/26/05
34219782 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.12	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34218262 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	NI	Nickel	0.69	1	39.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34214092 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	621		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	2/17/05	1/26/05
34219872 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.67	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219882 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219992 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.7	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34219702 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.66	1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34223522 2820S	RE16-05-57440	N	NA	BA	INV	Unfiltered	16-02657	2.95-5.55	FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.974		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	2/23/05	1/26/05

34488532	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FT	WG	WGA	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-12.62		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/24/05
34174282	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	87-86-5	Pentachlorophenol	5.2	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34172412	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	CLO4	Perchlorate	0.05	1	0.12		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/24/05
34174292	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	85-01-8	Phenanthrene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34173832	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	108-95-2	Phenol	0.31	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34222742	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	K	Potassium	17	1	2010		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34172272	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34174332	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	129-00-0	Pyrene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34173812	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	110-86-1	Pyridine	5.2	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34177952	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	121-82-4	RDX	0.51	10	12.5		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/24/05
34222752	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	SE	Selenium	2.8	1	3.1		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222762	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222772	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	NA	Sodium	14	1	25800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34172212	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34223402	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	6500		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/11/05	1/24/05
34172172	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172242	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172132	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34177992	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	479-45-8	Tetryl	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/24/05
34222782	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	TL	Thallium	0.02	1	0.04		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34135742	2797S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	TNX	TNX	0.16	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34135752	2797S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FT	WG	WGA	ORGANIC	TNX	TNX	0.16	1	0.5		UG/L	R	NA	RE	HEXP	SW-846:8330	Severn Trent Laboratories, Inc., St. Louis	2/17/05	1/24/05
34172082	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171862	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34174022	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.74	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34171972	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172102	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172022	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34171832	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34174102	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34174092	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.41	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34172252	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172302	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172292	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34177912	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.42	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/24/05
34177922	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.39	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/24/05
34296892	2800S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	RAD	H-3	Tritium		1	0.07	2.56E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/24/05
34222792	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	U	Uranium	0.02	1	0.24		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222802	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	V	Vanadium	0.61	1	4.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34171802	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172202	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34172192	2796S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34222812	2798S	RE16-05-57441	N	NA	BA	INV	Unfiltered	16-02658	6.21-10.25 FWG		WGA	INORGANIC	ZN	Zinc	0.88	1	19.3		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34220602	2820S	RE16-05-57442	N	NA	BA	INV	Unfiltered	16-02659	6.18-10.2 FTWG		WGA	ORGANIC	83-32-9	Acenaphthene	0.51	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05

34138842 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	95-48-7	Methylphenol[2-]	0.46		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138872 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.66		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138882 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	106-44-5	Methylphenol[4-]	0.6		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34081192 2794S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	MNX	MNX	0.17		1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/27/05	1/19/05
34139072 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	91-20-3	Naphthalene	0.12		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139082 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	91-20-3	Naphthalene	0.11		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137702 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	NI	Nickel	0.69		1	3.9	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34137512 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03		1	20	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	2/10/05	1/19/05
34139252 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.72		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139262 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	88-74-4	Nitroaniline[2-]	0.65		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34139272 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1.1		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139282 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	99-09-2	Nitroaniline[3-]	1		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34139492 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.75		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139502 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	100-01-6	Nitroaniline[4-]	0.68		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137212 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.33		2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34138912 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.71		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138922 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	98-95-3	Nitrobenzene	0.64		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138952 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	88-75-5	Nitrophenol[2-]	0.66		1	11.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138962 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	88-75-5	Nitrophenol[2-]	0.6		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34139412 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	100-02-7	Nitrophenol[4-]	5.6		1	11.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139422 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	100-02-7	Nitrophenol[4-]	5.1		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138612 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6		1	11.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138622 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.1		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138852 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.84		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138862 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.76		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137322 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16		2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137332 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16		2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137342 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33		2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34138532 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	C2O4	Oxalate	0.35		1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/25/05	1/19/05
34138812 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.9		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138822 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.81		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34270232 2792S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio			1	-11.91	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/8/05	1/19/05
34139572 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	87-86-5	Pentachlorophenol	5.6		1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34139582 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	87-86-5	Pentachlorophenol	5.1		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137352 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	CLO4	Perchlorate	0.05		1	0.2	UG/L	U	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/19/05
34139592 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	85-01-8	Phenanthrene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139602 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	85-01-8	Phenanthrene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138672 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	108-95-2	Phenol	0.34		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138682 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	108-95-2	Phenol	0.3		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137712 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	K	Potassium	17		1	4540	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34136462 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	103-65-1	Propylbenzene[1-]	0.25		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34139672 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	129-00-0	Pyrene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139682 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	129-00-0	Pyrene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34138632 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	110-86-1	Pyridine	5.6		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34138642 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	110-86-1	Pyridine	5.1		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137272 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	121-82-4	RDX	0.1		2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137722 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	SE	Selenium	2.8		1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34137732 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	AG	Silver	0.84		1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34137742 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	NA	Sodium	14		1	20000	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34136402 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	100-42-5	Styrene	0.25		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34138552 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19		1	8450	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/29/05	1/19/05
34136362 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136432 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136322 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137312 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	479-45-8	Tetryl	0.16		2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137752 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	TL	Thallium	0.02		1	0.41	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/19/05
34081202 2794S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	TNX	TNX	0.16		1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/27/05	1/19/05
34136272 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	108-88-3	Toluene	0.39		1	0.51	UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136052 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5		1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34139052 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.8		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34139062 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.72		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34136162 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136292 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136212 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136022 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34139212 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1		1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34139222 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	0.98		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34139192 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.44		1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34139202 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96 FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.39		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34136442 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136492 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136482 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137232 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08		2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137242 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07		2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34095522 2793S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	RAD	H-3	Tritium		2.88E-03	1	0.07	PCI/ML		NA	CS	H3	GENERIC:	University of Miami Tritium L	3/15/05	1/19/05
34137762 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	U	Uranium	0.02		1	0.82	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/19/05
34137772 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	V	Vanadium	0.61		1	10.3	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34135992 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136392 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136382 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6		1	2	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137782 2795S	RE16-05-57444	N	NA	BA	INV	Unfiltered	16-06294	5.21-10.96	FWG	WGA	INORGANIC	ZN	Zinc	0.88		1	20.9	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34140712 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	83-32-9	Acenaphthene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140722 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	83-32-9	Acenaphthene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34140692 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	208-96-8	Acenaphthylene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140702 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	208-96-8	Acenaphthylene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34136662 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	67-64-1	Acetone	2.3		1	5	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34142882 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5		1	52500	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/24/05	1/19/05
34137792 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	AL	Aluminum	15		1	1560	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34137432 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09		2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137442 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1		2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34140032 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	62-53-3	Aniline	1.8		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140042 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	62-53-3	Aniline	1.6		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34140992 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	120-12-7	Anthracene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141002 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	120-12-7	Anthracene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137802 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	SB	Antimony	0.28		1	0.48	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/19/05
34137812 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	AS	Arsenic	2.2		1	4	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34140912 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	103-33-3	Azobenzene	0.97		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140922 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	103-33-3	Azobenzene	0.87		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137822 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	BA	Barium	0.22		1	145	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34136822 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	71-43-2	Benzene	0.33		1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34141092 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141102 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	56-55-3	Benzo(a)anthracene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34141232 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141242 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	50-32-8	Benzo(a)pyrene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34141192 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141202 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34141292 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141302 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34141212 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.56		1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34141222 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.51		1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34140412 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	65-85-0	Benzoic Acid	11		1	22.5	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34140422 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	65-85-0	Benzoic Acid	10		1	20.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34140152 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	100-51-6	Benzyl Alcohol	1		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140162 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	100-51-6	Benzyl Alcohol	0.92		1	10.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137832 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	BE	Beryllium	0.08		1	0.46	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/19/05
34140372 2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.54		1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05

34137022	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34138602	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	SO4(-2)	Sulfate	0.19	1	10000		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/29/05	1/19/05
34136982	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137052	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136942	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137462	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	479-45-8	Tetryl	0.16	2	0.48		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137992	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.08		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/19/05
34081232	2794S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	TNX	TNX	0.16	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/27/05	1/19/05
34136892	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136672	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34140432	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.8	1	11.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/19/05
34140442	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.72	1	10.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34136782	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136912	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136832	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34136642	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34140592	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1	1	11.2		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34140602	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	0.98	1	10.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34140572	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.44	1	11.2		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/19/05
34140582	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72 FT	WG	WGA	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.39	1	10.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/19/05
34137062	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137112	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137102	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137382	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34137392	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/19/05
34295532	2793S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	RAD	H-3	Tritium		1	0.07	2.56E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	3/15/05	1/19/05
34138002	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	U	Uranium	0.02	1	0.79		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/19/05
34138012	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	V	Vanadium	0.61	1	5.4		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34136612	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137012	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34137002	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/19/05
34138022	2795S	RE16-05-57445	N	NA	BA	INV	Unfiltered	16-06295	3.74-9.72	FTWG	WGA	INORGANIC	ZN	Zinc	0.88	1	18.6		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/26/05	1/19/05
34222822	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	AL	Aluminum	15	1	13200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222832	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	SB	Antimony	0.28	1	2.7		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222842	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	AS	Arsenic	2.2	1	8.8		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222852	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	BA	Barium	0.22	1	92.9		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222862	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.52		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222872	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.96		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222882	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	CA	Calcium	5.5	1	12900		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222892	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	CR	Chromium	0.5	1	8		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222902	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	CO	Cobalt	0.54	1	4.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222912	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	CU	Copper	1.4	1	7.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222922	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	FE	Iron	13	1	7220		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222932	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	PB	Lead	0.05	1	2.8		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222942	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	MG	Magnesium	5.2	1	3710		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222952	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	MN	Manganese	1.6	1	33.4		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34222962	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/31/05	1/24/05
34222972	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	NI	Nickel	0.69	1	20.5		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222982	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	K	Potassium	17	1	7940		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34222992	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	SE	Selenium	2.8	1	13.9		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223002	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223012	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	NA	Sodium	14	1	109000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223022	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.09		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34223032	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	U	Uranium	0.02	1	0.68		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34223042	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	V	Vanadium	0.61	1	17.8		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223052	2798S	RE16-05-57446	N	NA	BA	INV	Filtered	16-02655	6.98-10.17	FWG	WGA	INORGANIC	ZN	Zinc	0.88	1	32.6		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34209692	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	AL	Aluminum	15	1	43.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209702	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209712	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209722	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	BA	Barium	0.22	1	3270		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209732	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209742	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.06		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209752	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	CA	Calcium	5.5	1	22000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209762	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	CR	Chromium	0.5	1	0.52		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209772	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	CO	Cobalt	0.54	1	2.2		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209782	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34209792	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	FE	Iron	13	1	79.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34209802	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	PB	Lead	0.05	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209812	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	MG	Magnesium	5.2	1	5980		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209822	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	MN	Manganese	1.6	1	52.6		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209832	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	2/1/05	1/26/05
34209842	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	NI	Nickel	0.69	1	2.4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209852	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	K	Potassium	17	1	3100		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209862	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	SE	Selenium	2.8	1	3.4		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34209872	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209882	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	NA	Sodium	14	1	15800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209892	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209902	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	U	Uranium	0.02	1	0.02		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34209912	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	V	Vanadium	0.61	1	1.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34209922	2816S	RE16-05-57447	N	NA	BA	INV	Filtered	16-02656	5.86-10.2	FTWG	WGA	INORGANIC	ZN	Zinc	0.88	1	10		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34218832	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	AL	Aluminum	15	1	4680		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218842	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	SB	Antimony	0.28	1	0.83		UG/L	J-	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218852	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218862	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	BA	Barium	0.22	1	2570		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218872	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	BE	Beryllium	0.08	1	0.28		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/26/05
34218882	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	CD	Cadmium	0.04	1	0.11		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218892	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	CA	Calcium	5.5	1	7470		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218902	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	CR	Chromium	0.5	1	1.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218912	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	CO	Cobalt	0.54	1	5.4		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218922	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	CU	Copper	1.4	1	7.4		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218932	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	FE	Iron	13	1	2670		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218942	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	PB	Lead	0.05	1	3.6		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34218952	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	MG	Magnesium	5.2	1	2280		UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218962	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	MN	Manganese	1.6	1	211		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/3/05	1/26/05
34218972	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	2/2/05	1/26/05
34218982	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	NI	Nickel	0.69	1	5.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34218992	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	K	Potassium	17	1	4100		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219002	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219012	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219022	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	NA	Sodium	14	1	27000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219032	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	TL	Thallium	0.02	1	0.03		UG/L	J-	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34219042	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	U	Uranium	0.02	1	0.55		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/26/05
34219052	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	V	Vanadium	0.61	1	4.4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34219062	2820S	RE16-05-57448	N	NA	BA	INV	Filtered	16-02657	2.95-5.55	FTWG	WGA	INORGANIC	ZN	Zinc	0.88	1	193		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/26/05
34223062	2798S	RE16-05-57449	N	NA	BA	INV	Filtered	16-02658	6.21-10.25	FWG	WGA	INORGANIC	AL	Aluminum	15	1	733		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34223072	2798S	RE16-05-57449	N	NA	BA	INV	Filtered	16-02658	6.21-10.25	FWG	WGA	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34223082	2798S	RE16-05-57449	N	NA	BA	INV	Filtered	16-02658	6.21-10.25	FWG	WGA	INORGANIC	AS	Arsenic	2.2	1	2.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05

30969802	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968872	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/23/02
30969782	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5	1	20	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968762	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/23/02
30969652	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.7	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968822	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.07	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/23/02
30969842	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969602	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	117-84-0	Di-n-octylphthalate	0.87	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30904792	1252S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/4/02	9/23/02
30966272	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30969732	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	206-44-0	Fluoranthene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969982	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	86-73-7	Fluorene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30925082	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	521	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/2/02	9/23/02
30969612	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	118-74-1	Hexachlorobenzene	0.65	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969992	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-68-3	Hexachlorobutadiene	0.32	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969912	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969892	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	67-72-1	Hexachloroethane	0.43	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30966512	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30968792	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.07	1	15.9	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/23/02
30969712	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30966602	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30925442	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	544	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/23/02
30969922	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	78-59-1	Isophorone	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30966862	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30966872	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30925312	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.69	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/2/02	9/23/02
30925452	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7320	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/23/02
30925302	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	4.46	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/2/02	9/23/02
30925512	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	10/17/02	9/23/02
30966372	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30966652	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30970052	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30970082	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-48-7	Methylphenol[2-]	0.45	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969512	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-44-5	Methylphenol[4-]	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30904802	1252S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/4/02	9/23/02
30970042	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-20-3	Naphthalene	0.11	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30925472	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	9/23/02
30927202	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.05	5	3600	UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	10/9/02	9/23/02
30970022	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-74-4	Nitroaniline[2-]	0.64	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30970132	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969452	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-01-6	Nitroaniline[4-]	0.67	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968982	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.13	10	1	UG/L	U	NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/23/02
30970122	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.63	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30970032	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-75-5	Nitrophenol[2-]	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969462	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-02-7	Nitrophenol[4-]	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969862	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969872	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.75	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969662	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.79	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968832	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/4/02	9/23/02
30968992	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.64	10	1	UG/L	U	NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/23/02
30969022	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.64	10	1	UG/L	U	NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/23/02
30925122	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/7/02	9/23/02
30969542	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.8	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02

31358122	1265S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-10.5	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	1/31/03	9/23/02
30970002	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-86-5	Pentachlorophenol	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30927242	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	10/16/02	9/23/02
30969962	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	85-01-8	Phenanthrene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969552	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-95-2	Phenol	0.3	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30925342	1253S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2770	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/16/02	9/23/02
30966312	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/1/02	9/23/02
30969672	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	129-00-0	Pyrene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30969562	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	110-86-1	Pyridine	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/1/02	9/23/02
30968912	1251S	RE16-02-49382	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.53	10	126	UG/L		NA	DL	HEXP	SW-846:833	General Engineering Labora	10/5/02	9/23/02

30969172	1251S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	10/4/02	9/23/02
31003902	1254S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.09	3.20E-03	PCI/ML		NA	CS	H3	GENERIC:LcUniversity of Miami Tritium L	11/6/02	9/23/02
30925972	1253S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	5.95		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30967882	1251S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	10/1/02	9/23/02
30968032	1251S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	10/1/02	9/23/02
30968122	1251S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	10/1/02	9/23/02
30925982	1253S	RE16-02-49392	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	6.67		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926802	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	388		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926762	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926812	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	2.57		UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926832	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	158		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926722	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926822	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	1920		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926732	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.04		UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926842	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	29600		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926862	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	1.12		UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926852	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926872	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926882	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	188		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926752	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.25		UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926892	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7100		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926742	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	2.75		UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926952	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	10/17/02	9/23/02
30926912	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926782	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2630		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/16/02	9/23/02
30926922	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926792	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	UJ	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926902	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	33800		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926772	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926932	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	3.78		UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30926942	1253S	RE16-02-49393	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	5.58		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30972002	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	83-32-9	Acenaphthene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30971822	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	208-96-8	Acenaphthylene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30968402	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	10/1/02	9/23/02
30925072	1253S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	0.73	1	97700		UG/L		NA	CS	ALK	EPA:310.1 General Engineering Labora	10/7/02	9/23/02
30926082	1253S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	877		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30969342	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	10/4/02	9/23/02
30969362	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	10/4/02	9/23/02
30971932	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	62-53-3	Aniline	1.8	1	11.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30971692	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	120-12-7	Anthracene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30926042	1253S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	10/2/02	9/23/02
30926092	1253S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30971562	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	103-33-3	Azobenzene	0	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30926112	1253S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	126		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	10/17/02	9/23/02
30968422	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	10/1/02	9/23/02
30971892	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	56-55-3	Benzo(a)anthracene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30971842	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	50-32-8	Benzo(a)pyrene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
30971792	1251S	RE16-02-49394	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	10/1/02	9/23/02
[illegible]																										

31279682	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	106	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279562	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279672	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	2040	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279572	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.14	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279692	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	28600	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279712	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279702	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279722	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	1.67	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279632	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	43.4	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/8/03	12/17/02
31279592	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279742	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7280	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279582	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	156	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279622	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	1/6/03	12/17/02
31279762	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279732	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2660	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279772	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279642	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279752	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	31300	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279612	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279782	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279792	1470S	RE16-03-49866	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	6.7	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279892	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	100	UG/L	UJ	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279842	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	1.17	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279902	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279922	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	73.3	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279802	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279912	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	1710	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279812	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279932	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	25400	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279952	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279942	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279962	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	1.73	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279872	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	56.3	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/8/03	12/17/02
31279832	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279982	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	6560	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279822	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	194	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31279862	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	1/6/03	12/17/02
31280002	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279972	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2700	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280012	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279882	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279992	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	38000	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31279852	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31280022	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280032	1470S	RE16-03-49867	N	NA	DC	INV	Filtered	16-06707	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	2.56	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31212272	1468S	RE16-03-49868	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31279292	1470S	RE16-03-49868	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	111000	UG/L		NA	CS	ALK	EPA:310.1 General Engineering Labora	12/27/02	12/17/02
31280132	1470S	RE16-03-49868	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	566	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
[illegible]																									

31280702	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	6790		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280542	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	615		UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31280582	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	1/6/03	12/17/02
31213342	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213622	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31232672	1469S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	MNX	MNX	0.03	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833 Severn Trent Laboratories, Inc	1/14/03	12/17/02
31280722	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	1.46		UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280782	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	150		UG/L		NA	CS	ANION	EPA:353.1 General Engineering Labora	12/27/02	12/17/02
31230292	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31230282	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31230302	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31230332	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31283312	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	1/9/03	12/17/02
31884132	1477S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-10.1		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio Geochron Lab	5/26/03	12/17/02
31279282	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	1.5	1	6.52		UG/L	R	NA	CS	PERCHLORATE	EPA:314.0 General Engineering Laboratories, Inc., Historical	1/10/03	12/17/02
31280692	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2830		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31213282	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31230222	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.05	1	19.3		UG/L		NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31280732	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280602	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31280712	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	39500		UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31213252	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31283342	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	29700		UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	1/10/03	12/17/02
31213502	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213752	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213402	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31230262	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31280572	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.02		UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	1/2/03	12/17/02
31232682	1469S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	TNX	TNX	0.04	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833 Severn Trent Laboratories, Inc	1/14/03	12/17/02
31213372	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213702	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213542	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213732	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213742	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213682	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213812	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213792	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31213352	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
31230312	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31230202	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.14		UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	12/26/02	12/17/02
31464362	1478S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.1	3.52E-03	PCI/ML		NA	CS	H3	GENERIC:Lc University of Miami Tritium L	2/16/03	12/17/02
31280742	1470S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	2.14		UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/9/03	12/17/02
31213612	1468S	RE16-03-49874	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	12/30/02	12/17/02
[illegible]																										

31698422 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697952 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624502 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	0.85	UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624492 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624512 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
32592212 1673S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	OTHER	DELTAH-2	Deuterium Ratio		1	-78	RATIO		FD	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	6/13/03	3/26/03
31698452 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697972 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698232 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698432 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698102 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697962 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698342 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698312 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697982 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698322 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698082 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698092 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698362 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698072 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698142 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698122 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697912 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31697922 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700432 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.033	1	0.1	UG/L	R	FD	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/3/03	3/26/03
31700572 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.33	10	1	UG/L	U	FD	DL	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/26/03
31700712 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.33	10	1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/9/03	3/26/03
31700852 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.033	1	0.1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700322 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.035	1	0.1	UG/L	R	FD	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/3/03	3/26/03
31700462 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.35	10	1	UG/L	U	FD	DL	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/26/03
31700602 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.35	10	1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/9/03	3/26/03
31700742 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.035	1	0.1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700382 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	R	FD	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/3/03	3/26/03
31700522 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.5	10	1	UG/L	U	FD	DL	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/26/03
31700662 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.5	10	1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/9/03	3/26/03
31700802 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31682342 1671S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/2/03	3/26/03
31697892 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624012 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	728	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/26/03
31698132 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700352 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.078	1	16.4	UG/L	R	FD	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/3/03	3/26/03
31700492 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.78	10	16.8	UG/L		FD	DL	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/26/03
31700632 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.78	10	17.1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/9/03	3/26/03
31700772 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.078	1	17	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31698222 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624522 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	98.5	UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31698482 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698492 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624392 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.13	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624542 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7550	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624382 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	2.5	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624422 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.07	UG/L	J	FD	CS	METALS	SW-846:747	General Engineering Labora	4/10/03	3/26/03
31697992 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698272 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31682352 1671S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	MNX	MNX	0.03	1	0.29	UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/2/03	3/26/03
31624562 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31626052 1672S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.05	5	3750	UG/L		FD	CS	ANION	EPA:353.1	General Engineering Labora	4/17/03	3/26/03
31700402 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1	UG/L	R	FD	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/3/03	3/26/03
31700542 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.13	10	1	UG/L	U	FD	DL	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/26/03
31700682 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.13	10	1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/9/03	3/26/03
31700822 1670S	RE16-03-50727	N	NA	DC	QC	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1	UG/L	R	FD	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03

31698832 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699042 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698572 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624742 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	1.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624732 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	4.15		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624752 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	3.36		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
32592232 1673S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	OTHER	DELTAH-2	Deuterium Ratio		1	-91		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	6/13/03	3/26/03
31699072 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698592 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698852 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699052 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698722 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698582 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698962 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698932 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698602 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698942 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698702 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698712 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698982 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698692 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698762 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698742 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698532 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698542 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700992 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701132 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.033	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700882 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701022 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.035	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700942 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701082 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31682372 1671S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.09	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/2/03	3/26/03
31698512 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624052 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	334		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/26/03
31698752 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700912 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.07	1	0.24		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701052 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.078	1	0.31		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31698842 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624762 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	7520		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31699102 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699112 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624632 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.54		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624782 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7350		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624622 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	2260		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624662 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.07		UG/L	J	NA	CS	METALS	SW-846:747	General Engineering Labora	4/10/03	3/26/03
31698612 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698892 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31682382 1671S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	MNX	MNX	0.03	1	0.08		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/2/03	3/26/03
31624802 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	3.9		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31626062 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	430		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	4/17/03	3/26/03
31700962 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701102 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700952 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701092 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.064	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700972 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701112 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.064	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31701002 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701142 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.064	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31626122 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/26/03
32592242 1673S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-12.1		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	6/13/03	3/26/03
31626132 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	1.5	1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	4/22/03	3/26/03
31624772 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2720		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31698552 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700892 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.05	1	3.6		UG/L	J-	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701032 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.053	1	3.6		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31624812 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624672 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624792 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	23400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31698522 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624072 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.39	2	40900		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/12/03	3/26/03
31698772 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699022 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698672 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700932 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701072 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.032	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31624652 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.05		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31682392 1671S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	TNX	TNX	0.04	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/2/03	3/26/03
31698642 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698972 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698812 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699002 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699012 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698952 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699082 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699062 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31698622 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31700982 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701122 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31700872 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701012 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31749262 1674S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.1	3.84E-03	PCI/ML		NA	CS	H3	GENERIC:Lo	University of Miami Tritium L	5/6/03	3/26/03
31624822 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	2.14		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31698882 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699032 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31699122 1670S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624832 1672S	RE16-03-50741	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	27.3		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625642 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	100		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625602 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625652 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625672 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	149		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625562 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625662 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	2820		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625572 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.12		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625682 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	29500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625702 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	0.55		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625692 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	3.27		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625712 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625722 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	1410		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625592 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625742 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	7080		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625582 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	1840		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625622 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/10/03	3/26/03
31625762 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	3.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625732 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2610		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625772 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625632 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625752 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	23300		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625612 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31625782 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31625792 1672S	RE16-03-50742	N	NA	DC	INV	Filtered	16-06706	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	15.7		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31699402 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	3.4		UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31623952 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	94600		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/2/03	3/26/03
31624922 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	689		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31701182 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701322 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.041	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31701202 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/3/03	3/26/03
31701342 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.078	1	0.1		UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	4/10/03	3/26/03
31624882 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	11		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624932 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	2.47		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624952 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	143		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31699422 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03
31624842 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/3/03	3/26/03
31624942 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	1500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/16/03	3/26/03
31624082 1672S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BR(-1)	Bromide	0.09	1	146		UG/L	J	NA	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/26/03
31699252 1670S	RE16-03-50743	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/2/03	3/26/03

32055372 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055572 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055242 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055102 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055482 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055452 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055122 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055462 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055222 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055232 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055502 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055212 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055282 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055262 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055052 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055062 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054392 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054282 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054342 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32055032 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054082 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	219		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	9/9/03	9/4/03
32055272 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054312 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.07	1	1.51		UG/L		FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32055362 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32053382 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	156		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32055622 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055632 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32053482 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.6		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32053402 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	4980		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053472 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	2.41		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32053522 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	9/17/03	9/4/03
32055132 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055412 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32053422 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	1.51		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053042 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	1190		UG/L		FD	CS	ANION	EPA:353.1	General Engineering Labora	9/23/03	9/4/03
32054362 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054352 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054372 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054402 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054102 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	9/16/03	9/4/03
32445162 1875S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.9		RATIO		FD	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	10/20/03	9/4/03
32053392 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2870		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32055072 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054292 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.05	1	17.4		UG/L		FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32053432 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053292 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053412 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	14400		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32055042 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054092 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	7430		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	9/9/03	9/4/03
32055292 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055542 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055192 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	2		UG/L		FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054332 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	U	FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32053502 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32055162 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055492 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055332 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055522 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055532 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-01-6	Trichloroethene	0.36	1	2.6		UG/L		FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055472 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055602 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055582 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055142 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32054382 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.4		UG/L		FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32054272 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	1.54		UG/L		FD	CS	HEXP	SW-846:833	General Engineering Labora	9/16/03	9/4/03
32446012 1876S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.04	1.60E-03	PCI/ML		FD	CS	H3	GENERIC:LL	University of Miami Tritium L	10/23/03	9/4/03
32053442 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	2.31		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32055402 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055552 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32055642 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	9/10/03	9/4/03
32053452 1869S	RE16-03-51713	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	3.24		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053782 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	210		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053972 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32053792 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053812 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	150		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053992 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/17/03	9/4/03
32053802 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	B	Boron	4.9	1	17.1		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053942 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	1		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32053822 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	17600		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053842 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	0.98		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053832 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	0.81		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053852 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053862 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	93.6		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053962 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.08		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32053882 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	5130		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053952 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	5		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	9/16/03	9/4/03
32054002 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	9/17/03	9/4/03
32053902 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	1.57		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053872 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2970		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053912 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03
32053772 1869S	RE16-03-51714	N	NA	DC	QC	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	9/16/03	9/4/03

32591892	1987S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	OTHER	DELTAH-2	Deuterium Ratio		1	-87	RATIO		FD	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	12/26/03	12/4/03
32438992	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.52	1	1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32438892	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	132-64-9	Dibenzofuran	0.43	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440662	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440182	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440442	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32439292	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.42	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440642	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32439012	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.42	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440312	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32438722	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440172	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32439272	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440552	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440522	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440192	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440532	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440292	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440302	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32438842	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32440572	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440282	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440352	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440332	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440122	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32440132	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32439142	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	84-66-2	Diethylphthalate	0.92	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32438882	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32438702	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439152	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439002	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32445812	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.02	1	0.1	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32438982	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.6	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32438852	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.72	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32445712	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.04	1	0.04	UG/L	J	FD	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32439042	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.52	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32445762	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.01	1	0.02	UG/L	J	FD	CS	HEXP	SW-846:832	General Engineering Labora	12/31/03	12/4/03
32438802	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	117-84-0	Di-n-octylphthalate	0.9	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32431742	1968S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/15/03	12/4/03
32440102	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	12/16/03	12/4/03
32438932	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	206-44-0	Fluoranthene	0.52	1	1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439182	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	86-73-7	Fluorene	0.52	1	1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439442	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	168	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	12/16/03	12/4/03
32438812	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	118-74-1	Hexachlorobenzene	0.67	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439192	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03
32439112	1967S	RE16-04-52834	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.3	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/10/03	12/4/03

32721072	2133S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	12800		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/14/04
32733682	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733932	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733582	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	0.48		UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32735922	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.16	2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	5/15/04	4/14/04
32720312	2133S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.37		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32611562	2132S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	TNX	TNX	0.16	1	0.33		UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/24/04	4/14/04
32733552	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733882	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32732212	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.76	1	10.6		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733722	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733912	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733922	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1.2		UG/L		NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733862	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32732692	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.6		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732592	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.42	1	10.6		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733992	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733972	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733532	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32735972	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.19		UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32735872	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	3.41		UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32737282	2135S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.11	2.56E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	5/26/04	4/14/04
32720322	2133S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.42		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720232	2133S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	4.13		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32733792	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733942	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32734032	2131S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32720242	2133S	RE16-04-53116	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	4.72		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720582	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	2490		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720782	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720592	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720602	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	210		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720742	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.12		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720752	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.13		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720612	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	16800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720632	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	1.12		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720622	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	3.39		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720642	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	2.14		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720652	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	1200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720772	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.73		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720672	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	5250		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720762	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	10.7		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720732	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	5/4/04	4/14/04
32720692	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	3.44		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720662	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	3240		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720702	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720572	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720682	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	17000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720792	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.07		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720802	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.31		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720712	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	2.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32720722	2133S	RE16-04-53117	N	NA	DC	INV	Filtered	16-02652	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	5.97		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32628462	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	83-32-9	Acenaphthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628282	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	208-96-8	Acenaphthylene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626322	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	5.2		UG/L		NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32632822	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	75300		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/13/04	3/29/04
32633322	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	2410		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32639602	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/2/04	3/29/04
32639622	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/2/04	3/29/04
32628382	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	62-53-3	Aniline	1.6	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628152	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	120-12-7	Anthracene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32633272	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/29/04
32633332	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32628022	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	103-33-3	Azobenzene	0.86	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32633342	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	144		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32626342	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628352	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	56-55-3	Benzo(a)anthracene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628302	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	50-32-8	Benzo(a)pyrene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628252	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628232	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628272	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628412	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	65-85-0	Benzoic Acid	10	1	20		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628002	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	100-51-6	Benzyl Alcohol	0.91	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32633302	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.1		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/17/04	3/29/04
32628112	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.48	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628102	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628122	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32632892	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/5/04	3/29/04
32626172	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626402	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626462	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626452	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626362	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628012	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.2	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626532	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626102	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626222	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626632	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628502	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	85-68-7	Butylbenzylphthalate	0.68	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32633242	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	1		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/29/04
32633352	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	23000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32626442	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626272	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32632932	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CL(-1)	Chloride	0.06	2	19900		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/5/04	3/29/04
32628362	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.69	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628062	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-47-8	Chloroaniline[4-]	1.1	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626192	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626202	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626412	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626332	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626372	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628592	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.4	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628032	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-57-8	Chlorophenol[2-]	0.41	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628432	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.84	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626582	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626112	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32633372	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	1.56		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32628292	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	218-01-9	Chrysene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32633362	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32633382	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	2.92		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/29/04
32634472	2050S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5		UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	4/12/04	3/29/04
32628322	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628222	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	132-64-9	Dibenzofuran	0.42	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626612	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626192	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626392	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626592	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628622	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.41	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626262	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628342	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.41	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626122	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628052	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.31	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32628602	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.51	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626502	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626472	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626142	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626482	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626242	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626252	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32628172	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.47	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/7/04	3/29/04
32626522	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
32626232	2048S	RE16-04-53122	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/29/04
[illegible]																											

32680322	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32680312	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32680332	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32680362	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32630132	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/5/04	3/31/04
32680222	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	0.05	1	0.64	UG/L		NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	4/23/04	3/31/04
32629822	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	3260	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32680252	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.1	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32629862	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629732	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629842	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	6290	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630172	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	20000	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/7/04	3/31/04
32680292	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32629702	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.02	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32638902	2065S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	TNX	TNX	0.16	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/23/04	3/31/04
32680342	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32680232	2064S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32629712	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.15	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32629872	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	4.78	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629882	2066S	RE16-04-53126	N	NA	DC	INV	Unfiltered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	4.04	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629982	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	1320	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629932	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32629992	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630002	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	41.1	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629962	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.09	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/17/04	3/31/04
32629902	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32630012	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	12200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630032	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	0.53	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630022	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	4.08	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630042	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630052	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	447	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629922	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.38	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32630072	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	4150	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629912	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	8.65	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32629892	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/7/04	3/31/04
32630092	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630062	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	3170	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630102	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629972	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630082	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	6260	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32629942	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32629952	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.09	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32630112	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	4.2	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32630122	2066S	RE16-04-53127	N	NA	DC	INV	Filtered	16-03-21703	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	3.21	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32733202	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	83-32-9	Acenaphthene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733022	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	208-96-8	Acenaphthylene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32734312	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	4	UG/L	J	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32721162	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	50900	UG/L		FD	CS	ALK	EPA:310.1	General Engineering Labora	4/28/04	4/14/04
32720342	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	4130	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32736032	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.86	UG/L	J-	FD	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32736052	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.29	UG/L	J-	FD	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32733122	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	62-53-3	Aniline	1.7	1	10.8	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732892	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	120-12-7	Anthracene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32720542	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32720352	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32732762	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	103-33-3	Azobenzene	0.93	1	10.8	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32720362	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	224	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/14/04
32734332	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32733092	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	56-55-3	Benzo(a)anthracene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733042	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	50-32-8	Benzo(a)pyrene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732992	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732972	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733012	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.54	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32733152	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	65-85-0	Benzoic Acid	11	1	21.5	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732742	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-51-6	Benzyl Alcohol	0.98	1	10.8	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32720502	2133S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.21	UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32732852	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.52	1	10.8	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32732842	2131S	RE16-04-53128	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.5	1	10.8	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04

33035102 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3
33035112 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37
33035382 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25
33035092 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3
33035162 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5
33035142 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44
33034932 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3
33034942 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29
33119132 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16
33119022 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09
33119082 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07
33034912 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21
33036202 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05
33035152 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5
33119052 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.1
33035242 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9
33036822 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13
33035502 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29
33035512 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27
33036922 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05
33036842 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2
33036952 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6
33036962 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04
33035012 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8
33035292 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9
33036862 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69
33036172 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01
33119102 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.33
33119092 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16
33119112 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16
33119142 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33
33036232 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35

34296592 2228S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio	
33118992 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	0.05
33036832 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17
33034952 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25
33119032 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.1
33036872 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8
33036732 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84
33036852 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14
33034922 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25
33036212 2193S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19
33035172 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3
33035422 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49
33035072 2192S	RE16-04-53421	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33

33527632 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527672 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527752 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527782 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33529312 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33529342 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33529352 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33527872 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33502112 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	192	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	10/19/04	10/4/04
33527812 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33529392 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.1	2	0.24	UG/L	J	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33527562 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33502302 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	290	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33527922 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33528032 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33502312 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	0.07	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	10/20/04	10/4/04
33502322 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	4980	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33502332 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	5.3	UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	10/18/04	10/4/04
33502342 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	10/8/04	10/4/04
33527762 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527582 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33502352 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	1.2	UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33503122 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	1040	UG/L		FD	CS	ANION	EPA:353.1	General Engineering Labora	10/20/04	10/4/04
33529302 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33529412 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33529422 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33529432 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33502122 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	10/15/04	10/4/04
34457652 2396S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.8	RATIO		FD	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	12/7/04	10/4/04
33529582 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	0.05	1	0.69	UG/L		FD	CS	PERCHLORATE	SW-846:832	General Engineering Labora	10/18/04	10/4/04
33502362 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	2930	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33527962 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33529362 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.1	2	4.59	UG/L		FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33502372 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33502382 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33502392 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	14900	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	10/19/04	10/4/04
33527902 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33502142 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	7010	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	10/19/04	10/4/04
33527862 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527932 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527822 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1.7	UG/L		FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33529402 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	10/14/04	10/4/04
33502402 2393S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	UJ	FD	CS	METALS	SW-846:602	General Engineering Labora	10/18/04	10/4/04
33527772 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04
33527552 2392S	RE16-04-53737	N	NA	DC	QC	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/4/04

34115282	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34119952	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.46	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119962	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.46	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115262	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34119892	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.46	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119902	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.46	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115272	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34119912	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.35	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119922	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.34	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120892	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.57	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120902	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.57	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34114672	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114802	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114892	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114732	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114822	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114792	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120172	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.53	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120182	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.52	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34114922	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115002	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114832	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114872	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114952	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114982	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120552	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	84-66-2	Diethylphthalate	1	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120562	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	84-66-2	Diethylphthalate	0.99	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120452	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	131-11-3	Dimethyl Phthalate	0.6	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120462	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	131-11-3	Dimethyl Phthalate	0.59	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120132	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.53	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120142	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.52	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120792	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	84-74-2	Di-n-butylphthalate	1.1	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120802	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	84-74-2	Di-n-butylphthalate	1.1	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120632	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.1	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120642	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.1	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125482	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34120512	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.6	1	22.5	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120522	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.6	1	22.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34121112	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.79	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121122	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.78	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125512	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34121132	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.56	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121142	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.56	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125522	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34120952	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	117-84-0	Di-n-octylphthalate	0.98	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120962	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	117-84-0	Di-n-octylphthalate	0.97	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120672	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	122-39-4	Diphenylamine	0.89	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120682	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	122-39-4	Diphenylamine	0.88	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34135582	2779S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/26/05	1/18/05
34115072	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120812	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	206-44-0	Fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120822	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	206-44-0	Fluoranthene	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120592	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	86-73-7	Fluorene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120602	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	86-73-7	Fluorene	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34118012	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	458	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/29/05	1/18/05
34121092	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	118-74-1	Hexachlorobenzene	0.73	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121102	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	118-74-1	Hexachlorobenzene	0.72	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120272	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-68-3	Hexachlorobutadiene	0.36	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120282	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-68-3	Hexachlorobutadiene	0.36	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120332	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120342	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120052	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	67-72-1	Hexachloroethane	0.48	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120062	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	67-72-1	Hexachloroethane	0.48	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115012	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34125562	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.1	2	0.97	UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34121032	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121042	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34114762	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116632	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	1810	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34120092	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	78-59-1	Isophorone	0.66	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120102	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	78-59-1	Isophorone	0.66	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115122	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115232	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116642	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	2.1	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34116652	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	5240	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34116662	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	13.9	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34116672	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/25/05	1/18/05
34114962	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114782	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120312	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120322	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34119992	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-48-7	Methylphenol[2-]	0.51	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120002	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120032	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-44-5	Methylphenol[4-]	0.66	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120042	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	106-44-5	Methylphenol[4-]	0.66	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34135592	2779S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	MNX	MNX	0.17	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/26/05	1/18/05
34120232	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120242	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34116682	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34114642	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	1380	UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	2/4/05	1/18/05
34120412	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-74-4	Nitroaniline[2-]	0.72	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120422	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-74-4	Nitroaniline[2-]	0.71	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120432	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120442	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120652	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-01-6	Nitroaniline[4-]	0.75	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120662	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120072	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.71	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120082	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.7	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125472	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34120112	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-75-5	Nitrophenol[2-]	0.66	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120122	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-75-5	Nitrophenol[2-]	0.66	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120572	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-02-7	Nitrophenol[4-]	5.6	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120582	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-02-7	Nitrophenol[4-]	5.6	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34119772	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119782	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120012	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.84	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120022	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.83	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125582	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34125592	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34125602	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34118022	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/25/05	1/18/05
34119972	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.9	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119982	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.89	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34270172	2777S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-12.5	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/8/05	1/18/05
34120732	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-86-5	Pentachlorophenol	5.6	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120742	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	87-86-5	Pentachlorophenol	5.6	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34114612	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	CLO4	Perchlorate	0.05	1	0.4	UG/L		NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/7/05	1/18/05
34120752	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	85-01-8	Phenanthrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120762	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	85-01-8	Phenanthrene	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34119832	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-95-2	Phenol	0.34	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34119842	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-95-2	Phenol	0.33	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34116692	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	3370	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34115162	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120832	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	129-00-0	Pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120842	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	129-00-0	Pyrene	0.56	1	1.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34119792	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	110-86-1	Pyridine	5.6	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34119802	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	110-86-1	Pyridine	5.6	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34125532	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	121-82-4	RDX	0.1	2	9.22	UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34116702	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	7.9	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/18/05
34116712	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34116722	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	25700	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34115102	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34118032	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	SO4(-2)	Sulfate	0.19	1	12900	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/29/05	1/18/05
34115062	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115132	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115022	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34125572	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34116732	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.08	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34135602	2779S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	TNX	TNX	0.16	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/26/05	1/18/05
34114972	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114752	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120212	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.8	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34120222	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.79	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34114862	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114992	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114912	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	79-01-6	Trichloroethene	0.36	1	0.37	UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34114722	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34120372	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120382	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34120352	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.44	1	11.2	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34120362	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.43	1	11.1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115142	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115192	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115182	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34125492	2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05

34125502 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34295492 2778S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	RAD	H-3	Tritium		1	0.07	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	3/15/05	1/18/05
34116742 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.42		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34116752 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	5.7		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34114692 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115092 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115082 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116762 2780S	RE16-05-57368	N	NA	DC	INV	Unfiltered	16-02650	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	7.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117252 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	3490		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117262 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117272 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/18/05
34117282 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	BA	Barium	0.22	1	122		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117292 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.19		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117302 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.06		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117312 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	20500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117322 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	CR	Chromium	0.5	1	1.4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117332 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	CO	Cobalt	0.54	1	1.5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117342 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	CU	Copper	1.4	1	2.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117352 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	FE	Iron	13	1	1670		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117362 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	PB	Lead	0.05	1	1.2		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117372 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	MG	Magnesium	5.2	1	5220		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117382 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	MN	Manganese	1.6	1	10.1		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117392 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/25/05	1/18/05
34117402 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	NI	Nickel	0.69	1	1.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117412 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	K	Potassium	17	1	3320		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117422 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/18/05
34117432 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117442 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	NA	Sodium	14	1	25600		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117452 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	TL	Thallium	0.02	1	0.05		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117462 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	U	Uranium	0.02	1	0.31		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117472 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	V	Vanadium	0.61	1	6.9		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34117482 2780S	RE16-05-57369	N	NA	DC	INV	Filtered	16-02650	0-0 FT	WG	WGS	INORGANIC	ZN	Zinc	0.88	1	6.9		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34121872 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	83-32-9	Acenaphthene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121882 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	83-32-9	Acenaphthene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34121852 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	208-96-8	Acenaphthylene	0.56	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34121862 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	208-96-8	Acenaphthylene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/1/05	1/18/05
34115362 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34125902 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	61500		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/24/05	1/18/05
34116772 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	INORGANIC	AL	Aluminum	15	1	8410		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34125682 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34125692 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	1/28/05	1/18/05
34121192 2780S	RE16-05-57370	N	NA	DC	INV	Unfiltered	16-06706	0-0 FT	WG	WGS	ORGANIC	62-53-3	Aniline	1.8	1	11.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05

34123642 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34123772 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	50-32-8	Benzo(a)pyrene	0.59	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123782 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34123732 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.59	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123742 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34123832 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.59	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123842 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34123752 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.59	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123762 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34122952 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	65-85-0	Benzoic Acid	12	1	23.5	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/26/05	1/18/05
34122962 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	65-85-0	Benzoic Acid	10	1	20.6	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34122692 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	100-51-6	Benzyl Alcohol	1.1	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34122702 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	100-51-6	Benzyl Alcohol	0.94	1	10.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34117052 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BE	Beryllium	0.08	1	0.37	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34122912 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.57	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34122922 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34122612 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.6	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34122622 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34123692 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.5	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123702 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	2.5	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34118102 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/29/05	1/18/05
34116392 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116082 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116182 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116352 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34115942 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34123472 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.4	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123482 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34116052 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116482 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116462 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116452 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34123612 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	85-68-7	Butylbenzylphthalate	0.8	1	11.8	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/26/05	1/18/05
34123622 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	85-68-7	Butylbenzylphthalate	0.7	1	10.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/18/05
34117062 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	CD	Cadmium	0.04	1	0.06	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/2/05	1/18/05
34117072 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	CA	Calcium	5.5	1	15300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/27/05	1/18/05
34116012 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34116122 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/1/05	1/18/05
34118142 2780S	RE16-05-57372	N	NA	DC	INV	Unfiltered	16-06707	0-0 FT	WG	WGS	INORGANIC	CL(-1)	Chloride	0.16	5	18800	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/30/05	1/18/05
[illegible]																									

34204442	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204572	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204662	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204502	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204592	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204562	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34203262	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.48	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34204692	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204772	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204602	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204642	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204722	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34204752	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34203452	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	84-66-2	Diethylphthalate	0.9	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203402	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	131-11-3	Dimethyl Phthalate	0.54	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203242	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.48	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203572	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203492	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34211322	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.41	5	1.22	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/26/05
34203432	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.1	1	20.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203732	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.71	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34211352	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.25	5	0.81	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/26/05
34203742	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.51	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34211362	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.2	5	0.81	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/26/05
34203652	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	117-84-0	Di-n-octylphthalate	0.88	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203512	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	122-39-4	Diphenylamine	0.8	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34163612	28135	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	2/11/05	1/26/05
34204842	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34203582	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	206-44-0	Fluoranthene	0.51	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203472	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	86-73-7	Fluorene	0.51	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34206712	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	INORGANIC	F(-1)	Fluoride	0.05	1	64	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34203722	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	118-74-1	Hexachlorobenzene	0.66	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203312	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	87-68-3	Hexachlorobutadiene	0.32	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203342	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34203202	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	67-72-1	Hexachloroethane	0.43	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34204782	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05
34211402	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	2691-41-0	HMX	0.25	5	1.14	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/26/05
34203692	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.51	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34204532	28145	RE16-05-57376	N	NA	DC	INV	Unfiltered	16-02652	0-0 FT	WG	WGS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/8/05	1/26/05

30869622 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.078	1	3.3	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697742 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	432	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697622 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.99	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30697762 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5870	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697612 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	25.5	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30697822 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30869202 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30697782 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.27	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697332 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	70	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	8/28/02	8/7/02
30869532 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869672 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869522 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869662 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869542 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869682 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869572 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869712 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697262 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	9/4/02	8/7/02
30697252 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	8/14/02	8/7/02
30697752 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2630	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30869462 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	19.1	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869602 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.053	1	19	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697792 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697652 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697772 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698862 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	7890	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30869502 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869642 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.032	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697642 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.25	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30869212 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.04	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30869552 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869692 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869442 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30869582 1121S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697802 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	3.44	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697812 1123S	RE16-02-45959	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	5.46	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697312 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	1.5	1	64400	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	8/21/02	8/7/02
30697902 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	3480	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30869752 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869892 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.041	1	0.13	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869772 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869912 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.078	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697872 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30697912 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	2.4	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697932 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	869	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697832 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30697922 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	6.91	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698872 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30697842 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.14	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30697942 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	19800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698882 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	15700	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30697962 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	3.15	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697952 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	0.54	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697972 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5.88	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30869842 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869982 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.033	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869732 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869872 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.035	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869792 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869932 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869222 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30698892 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	228	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30869762 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	3.9	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869902 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.078	1	3.7	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697982 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	2150	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697862 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	5.46	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698002 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	6030	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697852 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	134	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698062 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30869232 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30698022 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	3.82	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697342 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	20	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	8/28/02	8/7/02
30869812 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869952 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869802 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869942 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869822 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869962 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869852 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869992 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697282 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	9/4/02	8/7/02
30697272 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	8/14/02	8/7/02
30697992 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2810	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30869742 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	17.7	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869882 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.053	1	16.8	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30698032 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30697892 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	4.68	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698012 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698902 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	7730	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30869782 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869922 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.032	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30697882 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.18	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30869242 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.04	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30869832 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869972 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30869722 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/16/02	8/7/02
30869862 1121S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/27/02	8/7/02
30698042 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	7.36	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698052 1123S	RE16-02-45960	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	12	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30704682 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ALK-CO3+HCO3	Alkalinity-CO3+HCO3	1.5	1	127000	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	8/21/02	8/7/02
30704232 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	965	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30870402 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.32	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870542 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.041	1	0.32	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870422 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.19	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870562 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.078	1	0.18	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704202 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.35	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704242 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	2.47	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704262 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	4880	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704162 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.09	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704252 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	48.6	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704642 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30704172 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.04	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704272 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	32600	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704652 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	15800	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30704292 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.07	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704282 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.1	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704302 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	3.92	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30870492 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870632 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.033	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870382 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870522 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.035	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870442 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870582 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30869132 1119S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30704662 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	188	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30870412 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	5.2	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870552 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.078	1	4.8	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704312 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	862	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704192 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	1.14	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704332 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	8320	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704182 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	137	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704392 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30869142 1119S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30704352 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	2.35	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704152 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	30	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	8/28/02	8/7/02
30870462 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870602 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.013	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870452 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870592 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870472 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870612 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870502 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870642 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.064	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704142 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	9/4/02	8/7/02
30704132 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	8/14/02	8/7/02
30704322 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4420	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30870392 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	5.6	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870532 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.053	1	5.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704362 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704222 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704342 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	18600	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704672 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	2070	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	8/22/02	8/7/02
30870432 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870572 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.032	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704212 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.13	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30869152 1119S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.04	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	9/3/02	8/7/02
30870482 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870622 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30870372 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	8/15/02	8/7/02
30870512 1118S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1	UG/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	9/26/02	8/7/02
30704372 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.94	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704382 1120S	RE16-02-45961	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30698142 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	50	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698112 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	3.05	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698152 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698172 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	184	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698072 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698162 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	7.66	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698082 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698182 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	19100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698202 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	0.96	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698192 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698212 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	4.85	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698222 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	50	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698102 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.17	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698242 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5690	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698092 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	4.24	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698302 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30698262 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.64	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698232 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2880	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698272 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698132 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698252 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698122 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.1	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698282 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	2.74	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698292 1122S	RE16-02-45971	N	NA	DC	INV	Filtered	16-05927	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	3.54	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698382 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	50	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698352 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698392 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698412 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	308	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698312 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698402 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	6.97	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698322 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698422 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	19200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698442 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.19	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698432 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.58	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698452 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.13	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698462 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	13.3	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698342 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698482 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5740	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698332 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	8.57	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698542 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30698502 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.76	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698472 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2470	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698512 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698372 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698492 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698362 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.04	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698522 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	2	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698532 1122S	RE16-02-45975	N	NA	DC	INV	Filtered	16-05996	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	2.79	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698622 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	35.1	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698592 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698632 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698652 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	498	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698552 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698642 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	8.63	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698562 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698662 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	18200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698682 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.17	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698672 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	2.15	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698692 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.32	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698702 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	21.3	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698582 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.06	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698722 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5360	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698572 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	8.81	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698782 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30698742 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.93	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698712 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2070	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698752 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698612 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698732 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	15700	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698602 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.04	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/22/02	8/7/02
30698762 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	2.42	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30698772 1122S	RE16-02-45976	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	1.33	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/25/02	8/7/02
30704472 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	50	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704442 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	3.56	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704482 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704502 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	4540	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704402 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704492 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	47.7	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704412 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704512 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	31200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704532 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	0.86	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704522 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	0.66	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704542 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	4.16	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704552 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	64.6	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704432 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704572 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	7840	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704422 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	88	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704632 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	8/27/02	8/7/02
30704592 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	2.05	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704562 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4080	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704602 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704462 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704582 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	18200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704452 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.07	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	8/20/02	8/7/02
30704612 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	0.7	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30704622 1120S	RE16-02-45981	N	NA	DC	INV	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	6.4	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/24/02	8/7/02
30370312 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1220	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594482 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	2.8	ug/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594502 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	2	ug/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30979582 961S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	NH3	Ammonia		1	10	UG/L	U	NA	CS	WET_CHEM	EPA:100.2	Pacific Ecorisk Laboratories	11/13/02	7/10/02
30370272 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370322 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370342 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	4910	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370222 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370332 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	20.8	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370232 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.04	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370352 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	29200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370372 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	2.54	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370362 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	2.5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370382 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	1.42	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594572 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594462 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594522 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594492 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	33.9	ug/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370392 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	825	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370262 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	1.93	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370412 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	6950	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370242 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	192	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370292 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/29/02	7/10/02
30370252 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	MO	Molybdenum	0.2	1	1.3	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370432 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.73	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594542 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594532 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594552 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594582 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370402 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4510	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594612 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	5.3	100	61.9	ug/L		NA	DL	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370442 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370302 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	8.09	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370422 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	19100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594512 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370282 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.02	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30594562 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594452 959S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370452 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	4	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370462 960S	RE16-02-45984	N	NA	DC	INV	Unfiltered	16-06709	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	4.25	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370562 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1380	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594762 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.13	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594782 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30979592 961S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	NH3	Ammonia		1	10	UG/L	U	NA	CS	WET_CHEM	EPA:100.2	Pacific Ecorisk Laboratories	11/13/02	7/10/02
30370522 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370572 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370592 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	539	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370472 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.1	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370582 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	10.2	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370482 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.06	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370602 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	15800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370622 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	2.74	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370612 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.13	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370632 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594852 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594742 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594802 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594772 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	2.8	ug/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370642 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	824	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370512 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	2.28	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370662 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5690	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370492 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	117	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370542 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/29/02	7/10/02
30370502 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	MO	Molybdenum	0.2	1	0.84	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370682 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.76	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594822 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594812 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594832 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594862 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370652 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3060	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594752 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	19.1	ug/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370692 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370552 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	2.85	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370672 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594792 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370532 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.02	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30594842 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30594732 959S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/18/02	7/10/02
30370702 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	4.53	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370712 960S	RE16-02-45985	N	NA	DC	INV	Unfiltered	16-06710	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	8.68	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370812 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	768	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594902 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594922 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30979602 961S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	NH3	Ammonia		1	10	UG/L	U	NA	CS	WET_CHEM	EPA:100.2	Pacific Ecorisk Laboratories	11/13/02	7/10/02
30370772 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370822 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370842 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	129	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370722 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370832 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	23.9	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370732 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.07	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370852 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	26500	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370872 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.7	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370862 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.39	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370882 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594992 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594882 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594942 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594912 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30370892 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	1280	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370762 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.73	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370912 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	7410	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370742 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	912	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370792 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/29/02	7/10/02
30370752 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	MO	Molybdenum	0.2	1	0.91	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30370932 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.73	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594962 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594952 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594972 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30595002 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30370902 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4320	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594892 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30370942 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370802 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	2.06	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370922 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	23100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30594932 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30370782 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/19/02	7/10/02
30594982 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30594872 959S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	7/19/02	7/10/02
30370952 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	3.1	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30370962 960S	RE16-02-45987	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	3.45	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	8/2/02	7/10/02
30929992 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929812 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930472 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	3.1	UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30919612 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	66100	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	10/22/02	10/9/02
30920112 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	12200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30930852 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.16	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30930992 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.41	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30930872 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.3	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931012 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.78	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30929912 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.7	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929682 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920082 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.29	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/9/02
30920122 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	12.2	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30929552 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920252 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BA	Barium	1.1	5	26200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/21/02	10/9/02
30930492 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929882 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929832 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929782 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929762 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929802 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929942 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	10	1	20.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929532 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.95	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30920042 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	6.74	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/9/02
30929642 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929632 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929652 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920132 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	10.7	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30919622 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/26/02	10/9/02
30930322 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930552 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930612 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930602 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930512 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929542 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930682 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930252 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930372 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930782 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930032 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.71	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920052 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.99	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/9/02
30920142 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	36900	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30930592 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930422 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30919632 1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	5790	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/26/02	10/9/02
30929892 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.72	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929592 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930342 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930352 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930562 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930482 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930522 1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02

30930122	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.42	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930162	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.43	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929962	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.88	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930732	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930262	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30920162	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	4.12	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30929822	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920152	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	17.3	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30920172	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	59.4	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
31884002	1321S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-53	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	6/13/03	10/9/02
30929852	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929752	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.44	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930762	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930282	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930542	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930152	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.43	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930742	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929872	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.43	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930412	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929582	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930272	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930132	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930652	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930622	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930292	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930632	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930392	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930402	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929702	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30930672	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930382	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930452	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930432	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930222	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930232	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930002	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.93	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929742	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929562	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30930012	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929862	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30930942	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.13	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931082	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.33	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30929842	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.8	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929712	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.73	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930832	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.13	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30930972	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.35	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30929902	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.52	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930892	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.19	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931032	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.5	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30929662	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.91	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
31015692	1317S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/22/02	10/9/02
30930202	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30929792	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930042	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30919642	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	280	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/26/02	10/9/02
30929672	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.68	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930052	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929972	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929952	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.45	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930442	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930862	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.3	1	0.56	UG/L	J-	NA	CS	HEXP	SW-846:833	General Engineering Labora	10/16/02	10/9/02
30929772	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930532	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30920182	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	11200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30929982	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.62	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930792	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930802	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30920072	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	72	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/9/02
30920202	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	9110	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30920062	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	1250	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	10/16/02	10/9/02
30920272	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.24	UG/L		NA	CS	METALS	SW-846:747	General Engineering Labora	10/26/02	10/9/02
30930302	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930582	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/15/02	10/9/02
30930112	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930142	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.47	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929572	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.62	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
31015702	1317S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	UJ	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	10/22/02	10/9/02
30930102	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.12	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30920222	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	15.9	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	10/17/02	10/9/02
30919672	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	160	UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	11/1/02	10/9/02
30930082	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.67	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930192	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929512	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.7	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930182	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.66	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930912	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.05	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931052	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.13	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30930092	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.62	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929522	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.2	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30929922	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.2	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929932	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.78	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929722	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.82	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30930902	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.25	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931042	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.64	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30930922	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.25	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931062	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.64	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30930952	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.25	1	0.4	UG/L	R	NA	CS	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	10/16/02	10/9/02
30931092	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.64	1	1	UG/L	UJ	NA	RE	HEXP	SW-846:833	General Engineering Labora	10/19/02	10/9/02
30919662	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	11/5/02	10/9/02
30929602	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.83	1	10.4	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
31884012	1321S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-1.9	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	6/13/03	10/9/02
30930062	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.2	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02
30919682	1318S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	10/21/02	10/9/02
30930022	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	10/15/02	10/9/02
30929612	1316S	RE16-02-49400	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.31	1	10.4	UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	10/15/02	10/9/02

31061412	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061512	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	62.3	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31063982	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	12/9/02	11/13/02
31061422	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061532	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	25800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31063992	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	18700	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/9/02	11/13/02
31061552	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.14	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061542	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.15	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061562	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	1.62	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31059882	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059772	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059832	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.11	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31190062	1384S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.42	UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	12/11/02	11/13/02
31064002	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	281	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/9/02	11/13/02
31059802	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	41.1	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061572	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	84.5	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061442	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.36	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061592	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	7630	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061432	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	7.11	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061472	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.09	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	11/21/02	11/13/02
31190072	1384S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	1.3	UG/L		NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	12/11/02	11/13/02
31061612	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.85	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061132	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.05	5	250	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	12/5/02	11/13/02
31059852	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059842	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059862	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059892	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.08	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31063972	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	12/6/02	11/13/02
31061032	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	12/3/02	11/13/02
31061582	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4540	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31059782	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	38.8	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061622	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061482	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061602	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	21800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31064012	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	4900	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/9/02	11/13/02
31059822	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061462	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.08	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31190082	1384S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.04	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	12/11/02	11/13/02
31059872	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31059762	1383S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061632	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.84	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061642	1385S	RE16-03-49768	N	NA	DC	INV	Unfiltered	16-05929	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	2.66	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061092	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	83900	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	11/26/02	11/13/02
31061732	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	573	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31060072	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	1.6	UG/L	J+	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31060092	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	1	UG/L	J+	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061692	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061742	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061762	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	1450	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061652	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061752	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	14	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31064032	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	12/10/02	11/13/02
31061662	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061772	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	21100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31064062	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.06	2	19200	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/10/02	11/13/02
31061792	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.97	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061782	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061802	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31060162	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31060052	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31060112	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.05	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31190092	1384S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	12/11/02	11/13/02
31064042	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	217	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	12/10/02	11/13/02
31060082	1383S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	14.4	UG/L	J+	NA	CS	HEXP	SW-846:833	General Engineering Labora	11/26/02	11/13/02
31061812	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	399	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061682	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.91	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02
31061832	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	6040	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/5/02	11/13/02
31061672	1385S	RE16-03-49774	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	42	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	11/20/02	11/13/02

31239232	1444S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.025	1	0.1		ug/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	12/19/02	12/6/02
31239372	1444S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.05		ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/20/02	12/6/02
31239122	1444S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.078	1	0.1		ug/L	R	NA	RE	HEXP	SW-846:8330	General Engineering Laboratories, Inc., Historical	12/19/02	12/6/02
31239262	1444S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		ug/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/20/02	12/6/02
31122072	1445S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	2.91		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/18/02	12/6/02
31122082	1445S	RE16-03-49882	N	NA	DC	INV	Unfiltered	16-06712	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	5.47		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/18/02	12/6/02
31201832	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	3		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232692	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	36300		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	12/27/02	12/16/02
31232832	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	101		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31202212	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202232	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31232792	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232842	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	3.34		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232862	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	31.2		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31201852	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232752	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232852	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	50		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232702	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/3/03	12/16/02
31201682	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201912	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201972	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201962	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201872	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202042	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201612	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201732	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202142	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232762	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232872	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	10400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31201952	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201782	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232712	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	1440		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/3/03	12/16/02
31201702	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201712	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201922	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201842	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201882	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202092	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201622	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232892	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	0.97		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232882	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232902	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.64		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31884062	1475S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-78		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	5/26/03	12/16/02
31202122	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201642	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201902	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202102	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201772	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201632	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202012	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201982	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201652	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201992	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201752	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201762	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202032	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201742	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201812	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201792	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201582	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201592	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202302	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202192	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202252	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31232482	1464S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	1/14/03	12/16/02
31201562	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232722	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	154		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/3/03	12/16/02
31201802	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202222	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31201892	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232912	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	58		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31202152	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202162	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232782	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.12		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232932	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	3660		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232772	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	3.51		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232812	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/6/03	12/16/02
31201662	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201942	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232492	1464S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	1/14/03	12/16/02
31232952	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232992	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.05	5	350		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	12/27/02	12/16/02
31202272	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202262	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202282	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202312	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31232742	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/8/03	12/16/02
31884072	1475S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Geochron Lab	5/26/03	12/16/02
31233002	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4		UG/L	U	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	1/9/03	12/16/02
31232922	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	1700		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31201602	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202202	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31232962	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232822	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31232942	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	4020		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31201572	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232732	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	5140		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/3/03	12/16/02
31201822	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202072	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201722	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202242	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.03	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31232802	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.23		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31232502	1464S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.04	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	1/14/03	12/16/02
31201692	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202022	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201862	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202052	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202062	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202002	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202132	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202112	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31201672	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202292	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.02	1	0.1		UG/L	UJ	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31202182	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	1	0.1		UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	12/21/02	12/16/02
31464332	1476S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.04	1.28E-03	PCI/ML		NA	CS	H3	GENERIC:Lo	University of Miami Tritium L	2/16/03	12/16/02
31232972	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.19		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31201932	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202082	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31202172	1463S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	12/19/02	12/16/02
31232982	1465S	RE16-03-49898	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231062	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	25		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231022	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31231072	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231092	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	30.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31230982	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31231082	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	50		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31230992	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31231102	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	10400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231122	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.17		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231112	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231132	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231142	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	13.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231012	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31231162	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	3660		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231002	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	5		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02
31231042	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/6/03	12/16/02
31231182	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231152	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	1680		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231192	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231052	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231172	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	4090		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/27/02	12/16/02
31231032	1467S	RE16-03-49923	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.07		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/2/03	12/16/02

31623532	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31623552	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31633102	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.64	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/20/03
31633142	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	8.17	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633162	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	498	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633062	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.72	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/20/03
31633152	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	1430	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31632932	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/7/03	3/20/03
31633072	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.71	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/20/03
31633172	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	26800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31632962	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.06	2	27500	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/11/03	3/20/03
31633192	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	12.3	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633182	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	4.61	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633202	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	29.8	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31623622	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31623512	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31623572	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31701462	1652S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.34	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	3/28/03	3/20/03
31632942	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	561	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/7/03	3/20/03
31623542	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	3.2	UG/L		NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31633212	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	10400	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633092	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	44.4	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/20/03
31633232	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	8510	UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31633082	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	1050	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/20/03
31633052	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.11	UG/L	J	NA	CS	METALS	SW-846:747	General Engineering Labora	4/4/03	3/20/03
31701472	1652S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.81	UG/L		NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	3/28/03	3/20/03
31633252	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	6.79	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/11/03	3/20/03
31634492	1651S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	50	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	3/31/03	3/20/03
31623592	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31623582	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03
31623602	1650S	RE16-03-50751	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	3/26/03	3/20/03

31678102	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678362	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678562	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678232	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678092	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678472	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678442	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678112	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678452	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678212	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678222	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678492	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678202	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678272	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678252	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678042	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678052	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678762	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678652	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678712	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31682582	1690S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.09	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/6/03	3/28/03
31678022	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31710322	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	238	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/8/03	3/28/03
31678262	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678682	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678352	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31710432	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	1030	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/4/03	3/28/03
31678612	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678622	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31710542	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.61	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/28/03
31710452	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	3570	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/4/03	3/28/03
31710532	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	6.79	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/5/03	3/28/03
31710572	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/16/03	3/28/03
31678122	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678402	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31682592	1690S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.03	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/6/03	3/28/03
31710472	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.39	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/4/03	3/28/03
31710822	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	50	UG/L	U	NA	CS	ANION	EPA:353.1	General Engineering Labora	4/17/03	3/28/03
31678732	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678722	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678742	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31678772	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31710282	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/9/03	3/28/03
31710272	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	1.5	1	4	UG/L	J	NA	CS	PERCHLORATE	EPA:314.0	General Engineering Labora	4/3/03	3/28/03
31710442	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3670	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/4/03	3/28/03
31678062	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/8/03	3/28/03
31678662	1689S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833	General Engineering Labora	4/4/03	3/28/03
31710482	1691S	RE16-03-50771	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/4/03	3/28/03

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32058792	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	0.6	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058812	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058822	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	39.5	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058922	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.07	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/5/03
32058842	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	2860	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058912	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	5.18	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/5/03
32058962	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	9/17/03	9/5/03
32058862	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.07	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058832	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2060	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058872	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058732	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058852	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	4480	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058942	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.04	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/5/03
32058882	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	0.74	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32058892	1871S	RE16-03-51772	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	1.78	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/5/03
32068762	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	70300	UG/L		NA	CS	ALK	EPA:310.1 General Engineering Labora	9/18/03	9/4/03
32066882	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	925	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32068962	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.04	1	0.45	UG/L		NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32068982	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.07	1	0.22	UG/L		NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32067072	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/4/03
32066892	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32066912	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	341	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32067092	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	9/17/03	9/4/03
32066902	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	17.6	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32068602	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	9/9/03	9/4/03
32067042	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/4/03
32066922	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	17400	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32068612	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	15700	UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	9/9/03	9/4/03
32066942	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.05	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32066932	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	0.97	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32066952	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32069052	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32068942	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.03	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32069002	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.05	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32068622	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	210	UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	9/9/03	9/4/03
32068972	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.07	1	2.35	UG/L		NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32066962	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	539	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32067062	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	1.13	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/4/03
32066982	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5130	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32067052	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	24.2	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	9/16/03	9/4/03
32067102	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	9/17/03	9/4/03
32067002	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	2.37	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	9/16/03	9/4/03
32069362	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	550	UG/L		NA	CS	ANION	EPA:353.1 General Engineering Labora	9/23/03	9/4/03
32069022	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.01	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32069012	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32069032	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32069062	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.06	1	0.1	UG/L	U	NA	CS	HEXP	SW-846:833 General Engineering Labora	9/16/03	9/4/03
32068642	1868S	RE16-03-51791	N	NA	DC	INV	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	9/16/03	9/4/03

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32429942	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	12/23/03	12/8/03
32429752	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/8/03
32434242	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.91	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32429772	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	2060	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/8/03
32434572	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434522	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434472	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434452	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434492	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434632	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	11	1	21	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434222	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.96	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32429902	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	12/23/03	12/8/03
32434332	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.51	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434322	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32434342	1978S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	12/14/03	12/8/03
32429762	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	B	Boron	4.9	1	23.1	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/8/03
32429252	1979S	RE16-04-52862	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	12/17/03	12/8/03

[illegible]

32418412	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	12/17/03	12/9/03
32443032	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.4	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443522	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.76	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32422692	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	12/23/03	12/9/03
32422562	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	17900	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03
32418422	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	17800	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	12/17/03	12/9/03
32443382	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.77	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443082	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443612	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.44	1	1.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443652	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.46	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443452	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.93	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32422582	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.24	UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03
32443312	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.56	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32422572	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03
32422592	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	1.46	UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03
32443342	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.56	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443242	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.47	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443642	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.46	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443362	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.46	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443072	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.34	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443622	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.57	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443192	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.52	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443492	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.99	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443232	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.59	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443052	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.52	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443502	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1.1	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443352	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.1	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32602842	1982S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.46	20	2.08	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	1/12/04	12/9/03
32443332	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.6	1	22.2	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443202	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.78	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32602732	1982S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.83	20	2.08	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	1/12/04	12/9/03
32443392	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.56	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32602792	1982S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.3	20	2.08	UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	1/12/04	12/9/03
32443152	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.97	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32437742	1981S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	12/16/03	12/9/03
32443282	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.56	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443532	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.56	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32418432	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	160	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	12/17/03	12/9/03
32443162	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.72	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443542	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.36	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443462	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32443442	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.48	1	11.1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32602762	1982S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.77	20	2.29	UG/L		FD	CS	HEXP	SW-846:832	General Engineering Labora	1/12/04	12/9/03
32443262	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.56	1	1.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32422602	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	80.5	UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03
32443472	1983S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.66	1	11.1	UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	12/12/03	12/9/03
32422712	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.69	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	12/23/03	12/9/03
32422622	1984S	RE16-04-52888	N	NA	DC	QC	Unfiltered	16-05996	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5230	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	12/19/03	12/9/03

32727552 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	35.2		UG/L		NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32729602 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/5/04
32729732 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.32	2	0.962		UG/L	R	NA	RE	HEXP	SW-846:8321A_ MOD	General Engineering Laboratories, Inc., Historical	5/16/04	4/5/04
32648492 2075S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.15		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/5/04
32687762 2074S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.16	1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/23/04	4/5/04
32727522 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727852 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32726882 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.76	1	10.6		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/19/04	4/5/04
32727602 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727882 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727862 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	2.8		UG/L		NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727832 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727362 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.6		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/19/04	4/5/04
32727262 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.42	1	10.6		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/19/04	4/5/04
32727962 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727942 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727502 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32729652 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/5/04
32729782 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.17	2	0.641		UG/L	R	NA	RE	HEXP	SW-846:8321A_ MOD	General Engineering Laboratories, Inc., Historical	5/16/04	4/5/04
32729542 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32		UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/28/04	4/5/04
32729682 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.15	2	0.641		UG/L	R	NA	RE	HEXP	SW-846:8321A_ MOD	General Engineering Laboratories, Inc., Historical	5/16/04	4/5/04
32739982 2077S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.31	0.01	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	5/26/04	4/5/04
32648502 2075S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.55		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/5/04
32648652 2075S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	9.59		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32727762 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32727912 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32728002 2073S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/5/04
32648662 2075S	RE16-04-53120	N	NA	DC	INV	Unfiltered	16-02654	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	24.1		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648702 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	8520		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648722 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.7		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/5/04
32648772 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648782 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	372		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648682 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.48		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/5/04
32648692 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.24		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/5/04
32648762 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	8460		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648812 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	4.78		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648842 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	10.6		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648822 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	8.56		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648832 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	4860		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32649712 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	3.48		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/5/04
32648852 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	2580		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648702 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	41.6		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/21/04	4/5/04
32648812 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/26/04	4/5/04
32648872 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5.41		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648842 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	2600		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648852 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648752 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	0.9		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04
32648862 2075S	RE16-04-53121	N	NA	DC	INV	Filtered	16-02654	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	12000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/5/04

32638452	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32616342	2059S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	1180	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/3/04	3/20/04
32640252	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.8	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32639952	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.3	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638372	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638382	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638592	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638512	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638552	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32640482	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.47	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32640522	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.48	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32640322	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.98	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638762	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638292	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32615982	2059S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	45.7	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/20/04
32640182	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.58	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32615972	2059S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	8.59	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/20/04
32615992	2059S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	33.7	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/20/04
32615832	2059S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5	UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	4/12/04	3/20/04
33896442	2060S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-8.8	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	12/6/04	3/20/04
32640212	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.58	1	1.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32640112	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.49	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638792	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638312	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638572	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638772	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32640512	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.48	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638442	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32640232	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.48	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638302	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32639942	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.36	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32640492	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.59	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638682	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638652	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638322	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638662	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638422	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638432	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32640062	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.55	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04
32638702	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638412	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638482	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638462	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638252	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32638262	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/20/04
32640362	2057S	RE16-04-53152	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	1	1	11.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/5/04	3/20/04

[illegible]

32721672	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.92	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722362	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.75	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32721462	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.96	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722152	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.79	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32708172	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/12/04
32708192	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/12/04
32708222	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/12/04
32665132	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/12/04
32721342	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.98	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722032	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.8	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32721802	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	6.1	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722492	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32708062	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.38	UG/L		NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	4/19/04	4/12/04
32721762	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.61	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722452	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.5	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32721352	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.37	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722042	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.3	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32663842	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3350	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/12/04
32708552	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32721472	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.61	1	1.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722162	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.5	1	1	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32721362	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	6.1	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722052	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	5	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32708112	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.1	2	1.85	UG/L	J-	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/12/04
32663892	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/12/04
32663752	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/12/04
32663862	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	23300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/12/04
32708522	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32665162	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	17800	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/12/04
32708772	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32709022	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32708672	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32708152	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/12/04
32663722	2102S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.11	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/1/04	4/12/04
32687822	2101S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.16	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/23/04	4/12/04
32708642	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32708972	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32721432	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.87	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722122	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.71	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32708812	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32709002	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32709012	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32708952	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/16/04	4/12/04
32721912	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.2	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04
32722602	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	0.97	1	10	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/28/04	4/12/04
32721812	2100S	RE16-04-53154	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.48	1	12.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/12/04

32683882 2112S	RE16-04-53159	N	NA	DC	INV	Filtered	16-05923	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.09	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/1/04	4/13/04
32684042 2112S	RE16-04-53159	N	NA	DC	INV	Filtered	16-05923	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.43	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/13/04
32684052 2112S	RE16-04-53159	N	NA	DC	INV	Filtered	16-05923	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	2.39	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/4/04	4/13/04
32676482 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676302 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32673052 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	3.2	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32654372 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	67200	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/26/04	4/14/04
32651742 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1930	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32724702 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	9.03	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32724712 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	8.11	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32676402 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.8	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676172 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32651932 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32651752 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32676042 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.97	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32651762 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	4940	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32673072 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32676372 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676322 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676272 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676252 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676292 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676432 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	11	1	22.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676022 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	1	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32651892 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.12	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32676132 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.54	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676122 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.5	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676142 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.5	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32654122 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	211	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/14/04
32672902 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673132 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673192 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673182 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673092 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32676032 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.4	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32673262 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32672832 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32672952 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673362 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32676522 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.76	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32651902 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.05	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32651772 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	18200	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32673172 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673002 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32654162 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.06	2	22600	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/26/04	4/14/04
32676382 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.78	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676082 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32672922 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32672932 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673142 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673062 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673102 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32676612 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.45	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676652 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.46	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676452 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.94	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32673312 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32672842 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32651792 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.8	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32676312 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32651782 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32651802 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.85	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32659952 2127S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5.14	UG/L	J-	NA	CS	CN	SW-846:901	General Engineering Labora	5/3/04	4/14/04
32676342 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32676242 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.47	1	11.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32673342 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32672862 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673122 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32673322 2125S	RE16-04-53160	N	NA	DC	INV	Unfiltered	16-05926	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04

32702952 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.96	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703012 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.87	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32629512 2136S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833 Severn Trent Laboratories, Inc	4/24/04	4/15/04
32697562 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32703082 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.55	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703332 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.55	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32663112 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	177	UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	5/1/04	4/15/04
32702962 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.71	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703342 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.35	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703262 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703242 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.47	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32697802 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32719642 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	1	20	66.8	UG/L		NA	CS	HEXP	SW-846:832 General Engineering Labora	5/17/04	4/15/04
32703062 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.55	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32697892 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32660752 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	489	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	5/10/04	4/15/04
32703272 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.65	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32698152 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32698162 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32660632 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.72	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	5/6/04	4/15/04
32660772 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	6250	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	5/10/04	4/15/04
32660622 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	11.1	UG/L		NA	CS	METALS	SW-846:602 General Engineering Labora	5/6/04	4/15/04
32660592 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747 General Engineering Labora	5/4/04	4/15/04
32697662 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32697942 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	4/27/04	4/15/04
32703402 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.55	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703432 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32702862 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.65	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32629522 2136S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.17	1	1.2	UG/L		NA	CS	HEXP	SW-846:833 Severn Trent Laboratories, Inc	4/24/04	4/15/04
32703392 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32660792 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	2.41	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	5/10/04	4/15/04
32660072 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	90	UG/L		NA	CS	ANION	EPA:353.1 General Engineering Labora	5/7/04	4/15/04
32703372 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.7	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703482 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32702802 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703472 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.69	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32719582 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/15/04	4/15/04
32703382 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.65	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32702812 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.5	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703212 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.5	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703222 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.82	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32719572 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/15/04	4/15/04
32719592 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/15/04	4/15/04
32719622 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832 General Engineering Labora	5/15/04	4/15/04
32663092 2139S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	4/21/04	4/15/04
32702892 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.88	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32703352 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.5	1	11	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	4/21/04	4/15/04
32721212 2138S	RE16-04-53164	N	NA	DC	INV	Unfiltered	16-05928	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.37	UG/L	U	NA	CS	PERCHLORATE	SW-846:832 General Engineering Labora	5/11/04	4/15/04
[illegible]																								

32662712	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662682	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3680	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662722	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662592	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662702	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	22000	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662572	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.5	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/15/04
32662582	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.06	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/15/04
32662732	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	0.76	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32662742	2138S	RE16-04-53169	N	NA	DC	INV	Filtered	16-05930	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	2.06	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/15/04
32632602	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632422	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32631072	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32635172	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	21400	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/14/04	3/31/04
32634642	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1310	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32680562	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32680582	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/6/04	3/31/04
32632522	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.8	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632292	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634592	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32634652	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32632162	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.96	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634662	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	25.5	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32631092	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32632492	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632442	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632392	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632372	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632412	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632552	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	11	1	22.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632142	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	1	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634622	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/17/04	3/31/04
32632252	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.53	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632242	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.5	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632262	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634512	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/7/04	3/31/04
32630922	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631152	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631212	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631202	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631112	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32632152	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.4	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32631282	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32630852	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32630972	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631382	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32632642	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.76	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634562	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	4/16/04	3/31/04
32634672	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	6830	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32631192	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631022	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32634522	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	1870	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/7/04	3/31/04
32632502	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.77	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632202	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32630942	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32630952	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631162	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631082	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32631122	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32632732	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.44	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632772	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.46	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32632572	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.93	1	11.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32631332	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32630862	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/12/04	3/31/04
32634692	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	0.78	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32632432	2067S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.56	1	1.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/6/04	3/31/04
32634682	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32634702	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/19/04	3/31/04
32634492	2068S	RE16-04-53170	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5	UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	4/12/04	3/31/04
[illegible]																										

32730462	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32730482	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32729202	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.89	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728942	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.53	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728762	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.47	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729212	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729062	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731982	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32729042	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5	1	20	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728912	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.7	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731872	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32729102	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731932	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32728862	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.87	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728922	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.79	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32604682	2141S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/24/04	4/16/04		
32731102	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32728992	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729242	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32655462	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	103	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	5/1/04	4/16/04		
32728872	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.65	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729252	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.32	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729172	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729152	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.43	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731342	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32731902	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.1	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32728972	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731432	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32654842	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	389	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/16/04		
32729182	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731692	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32731702	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32654712	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.29	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/16/04		
32654862	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	4610	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/16/04		
32654702	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	5.75	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/16/04		
32654752	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	5/6/04	4/16/04		
32731202	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32731482	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/29/04	4/16/04		
32729312	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.5	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729342	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.45	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728772	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32604692	2141S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.17	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboraties, Inc	4/24/04	4/16/04		
32729302	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.11	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32654882	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.61	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/10/04	4/16/04		
32654432	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	320	UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	5/14/04	4/16/04		
32729282	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.64	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729392	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728712	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.67	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729382	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.63	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731952	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32729292	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.59	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32728722	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729122	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32729132	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.75	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		
32731942	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32731962	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32731992	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/16/04		
32655482	2143S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	5/4/04	4/16/04		
32728802	2142S	RE16-04-53174	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis[1-chloropropane][2,2'-]	0.8	1	10	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	5/4/04	4/16/04		

32705932 2088S	RE16-04-53178	N	NA	DC	INV	Unfiltered	16-05989	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706082 2088S	RE16-04-53178	N	NA	DC	INV	Unfiltered	16-05989	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706172 2088S	RE16-04-53178	N	NA	DC	INV	Unfiltered	16-05989	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32665672 2090S	RE16-04-53178	N	NA	DC	INV	Unfiltered	16-05989	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	29.3	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666492 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	10600	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666452 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.51	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666502 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666512 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	149	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666412 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.41	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666422 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.25	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666522 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	11900	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666542 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	5.87	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666532 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	4.75	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666552 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	9.97	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666562 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	5430	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666442 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	3.94	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666582 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	3780	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666432 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	28.3	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666402 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	4/16/04	4/7/04
32666602 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	4.28	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666572 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	4120	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666612 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666482 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666592 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	22800	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666462 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.13	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666472 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.41	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666622 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	15.8	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32666632 2090S	RE16-04-53179	N	NA	DC	INV	Filtered	16-05989	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	25.4	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32716262 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711942 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32706452 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	3.9	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32668122 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	28500	UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/20/04	4/7/04
32665772 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	13100	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32724252 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/7/04
32724272 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	4/30/04	4/7/04
32716182 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.7	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711812 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32665732 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.41	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32665782 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	2.41	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32711682 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.91	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32665792 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	205	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32706472 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32716152 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711962 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711912 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711892 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711932 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.53	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32716212 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	11	1	21	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711662 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.96	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32665692 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.53	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32711772 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.51	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711762 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32711782 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	0.77	UG/L	J	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32667422 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/7/04
32706302 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706532 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706592 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706582 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706492 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32711672 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32706662 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706232 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706352 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32706762 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32716302 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.72	1	10.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32665702 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.26	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32665802 2090S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	10400	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32706572 2088S	RE16-04-53180	N	NA	DC	INV	Unfiltered	16-05990	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04

32717752 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.15	1	1.3	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32666122 2090S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5.76	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32665422 2090S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	30	UG/L	J	NA	CS	ANION	EPA:353.1	General Engineering Labora	4/28/04	4/7/04
32717042 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.65	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717732 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.84	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32717152 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717842 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1.3	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32716472 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.68	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717162 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.88	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32717142 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.64	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717832 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.83	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32724452 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/7/04
32717052 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.6	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717742 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.78	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32716482 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.1	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717172 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	6.6	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32716882 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.1	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717572 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	6.6	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32716892 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.77	1	5.5	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717582 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.99	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32716682 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	0.81	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04
32717372 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	86-30-6	Nitrosodiphenylamine[N-]	1	1	13.2	UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32724442 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/7/04
32724462 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/7/04
32724492 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97	UG/L	UJ	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/1/04	4/7/04
32667462 2090S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/7/04
32716562 2088S	RE16-04-53182	N	NA	DC	INV	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.82	1	10.2	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/14/04	4/7/04

32674512	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674522	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674462	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32678042	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32677942	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.41	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32674592	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674572	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674132	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32725072	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32724982	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.25		UG/L	J	NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32737252	2130S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.15	3.20E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	5/26/04	4/14/04
32652422	2127S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.19		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32652342	2127S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	3.04		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32674392	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674542	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674632	2125S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32652352	2127S	RE16-04-53192	N	NA	DC	INV	Unfiltered	16-05997	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653422	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1320		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653602	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653432	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653442	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	3270		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653562	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653572	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.04		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653452	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	18500		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653472	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.31		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653462	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	4.76		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653482	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	1.69		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653492	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	659		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653592	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.45		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653512	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5420		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653582	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	12.1		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653402	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	5/4/04	4/14/04
32653532	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653502	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3140		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653632	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/7/04	4/14/04
32653412	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653522	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	18700		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653612	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.02		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653622	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.17		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653542	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	3.08		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653552	2127S	RE16-04-53193	N	NA	DC	INV	Filtered	16-05997	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	2.55		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32678552	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678372	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32674912	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5.3		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32654402	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	72300		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	4/26/04	4/14/04
32652462	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	1410		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32725142	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	2.48		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32725152	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	2.05		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32678472	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.7	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678242	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32652642	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.28		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32652472	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32678112	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.9	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32652482	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	3710		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32674932	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	0.93		UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32678442	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678392	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678342	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678322	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678362	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678502	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	10	1	20.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678092	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.95	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32652602	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.09		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32678202	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678192	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678212	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	4.2		UG/L	J	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32654272	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	159		UG/L	J	NA	CS	ANION	EPA:300	General Engineering Labora	4/20/04	4/14/04
32674762	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674992	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675052	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675042	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674952	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32678102	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32675122	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674692	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674812	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675222	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32678592	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.71	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32652612	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.04		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32652492	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	20400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32675032	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674862	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32654312	2127S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.06	2	23400		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	4/26/04	4/14/04
32678452	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.72	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32678152	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32674782	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32674792	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675002	2125S	RE16-04-53194	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04

32718672	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.54	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32717972	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32718662	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.5	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32717992	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32718682	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.5	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32667522	2090S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/7/04
32707542	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707772	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707832	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707822	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707732	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32717882	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.2	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32718572	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.4	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32707902	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707472	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707592	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32708002	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32718372	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.69	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32719062	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.76	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32666182	2090S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.33	UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	4/20/04	4/7/04
32666282	2090S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	10500	UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	4/22/04	4/7/04
32707812	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707642	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32667532	2090S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	9930	UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	4/27/04	4/7/04
32718232	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.7	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32718922	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.78	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32717932	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.1	1	10.2	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04
32718622	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	11.2	UG/L	R	FD	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	4/23/04	4/7/04
32707562	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707572	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707782	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707702	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32707742	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/15/04	4/7/04
32718462	2088S	RE16-04-53198	N	NA	DC	QC	Unfiltered	16-05991	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.41	1	1	UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/15/04	4/7/04

32725302 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.16	2	0.487		UG/L	R	FD	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	5/15/04	4/14/04
32652902 2127S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.02		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32615822 2126S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.16	1	0.23		UG/L	J	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	4/24/04	4/14/04
32675392 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675722 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32678942 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.73	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32675562 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675752 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675762 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675702 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32679422 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32679322 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.4	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	4/22/04	4/14/04
32675832 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675812 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675372 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32725352 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32725262 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	5/15/04	4/14/04
32737272 2130S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.18	3.20E-03	PCI/ML		FD	CS	H3	GENERIC:Lc	University of Miami Tritium L	5/26/04	4/14/04
32652912 2127S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.17		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32652832 2127S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	2.6		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32675632 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675782 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32675872 2125S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	4/27/04	4/14/04
32652842 2127S	RE16-04-53200	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	12.4		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653902 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	745		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654092 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.35		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653912 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653922 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	3660		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654052 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32654062 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.04		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653932 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	20200		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653952 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.37		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653942 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	4.43		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653962 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.61		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653972 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	432		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654082 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.21		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653992 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5520		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654072 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	10.4		UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32653882 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	5/4/04	4/14/04
32654012 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.45		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653982 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3580		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654022 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32653892 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654002 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	19200		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654102 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.5		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32654112 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.14		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	5/6/04	4/14/04
32654032 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.52		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
32654042 2127S	RE16-04-53201	N	NA	DC	QC	Filtered	16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	8		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	5/6/04	4/14/04
33033322 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33052612 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	59500		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	7/21/04	7/10/04
33052712 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	527		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33131282 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.11		UG/L	J	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33131302 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/28/04	7/10/04
33052682 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/22/04	7/10/04
33052722 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33052732 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	247		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33033342 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33052642 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/22/04	7/10/04
33036382 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	7/20/04	7/10/04
33033172 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033402 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033462 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033452 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033362 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033532 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033102 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033222 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033632 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33052652 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	1		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/22/04	7/10/04
33052742 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	15800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33033442 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033272 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33036352 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	11500		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	7/15/04	7/10/04
33033192 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033202 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033412 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033332 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033372 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033582 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33033112 2198S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/24/04	7/10/04
33052762 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33052752 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33052772 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/26/04	7/10/04
33036292 2199S	RE16-04-53451	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	4.19		UG/L	J	NA	CS	CN	SW-846:901	General Engineering Labora	7/23/04	7/10/04
[illegible]																										

32956762 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957102 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956862 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956872 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957142 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956852 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956922 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956902 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956692 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956702 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957422 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957312 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957372 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32956672 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32981452 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	100		UG/L	UJ	NA	CS	ANION	EPA:300	General Engineering Labora	7/8/04	6/29/04
32956912 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957342 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.1	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957002 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32977642 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	127		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32957262 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957272 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32977532 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.15		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977652 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	2930		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977522 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	3.87		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977722 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/22/04	6/29/04
32956772 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957052 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32977662 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	3.27		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977492 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	0.01	1	110		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	7/22/04	6/29/04
32957392 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.33	2	0.97		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957382 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.16	2	0.48		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957402 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.16	2	0.48		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957432 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	0.33	2	0.97		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32981472 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	7/16/04	6/29/04
34296572 2227S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.9		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	12/7/04	6/29/04
32957292 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.14		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	7/6/04	6/29/04
32977702 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	1750		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/21/04	6/29/04
32956712 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957322 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.1	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32977672 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977562 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977712 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	4220		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/21/04	6/29/04
32956682 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32981462 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	6210		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	7/8/04	6/29/04
32956932 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957182 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956832 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957362 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.16	2	0.48		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32977552 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.03		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32956802 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957132 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956972 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957162 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957172 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957112 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957242 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957222 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32956782 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957412 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.08	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
32957302 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.07	2	0.32		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	7/8/04	6/29/04
33131132 2189S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.04	1.60E-03	PCI/ML		NA	CS	H3	GENERIC:Lc	University of Miami Tritium L	8/16/04	6/29/04
32977682 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	0.67		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32957042 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957192 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32957282 2187S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	7/9/04	6/29/04
32977692 2188S	RE16-04-53477	N	NA	DC	INV	Unfiltered	16-05968	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	5.3		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977802 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	78.3		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977772 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977812 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	3.85		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977822 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	27.5		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977732 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977742 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.05		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977832 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	9650		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977852 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977842 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	2.73		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977862 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	1.49		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977872 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	38.5		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977762 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.08		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977882 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	2930		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04
32977752 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	5.88		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	7/16/04	6/29/04
32977952 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	7/22/04	6/29/04
32977892 2188S	RE16-04-53478	N	NA	DC	INV	Filtered	16-05968	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	0.84		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	7/20/04	6/29/04

33535712 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.325	UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	10/15/04	10/7/04
33535722 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.325	UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	10/15/04	10/7/04
33573092 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.35	UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	11/5/04	10/7/04
33573102 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	12.1	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33573112 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	11300	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33534972 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33573122 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	4.4	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	11/5/04	10/7/04
33568182 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/30/04	10/7/04
33535222 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534912 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535012 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535182 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534772 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534882 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535312 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535292 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535282 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33573132 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.39	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	11/5/04	10/7/04
33573142 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	19000	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33534842 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534952 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33568212 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.03	1	2660	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	10/30/04	10/7/04
33535122 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535102 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534782 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534922 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534752 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535242 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535272 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33573152 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	55.8	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33573162 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	10.6	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33573172 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	48	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	11/2/04	10/7/04
33568042 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	3.8	UG/L	J	NA	CS	CN	SW-846:901	General Engineering Labora	10/20/04	10/7/04
33896532 2423S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-27.5	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Geochron Lab	12/7/04	10/7/04
33535322 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535112 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535002 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535352 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535332 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535342 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534742 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534872 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534962 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534802 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534892 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534852 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534992 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535072 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534902 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33534942 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535022 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535052 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33535652 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.487	UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	10/15/04	10/7/04
33535682 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.099	2	0.325	UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	10/15/04	10/7/04
33535692 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.078	2	0.325	UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	10/15/04	10/7/04
33535142 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04
33568192 2419S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	100	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	10/30/04	10/7/04
33535082 2418S	RE16-04-53777	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	10/14/04	10/7/04

34239402	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237982	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.49	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238802	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238932	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239022	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238862	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238952	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238922	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237622	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.45	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34239052	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239132	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238962	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239002	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239082	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239112	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237812	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.86	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237762	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.51	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237602	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.45	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237932	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	0.96	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237852	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	0.96	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34256452	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	2	25	6.09	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34237792	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	4.8	1	19.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238092	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.67	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34256482	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	1.2	25	4.06	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34238102	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.48	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34256492	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.97	25	4.06	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34238012	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.84	1	9.6	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237872	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.76	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34188232	2845S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	2/1/05
34239202	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237942	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.48	1	0.96	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237832	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.48	1	0.96	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34223432	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	127	UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	2/1/05
34238082	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.63	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237672	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.31	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237702	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	0.96	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237562	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.41	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34239142	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34256532	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	1.3	25	51.7	UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34238052	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno[1,2,3-cd]pyrene	0.48	1	0.96	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238892	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34227782	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	1180	UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/8/05	2/1/05
34237582	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.57	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34239252	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239362	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34227792	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	7.7	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/9/05	2/1/05
34227802	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	6270	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/8/05	2/1/05
34227812	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	77.1	UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/9/05	2/1/05
34227822	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	2/8/05	2/1/05
34239092	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238912	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237692	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.48	1	0.96	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237532	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.43	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237552	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.57	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34188242	2845S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.17	1	1.2	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	2/1/05
34237652	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.11	1	0.96	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34227832	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	3.3	UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/8/05	2/1/05
34237102	2846S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	10	UG/L	J	NA	CS	ANION	EPA:353.1	General Engineering Labora	2/24/05	2/1/05
34237742	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.62	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237752	2844S	RE16-05-57386	N	NA	DC	INV	Unfiltered	16-05600	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	0.96	1	9.6	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05

34215612 2803S	RE16-05-57388	N	NA	DC	INV	Unfiltered	16-05826	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	11.1	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	2/3/05	1/24/05
34131632 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131622 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34128982 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34132652 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	78700	UG/L		NA	CS	ALK	EPA:310.1 General Engineering Labora	1/24/05	1/18/05
34130192 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	3100	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34132742 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	1/28/05	1/18/05
34132752 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.1	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	1/28/05	1/18/05
34131292 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.7	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131772 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34130202 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2	UG/L	U	NA	CS	METALS	SW-846:602 General Engineering Labora	2/1/05	1/18/05
34130212 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	2/2/05	1/18/05
34131732 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.9	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34130222 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	112	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34129142 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131822 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131892 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131872 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131922 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131882 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131482 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	10	1	20.8	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131352 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.95	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34130232 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.16	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	2/1/05	1/18/05
34131462 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131312 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131852 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.4	1	1.8	UG/L	J	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131172 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200	UG/L	U	NA	CS	ANION	EPA:300 General Engineering Labora	1/29/05	1/18/05
34129392 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129082 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129182 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129352 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34128942 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131742 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129052 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129482 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129462 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129452 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131812 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.71	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34130242 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.08	UG/L	J	NA	CS	METALS	SW-846:602 General Engineering Labora	2/1/05	1/18/05
34130252 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	19800	UG/L		NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34129012 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129122 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131212 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.16	5	20200	UG/L		NA	CS	ANION	EPA:300 General Engineering Labora	1/30/05	1/18/05
34131532 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.72	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131512 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.2	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129292 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129272 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34128952 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129092 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34128922 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131582 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.42	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131322 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.43	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131692 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.88	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129412 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129442 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34130262 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	2.1	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34131842 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34130272 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	1.1	UG/L	U	NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34130282 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	2.6	UG/L	J	NA	CS	METALS	SW-846:601 General Engineering Labora	1/27/05	1/18/05
34131152 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5	UG/L	U	NA	CS	CN	SW-846:901 General Engineering Labora	1/27/05	1/18/05

34273382 2781S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-91.74	RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio Stable Isotopes Laboratory	2/8/05	1/18/05
34131912 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz[a,h]anthracene	0.52	1	1	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131662 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.44	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129492 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129282 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129172 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129522 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131362 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.43	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129502 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131332 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.43	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129512 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131342 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131832 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34128912 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129042 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129132 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34128972 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129062 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129032 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131472 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34129162 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129242 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129072 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129112 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129192 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34129222 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826 General Engineering Labora	2/1/05	1/18/05
34131682 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.93	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131612 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131452 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131782 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131702 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34132682 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	1/28/05	1/18/05
34131642 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.8	UG/L	UJ	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34131942 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.73	1	10.4	UG/L	U	NA	CS	SVOC	SW-846:827 General Engineering Labora	1/25/05	1/18/05
34132712 2784S	RE16-05-57389	N	NA	DC	INV	Unfiltered	16-05920	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	UJ	NA	CS	HEXP	SW-846:832 General Engineering Labora	1/28/05	1/18/05
[illegible]																								

34182612 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182722 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.72	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182432 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.68	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34187782 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	1.6	10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34182452 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.63	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182682 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.4	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182282 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.4	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182402 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.81	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34187892 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34187902 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34187912 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	1.6	10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34217922 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/17/05	1/25/05
34182382 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.86	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34488592 2804S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-11.89		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/25/05
34182762 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.4	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34187472 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.63		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/25/05
34182772 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.54	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182312 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.32	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34216022 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3420		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34186082 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34182812 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.54	1	1.1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182292 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	5.4	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34187842 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.51	10	35		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34216032 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	4.6		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34216042 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34216052 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16200		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34186022 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34217902 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	10000		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/25/05
34185982 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34186052 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34185942 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34187882 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34216062 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.07		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/25/05
34135512 2802S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.16	1	0.38		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/25/05
34185892 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34185672 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34182502 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.76	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34185782 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34185912 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34185832 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34185642 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34182582 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34182572 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.42	1	10.8		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/25/05
34186062 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34186112 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34186102 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34187802 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.42	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34187812 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.39	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/24/05	1/25/05
34496822 3106S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.07	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:Lo	University of Miami Tritium L	3/15/05	1/25/05
34216072 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.77		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/25/05
34216082 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	5		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34185612 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34186012 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34186002 2801S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/25/05
34216092 2803S	RE16-05-57393	N	NA	DC	INV	Unfiltered	16-05927	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	5.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/25/05
34238472 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238462 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34239492 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34237412 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	85200		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	2/4/05	2/1/05
34237122 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	372		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/10/05	2/1/05
34256652 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	1.1	25	4.06		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34256662 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	1.3	25	4.06		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	2/1/05
34238132 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.6	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238612 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237132 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	0.88		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/9/05	2/1/05
34237142 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/10/05	2/1/05
34238572 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.86	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237152 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	6380		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/10/05	2/1/05
34239652 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238662 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238732 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238712 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238762 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238722 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.5	1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238322 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	10	1	20		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238192 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.91	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237162 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/9/05	2/1/05
34238302 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.48	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238152 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34238692 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	2.2		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34237362 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	555		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	2/1/05
34239902 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239592 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239692 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239862 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239452 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34238582 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.2	1	10		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/9/05	2/1/05
34239562 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239992 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239972 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05
34239962 2844S	RE16-05-57396	N	NA	DC	INV	Unfiltered	16-05930	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	2/1/05

34208822	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1	UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208952	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209042	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208882	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208972	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208942	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34207712	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.48	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34209072	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209152	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208982	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209022	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209102	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209132	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34207902	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.9	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207852	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.54	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207692	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.48	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34208022	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207942	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34212042	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.16	2	0.48	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/22/05	1/31/05
34207882	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.1	1	20.2	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34208182	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.71	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34212072	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.09	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/22/05	1/31/05
34208192	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.51	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34212082	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.07	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/22/05	1/31/05
34208102	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.88	1	10.1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207962	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.8	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34135822	2837S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.5	UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/31/05
34209222	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34208032	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.51	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207922	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.51	1	1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34215292	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	100	UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/31/05
34208172	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.66	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207762	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.32	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207792	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34207652	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.43	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34209162	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34212122	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.1	2	0.32	UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/22/05	1/31/05
34208142	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.51	1	1	UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34208912	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34214612	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	329	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/7/05	1/31/05
34207672	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.6	1	10.1	UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/7/05	1/31/05
34209272	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34209382	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
34214622	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.23	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/4/05	1/31/05
34214632	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	4220	UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/7/05	1/31/05
34214642	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	3	UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/4/05	1/31/05
34214652	2838S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2	UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	2/4/05	1/31/05
34209112	2836S	RE16-05-57399	N	NA	DC	INV	Unfiltered	16-05970	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5	UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/31/05
[illegible]																										

34201102	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		0.33		2	0.974		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34201112	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		0.33		2	0.97		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34198512	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]		0.61		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198742	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]		5.2		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198342	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]		5.2		1	10.3		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198462	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]		0.77		1	10.3		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34200872	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]		0.16		2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34200902	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]		0.16		2	0.48		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34200882	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]		0.16		2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34200912	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]		0.16		2	0.48		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34200892	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]		0.33		2	0.974		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34200922	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]		0.33		2	0.97		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34196342	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate		0.35		1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	1/25/05	1/13/05
34198442	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]		0.83		1	10.3		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34270112	2770S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio				1	-12.37		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/8/05	1/13/05
34198822	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol		5.2		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34195522	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		0.05		1	0.1		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	1/20/05	1/13/05
34198832	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198372	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol		0.31		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34195712	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	K	Potassium		17		1	4600		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/19/05	1/13/05
34196972	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34198872	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198352	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine		5.2		1	10.3		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34201222	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX		0.1		2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34201232	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX		0.1		2	0.32		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34195722	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	SE	Selenium		2.8		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34195732	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	AG	Silver		0.84		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34195742	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	NA	Sodium		14		1	22800		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34196912	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196332	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate		0.19		1	20500		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	1/18/05	1/13/05
34196872	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196942	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]		0.49		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196832	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34200852	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl		0.16		2	0.487		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34200862	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl		0.16		2	0.48		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34195752	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.36		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	1/24/05	1/13/05
34065092	2771S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	TNX	TNX		0.16		1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	1/25/05	1/13/05
34196782	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene		0.39		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196562	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]		2.5		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34198562	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]		0.73		1	10.3		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34196672	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]		0.34		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196802	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]		0.44		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196722	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196532	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane		0.5		1	1		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34198642	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]		1		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34198632	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]		0.4		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34196952	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]		0.6		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34197002	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196992	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34201142	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]		0.085		2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34201152	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]		0.08		2	0.32		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34201162	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]		0.078		2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34201172	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]		0.07		2	0.32		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/25/05	1/13/05
34295582	2772S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	RAD	H-3	Tritium				1	0.08	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/13/05
34195762	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	U	Uranium		0.02		1	0.38		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	1/24/05	1/13/05
34195772	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	V	Vanadium		0.61		1	14.5		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34196502	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride		0.55		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196902	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196892	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]		0.6		1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34195782	2773S	RE16-05-57401	N	NA	DC	INV	Unfiltered		16-05989	0-0 FT	WS	WS	INORGANIC	ZN	Zinc		0.88		1	24.3		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34199392	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene		0.54		1	1.1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34199382	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene		0.54		1	1.1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/21/05	1/13/05
34197172	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone		2.3		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	1/25/05	1/13/05
34196462	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3		1.5		1	151000		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/17/05	1/13/05
34195792	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	INORGANIC	AL	Aluminum		15		1	15900		UG/L	J+	NA	CS	METALS	SW-846:601	General Engineering Labora	1/18/05	1/13/05
34200532	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]		0.09		2	0.325		UG/L	R	NA	CS	HEXP	SW-846:8321A_MOD	General Engineering Laboratories, Inc., Historical	1/20/05	1/13/05
34200542	2773S	RE16-05-57402	N	NA	DC	INV	Unfiltered		16-05990	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]		0.09		2	0.32		UG/L	UJ	NA	RE	HEXP	SW-846:832	General Engineering Labora	1/26/05	1/13/05

34186822	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183032	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]		0.43		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186802	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183042	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]		0.32		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186812	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183532	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]		0.53		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186212	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane		0.43		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186342	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]		0.41		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186432	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186272	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]		0.41		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186362	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186332	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]		0.37		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183172	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]		0.49		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34186462	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186542	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186372	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186412	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]		0.44		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186492	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186522	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183362	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate		0.93		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183312	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate		0.55		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183152	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]		0.49		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183482	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183402	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]		1		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34187932	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]		0.81		10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183342	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]		5.2		1	20.8		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183642	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]		0.73		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187962	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]		0.5		10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183652	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]		0.52		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187972	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]		0.39		10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183562	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate		0.91		1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183422	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine		0.82		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34135522	2802S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	DNX	DNX		0.35		1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34186612	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene		0.21		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183492	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183382	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34217942	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride		0.05		1	92		UG/L	J	NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/24/05
34183632	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene		0.68		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183222	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene		0.33		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183252	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183112	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane		0.45		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186552	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]		1.5		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34188012	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX		0.5		10	21		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183602	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186302	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane		1.9		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216202	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	FE	Iron		13		1	635		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34183132	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone		0.62		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186662	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186772	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]		0.27		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216212	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	PB	Lead		0.05		1	0.61		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216222	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	MG	Magnesium		5.2		1	5450		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216232	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	MN	Manganese		1.6		1	9.2		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216242	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	HG	Mercury		0.04		1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/31/05	1/24/05
34186502	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]		1.8		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186322	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride		1.9		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183242	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183082	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]		0.47		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183102	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]		0.62		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34135532	2802S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	MNX	MNX		0.17		1	0.97		UG/L		NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34183202	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene		0.12		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216252	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	NI	Nickel		0.69		1	1.9		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34215362	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N		3.00E-03		1	558		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	2/15/05	1/24/05
34183292	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]		0.67		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183302	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183412	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]		0.7		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183122	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		0.66		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187922	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		1.6		10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183142	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]		0.62		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183372	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]		5.2		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34182972	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183092	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]		0.78		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188032	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]		0.81		10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188042	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]		0.81		10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188052	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]		1.6		10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34217972	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate		0.35		1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/17/05	1/24/05
34183072	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]		0.83		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34488612	2804S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio				1	-12.02		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/24/05
34183452	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol		5.2		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34187482	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		0.05		1	0.61		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/24/05
34183462	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183002	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol		0.31		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34216262	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	K	Potassium		17		1	3420		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34186702	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183502	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34182982	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187982	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX		0.51		10	39.5		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34216272	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	SE	Selenium		2.8		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216282	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	AG	Silver		0.84		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216292	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	NA	Sodium		14		1	16300		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34186642	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34217952	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate		0.19		1	9940		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/24/05
34186602	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186672	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]		0.49		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186562	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34188022	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl		0.81		10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34216302	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.03		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34135542	2802S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	TNX	TNX		0.16		1	0.42		UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34186512	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene		0.39		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186292	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]		2.5		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183192	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]		0.74		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186402	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]		0.34		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186532	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]		0.44		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186452	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186262	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183272	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]		1		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183262	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]		0.41		1	10.4		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34186682	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]		0.6		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186792	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186722	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187942	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]		0.42		10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34187952	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]		0.39		10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34296832	2805S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	RAD	H-3	Tritium				1	0.07	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/24/05
34216312	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	U	Uranium		0.02		1	0.25		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216322	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	V	Vanadium		0.61		1	2.7		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34186232	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride		0.55		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186632	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186622	2801S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]		0.6		1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216332	2803S	RE16-05-57407	N	NA	DC	INV	Unfiltered		16-05996	0-0 FT	WS	WS	INORGANIC	ZN	Zinc		0.88		1	3.5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34184022	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184012	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186902	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone		2.3		1	5		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34222982	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3		1.5		1	60500		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/27/05	1/24/05
34216342	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	AL	Aluminum		15		1	1150		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34188132	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]		0.9		20	1.33		UG/L	J	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188142	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]		1		20	1.11		UG/L	J	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183682	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline		1.7		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184162	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216352	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	SB	Antimony		0.28		1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216362	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	AS	Arsenic		2.2		1	3.6		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34184122	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene		0.9		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216372	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	BA	Barium		0.22		1	2070		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34187062	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184212	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184282	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184262	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184312	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184272	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183872	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid		10		1	20.8		UG/L	R	NA	CS	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	1/31/05	1/24/05
34183742	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol		0.95		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216382	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	BE	Beryllium		0.08		1	0.2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34183852	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane		0.5		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183702	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether		1.4		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184242	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate		1.4		1	2.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34217982	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide		0.09		1	200		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/24/05
34187312	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene		0.27		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187002	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187102	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane		0.38		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187272	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186862	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane		0.5		1	1		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184132	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]		1.3		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186972	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]		2.3		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187402	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187382	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187372	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184202	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate		0.71		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216392	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CD	Cadmium		0.04		1	1		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216402	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CA	Calcium		5.5		1	18900		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34186932	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide		1.9		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187042	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34218012	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride		0.16		5	21500		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/14/05	1/24/05
34183922	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]		0.72		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183902	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]		1.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187212	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene		0.32		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187192	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186872	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187012	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186842	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183972	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]		0.42		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183712	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]		0.43		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184082	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether		0.88		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187332	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]		0.28		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187362	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216412	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CR	Chromium		0.5		1	1.2		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34184232	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216422	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CO	Cobalt		0.54		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216432	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CU	Copper		1.4		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34218072	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)		1.7		1	5		UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	1/31/05	1/24/05
34488622	2804S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio				1	-85.12		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Stable Isotopes Laboratory	2/18/05	1/24/05
34184302	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz[a,h]anthracene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184042	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran		0.44		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187412	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]		0.75		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187202	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187092	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183752	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]		0.43		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187442	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183722	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]		0.43		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187422	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183732	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]		0.32		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187432	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184222	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]		0.53		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186832	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane		0.43		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186962	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]		0.41		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187052	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186892	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]		0.41		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186982	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186952	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]		0.37		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183862	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]		0.49		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187082	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187162	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186992	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187032	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]		0.44		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187112	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187142	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184052	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate		0.93		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184002	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate		0.55		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183842	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]		0.49		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184172	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184092	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188072	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]		1.6		20	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34184032	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]		5.2		1	20.8		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184332	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]		0.73		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188102	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]		0.99		20	3.25		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34184342	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]		0.52		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188112	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]		0.78		20	3.25		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34184252	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate		0.91		1	10.4		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184112	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine		0.82		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34135552	2802S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	DNX	DNX		0.35		1	0.5		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34187232	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene		0.21		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184182	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184072	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34217992	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride		0.05		1	107		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/24/05
34184322	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene		0.68		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183912	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene		0.33		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183942	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183802	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane		0.45		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187172	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]		1.5		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34188152	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX		1		20	22.9		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34184292	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34186922	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane		1.9		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216442	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	FE	Iron		13		1	616		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34183822	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone		0.62		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187282	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene		0.29		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187392	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]		0.27		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216452	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	PB	Lead		0.05		1	0.58		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216462	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	MG	Magnesium		5.2		1	5520		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216472	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	MN	Manganese		1.6		1	14.6		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216482	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	HG	Mercury		0.04		1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	1/31/05	1/24/05
34187122	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]		1.8		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186942	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride		1.9		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183932	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183772	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]		0.47		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183792	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]		0.62		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34135562	2802S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	MNX	MNX		0.17		1	0.93		UG/L		NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34183892	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene		0.12		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216492	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	NI	Nickel		0.69		1	1.6		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34215372	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N		3.00E-03		1	497		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	2/15/05	1/24/05
34183982	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]		0.67		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183992	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184102	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]		0.7		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183812	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		0.66		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188062	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene		3.3		20	9.74		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34183832	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]		0.62		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34184062	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183662	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183782	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]		0.78		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188172	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]		1.6		20	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188182	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]		1.6		20	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188192	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]		3.3		20	9.74		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34218022	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate		0.35		1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/17/05	1/24/05
34183762	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]		0.83		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34488632	2804S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio				1	-12.05		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/24/05
34184142	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187492	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate		0.05		1	0.59		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/24/05
34184152	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183692	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol		0.31		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34216502	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	K	Potassium		17		1	3300		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34187322	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34184192	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene		0.52		1	1		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183672	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine		5.2		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34188122	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX		1		20	32.5		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34216512	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	SE	Selenium		2.8		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216522	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	AG	Silver		0.84		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34216532	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	NA	Sodium		14		1	17000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34187262	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34218002	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate		0.19		1	9490		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/24/05
34187222	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]		0.3		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187292	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]		0.49		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187182	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34188162	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl		1.6		20	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34216542	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.02		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34135572	2802S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	TNX	TNX		0.16		1	0.31		UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/11/05	1/24/05
34187132	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene		0.39		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186912	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]		2.5		1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183882	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]		0.74		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187022	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]		0.34		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187152	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]		0.44		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187072	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene		0.36		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34186882	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane		0.5		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34183962	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]		1		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34183952	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]		0.41		1	10.4		UG/L	U	NA	CS	SVOC	SW-846:827	General Engineering Labora	1/31/05	1/24/05
34187302	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]		0.6		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187352	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187342	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34188082	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]		0.85		20	3.25		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34188092	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]		0.78		20	3.25		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/25/05	1/24/05
34296842	2805S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	RAD	H-3	Tritium				1	0.07	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/24/05
34216552	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	U	Uranium		0.02		1	0.22		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/24/05
34216562	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	V	Vanadium		0.61		1	3.6		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34186852	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride		0.55		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187252	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]		0.25		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34187242	2801S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]		0.6		1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/2/05	1/24/05
34216572	2803S	RE16-05-57408	N	NA	DC	INV	Unfiltered		16-05997	0-0 FT	WS	WS	INORGANIC	ZN	Zinc		0.88		1	4.7		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/3/05	1/24/05
34193852	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193862	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193832	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193842	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34190862	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone		2.3		1	2.4		UG/L	J	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195502	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3		1.5		1	68600		UG/L		NA	CS	ALK	EPA:310.1	General Engineering Labora	1/31/05	1/26/05
34192072	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum		15		1	499		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34195292	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]		0.45		10	0.6		UG/L	J	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195302	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]		0.51		10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34193172	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline		1.7		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193182	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline		1.8		1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194132	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194142	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192082	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony		0.28		1	2		UG/L	U	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192092	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic		2.2		1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34194052	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene		0.89		1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194062	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene		0.96		1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192102	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium		0.22		1	2940		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191022	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene		0.33		1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194232	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194242	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194372	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194382	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194332	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194342	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194432	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194442	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene		0.56		1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194352	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene		0.52		1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05

34193972	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.87	1	10.3		UG/L	[illegible]	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193982	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.93	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191292	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191322	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192142	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34194272	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194282	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192152	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192162	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34195202	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.72	1	5		UG/L	U	NA	CS	CN	SW-846:901	General Engineering Labora	2/7/05	1/26/05
34488702	2827S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-85.85		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Stable Isotopes Laboratory	2/18/05	1/26/05
34194412	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194422	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193892	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.43	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193902	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.47	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191372	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191162	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191052	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191402	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193312	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.42	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193322	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.46	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191382	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193252	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.42	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193262	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.46	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191392	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193272	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193282	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.34	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194252	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194262	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.57	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34190792	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190922	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191012	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190852	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190942	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190912	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193532	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193542	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.52	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191042	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191122	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190952	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190992	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191072	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191102	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193912	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.92	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193922	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.99	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193812	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193822	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.59	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193492	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193502	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.52	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194152	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194162	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1.1	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193992	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194002	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1.1	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195232	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34193872	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.6		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193882	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.6	1	22.2		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194472	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.72	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194482	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.78	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195262	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.5	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194492	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.52	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194502	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.56	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195272	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.39	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194312	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.9	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194322	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.97	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194032	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.81	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194042	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.88	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34135852	2817S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.37		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34191192	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194172	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194182	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193952	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193962	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193042	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	115		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34194452	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.67	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194462	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.72	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193632	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193642	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.36	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193692	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193702	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1.1	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193412	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.44	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193422	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.48	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191132	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195312	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.5	10	22.3		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194392	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194402	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34190882	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192172	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	400		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34193452	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.61	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193462	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.66	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191242	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191352	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192182	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.28		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192192	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5610		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192202	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	34.3		UG/L		NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192212	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	NA	CS	METALS	SW-846:747	General Engineering Labora	2/1/05	1/26/05
34191082	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190902	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193672	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193682	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193352	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.46	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193362	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.5	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193392	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.61	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193402	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.66	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34135862	2817S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.17	1	1.2		UG/L	U	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34193592	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.11	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193602	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.12	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192222	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	1.8		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192052	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	229		UG/L		NA	CS	ANION	EPA:353.1	General Engineering Labora	2/17/05	1/26/05
34193772	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.66	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193782	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.71	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193792	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193802	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1.1	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34194012	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.69	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194022	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.74	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193432	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.65	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193442	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.7	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195222	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	1.6	10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34193472	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.61	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193482	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.66	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193932	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.2	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193942	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.6	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193132	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.2	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193142	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.6	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193372	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.77	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193382	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.83	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195332	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195342	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195352	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	1.6	10	4.87		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34193072	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	NA	CS	ANION	EPA:300	General Engineering Labora	2/17/05	1/26/05
34193332	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.83	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193342	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.89	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34488712	2827S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-12.11		RATIO		NA	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/26/05
34194092	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.2	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194102	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.6	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192032	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.7		UG/L	J	NA	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/26/05
34194112	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194122	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193192	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.31	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193202	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.33	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34192232	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3380		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191282	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194192	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.52	1	1		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194202	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.56	1	1.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193152	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	5.2	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193162	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	5.6	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34195282	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.51	10	29.9		UG/L		NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34192242	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	3.6		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34192252	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192262	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	17000		UG/L		NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191222	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193052	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	9080		UG/L		NA	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34191182	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191252	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191142	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene	0.33	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195322	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl	0.81	10	2.44		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34192272	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium	0.02	1	0.33		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34135872	2817S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	TNX	TNX	0.16	1	0.38		UG/L	J	NA	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34191092	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene	0.39	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190872	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	2.5	1	5		UG/L	UJ	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193572	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.73	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193582	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]	0.79	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34190982	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]	0.34	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191112	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]	0.44	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191032	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene	0.36	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34190842	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane	0.5	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193732	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193742	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]	1.1	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34193712	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.4	1	10.3		UG/L	UJ	NA	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193722	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]	0.43	1	11.1		UG/L	R	NA	RE	SVOC	SW-846:8270C	General Engineering Laboratories, Inc., Historical	2/7/05	1/26/05
34191262	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]	0.6	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191312	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191302	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195242	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]	0.42	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195252	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]	0.39	10	1.62		UG/L	U	NA	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34296932	2826S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	RAD	H-3	Tritium		1	0.07	2.88E-03	PCI/ML		NA	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/26/05
34192282	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	U	Uranium	0.02	1	0.17		UG/L	J	NA	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192292	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium	0.61	1	1.9		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34190802	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride	0.55	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191212	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]	0.25	1	1		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191202	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]	0.6	1	2		UG/L	U	NA	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192302	2818S	RE16-05-57409	N	NA	DC	INV	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc	0.88	1	4		UG/L	J	NA	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34194872	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	83-32-9	Acenaphthene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194882	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	208-96-8	Acenaphthylene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191482	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-64-1	Acetone	2.3	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195512	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	ALK-CO3+H	Alkalinity-CO3+HCO3	1.5	1	69600		UG/L		FD	CS	ALK	EPA:310.1	General Engineering Labora	1/31/05	1/26/05
34192312	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum	15	1	493		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34195432	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	19406-51-0	Amino-2,6-dinitrotoluene[4-]	0.45	10	0.58		UG/L	J	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195442	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	35572-78-2	Amino-4,6-dinitrotoluene[2-]	0.51	10	0.59		UG/L	J	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194532	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	62-53-3	Aniline	1.7	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195012	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-12-7	Anthracene	0.52	1	1		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192322	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony	0.28	1	2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192332	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic	2.2	1	3.5		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34194972	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	103-33-3	Azobenzene	0.89	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192342	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium	0.22	1	2910		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191642	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	71-43-2	Benzene	0.33	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195052	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	56-55-3	Benzo(a)anthracene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195132	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	50-32-8	Benzo(a)pyrene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195112	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	205-99-2	Benzo(b)fluoranthene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195162	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	191-24-2	Benzo(g,h,i)perylene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195122	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	207-08-9	Benzo(k)fluoranthene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194722	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	65-85-0	Benzoic Acid	10	1	20.6		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194592	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-51-6	Benzyl Alcohol	0.94	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192352	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium	0.08	1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34194702	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	111-91-1	Bis(2-chloroethoxy)methane	0.5	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194552	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	111-44-4	Bis(2-chloroethyl)ether	1.4	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195092	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	117-81-7	Bis(2-ethylhexyl)phthalate	1.3	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193082	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	BR(-1)	Bromide	0.09	1	200		UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34191892	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-86-1	Bromobenzene	0.27	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191582	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-97-5	Bromochloromethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191682	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-27-4	Bromodichloromethane	0.38	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191852	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-25-2	Bromoform	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191442	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-83-9	Bromomethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194982	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	101-55-3	Bromophenyl-phenylether[4-]	1.3	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191552	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-93-3	Butanone[2-]	2.3	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191982	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	104-51-8	Butylbenzene[n-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191962	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	135-98-8	Butylbenzene[sec-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191952	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-06-6	Butylbenzene[tert-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195062	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	85-68-7	Butylbenzylphthalate	0.7	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192362	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium	0.04	1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192372	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium	5.5	1	20600		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191512	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-15-0	Carbon Disulfide	1.9	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191622	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	56-23-5	Carbon Tetrachloride	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193112	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CL(-1)	Chloride	0.16	5	20100		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	2/14/05	1/26/05
34194772	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	59-50-7	Chloro-3-methylphenol[4-]	0.71	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194752	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-47-8	Chloroaniline[4-]	1.1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191792	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-90-7	Chlorobenzene	0.32	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191772	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	124-48-1	Chlorodibromomethane	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191452	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-00-3	Chloroethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191592	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-66-3	Chloroform	0.36	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191422	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-87-3	Chloromethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194822	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-58-7	Chloronaphthalene[2-]	0.41	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194562	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-57-8	Chlorophenol[2-]	0.42	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194932	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	7005-72-3	Chlorophenyl-phenyl[4-] Ether	0.87	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191912	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-49-8	Chlorotoluene[2-]	0.28	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191942	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-43-4	Chlorotoluene[4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192382	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium	0.5	1	1.1		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34195082	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	218-01-9	Chrysene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192392	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt	0.54	1	0.88		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192402	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper	1.4	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34195212	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CN(TOTAL)	Cyanide (Total)	1.7	1	5		UG/L	U	FD	CS	CN	SW-846:901	General Engineering Labora	2/7/05	1/26/05
34488722	2827S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	OTHER	DELTAH-2	Deuterium Ratio		1	-86.69		RATIO		FD	CS	STABLE_ISOTOPES	Generic:Deuterium Ratio	Stable Isotopes Laboratory	2/18/05	1/26/05
34195152	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	53-70-3	Dibenz(a,h)anthracene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194892	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	132-64-9	Dibenzofuran	0.43	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191992	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	96-12-8	Dibromo-3-Chloropropane[1,2-]	0.75	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191782	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-93-4	Dibromoethane[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191672	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-95-3	Dibromomethane	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192022	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.36	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194602	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-50-1	Dichlorobenzene[1,2-]	0.42	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192002	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.33	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194572	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	541-73-1	Dichlorobenzene[1,3-]	0.42	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192012	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194582	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-46-7	Dichlorobenzene[1,4-]	0.32	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195072	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-94-1	Dichlorobenzidine[3,3'-]	0.53	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191412	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-71-8	Dichlorodifluoromethane	0.43	1	1		UG/L	UJ	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191542	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-34-3	Dichloroethane[1,1-]	0.41	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191632	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	107-06-2	Dichloroethane[1,2-]	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191472	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-35-4	Dichloroethene[1,1-]	0.41	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191562	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	156-59-2	Dichloroethene[cis-1,2-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191532	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	156-60-5	Dichloroethene[trans-1,2-]	0.37	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194712	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	120-83-2	Dichlorophenol[2,4-]	0.49	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191662	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-87-5	Dichloropropane[1,2-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191742	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	142-28-9	Dichloropropane[1,3-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191572	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	594-20-7	Dichloropropane[2,2-]	0.5	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191612	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	563-58-6	Dichloropropene[1,1-]	0.44	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191692	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	10061-01-5	Dichloropropene[cis-1,3-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191722	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	10061-02-6	Dichloropropene[trans-1,3-]	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194902	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-66-2	Diethylphthalate	0.92	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194852	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	131-11-3	Dimethyl Phthalate	0.55	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194692	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	105-67-9	Dimethylphenol[2,4-]	0.49	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195022	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	84-74-2	Di-n-butylphthalate	1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194942	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	534-52-1	Dinitro-2-methylphenol[4,6-]	1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195372	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-65-0	Dinitrobenzene[1,3-]	0.81	10	2.44		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194882	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	51-28-5	Dinitrophenol[2,4-]	5.2	1	20.6		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195182	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.72	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195402	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-14-2	Dinitrotoluene[2,4-]	0.5	10	1.62		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195192	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.52	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195412	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	606-20-2	Dinitrotoluene[2,6-]	0.39	10	1.62		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195102	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	117-84-0	Di-n-octylphthalate	0.9	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194962	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	122-39-4	Diphenylamine	0.81	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34135882	2817S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	DNX	DNX	0.35	1	0.36		UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34191812	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-41-4	Ethylbenzene	0.21	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195032	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	206-44-0	Fluoranthene	0.52	1	1		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194922	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	86-73-7	Fluorene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34193092	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	F(-1)	Fluoride	0.05	1	97		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34195172	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	118-74-1	Hexachlorobenzene	0.67	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194762	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-68-3	Hexachlorobutadiene	0.33	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194792	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	77-47-4	Hexachlorocyclopentadiene	1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194652	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	67-72-1	Hexachloroethane	0.44	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191752	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	591-78-6	Hexanone[2-]	1.5	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195452	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	2691-41-0	HMX	0.5	10	23.9		UG/L		FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195142	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	193-39-5	Indeno(1,2,3-cd)pyrene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191502	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	74-88-4	Iodomethane	1.9	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192412	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron	13	1	396		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34194672	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	78-59-1	Isophorone	0.61	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191862	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-82-8	Isopropylbenzene	0.29	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191972	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-87-6	Isopropyltoluene[4-]	0.27	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192422	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead	0.05	1	0.29		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192432	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium	5.2	1	5570		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192442	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese	1.6	1	35.1		UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192452	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury	0.04	1	0.2		UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	2/1/05	1/26/05
34191702	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-10-1	Methyl-2-pentanone[4-]	1.8	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191522	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	75-09-2	Methylene Chloride	1.9	1	5		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194782	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-57-6	Methylnaphthalene[2-]	0.52	1	1		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194622	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	95-48-7	Methylphenol[2-]	0.46	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194642	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	106-44-5	Methylphenol[4-]	0.61	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34135892	2817S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	MNX	MNX	0.17	1	1.1		UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34194742	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	91-20-3	Naphthalene	0.11	1	1		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192462	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel	0.69	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192062	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NO3-NO2	Nitrate-Nitrite as N	3.00E-03	1	221		UG/L		FD	CS	ANION	EPA:353.1	General Engineering Labora	2/17/05	1/26/05
34194832	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-74-4	Nitroaniline[2-]	0.66	1	10.3		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194842	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-09-2	Nitroaniline[3-]	1	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194952	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-01-6	Nitroaniline[4-]	0.69	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194662	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	0.65	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195362	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	98-95-3	Nitrobenzene	1.6	10	4.87		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34194682	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-75-5	Nitrophenol[2-]	0.61	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194912	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-02-7	Nitrophenol[4-]	5.2	1	10.3		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194512	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	62-75-9	Nitrosodimethylamine[N-]	5.2	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194632	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	621-64-7	Nitroso-di-n-propylamine[N-]	0.77	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195472	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	88-72-2	Nitrotoluene[2-]	0.81	10	2.44		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195482	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-08-1	Nitrotoluene[3-]	0.81	10	2.44		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195492	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	99-99-0	Nitrotoluene[4-]	1.6	10	4.87		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34193122	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	C2O4	Oxalate	0.35	1	1000		UG/L	U	FD	CS	ANION	EPA:300	General Engineering Labora	2/17/05	1/26/05
34194612	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-60-1	Oxybis(1-chloropropane)[2,2'-]	0.83	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34488732	2827S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	OTHER	O18O16	Oxygen-18/Oxygen-16 Ratio		1	-12.02		RATIO		FD	CS	STABLE_ISOTOPES	Generic:Oxygen Isotope Ratio	Stable Isotopes Laboratory	2/19/05	1/26/05
34194992	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	87-86-5	Pentachlorophenol	5.2	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192042	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	CLO4	Perchlorate	0.05	1	0.41		UG/L	J	FD	CS	PERCHLORATE	SW-846:832	General Engineering Labora	2/11/05	1/26/05
34195002	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	85-01-8	Phenanthrene	0.52	1	1		UG/L	UJ	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194542	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	108-95-2	Phenol	0.31	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34192472	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium	17	1	3350		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191902	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	103-65-1	Propylbenzene[1-]	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195042	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	129-00-0	Pyrene	0.52	1	1		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194522	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	110-86-1	Pyridine	5.2	1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34195422	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	121-82-4	RDX	0.51	10	32.6		UG/L		FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34192482	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium	2.8	1	3.6		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34192492	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver	0.84	1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192502	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium	14	1	16100		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191842	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	100-42-5	Styrene	0.25	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34193102	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	INORGANIC	SO4(-2)	Sulfate	0.19	1	9120		UG/L		FD	CS	ANION	EPA:300	General Engineering Labora	2/12/05	1/26/05
34191802	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	630-20-6	Tetrachloroethane[1,1,1,2-]	0.3	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191872	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered	16-05998	0-0 FT	WS	WS	ORGANIC	79-34-5	Tetrachloroethane[1,1,2,2-]	0.49	1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05

34191762	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	127-18-4	Tetrachloroethene		0.33		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195462	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	479-45-8	Tetryl		0.81		10	2.44		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34192512	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.11		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34135902	2817S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	TNX	TNX		0.16		1	0.35		UG/L	U	FD	CS	HEXP	SW-846:833	Severn Trent Laboratories, Inc	2/10/05	1/26/05
34191712	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	108-88-3	Toluene		0.39		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191492	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]		2.5		1	5		UG/L	UJ	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194732	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	120-82-1	Trichlorobenzene[1,2,4-]		0.73		1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191602	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	71-55-6	Trichloroethane[1,1,1-]		0.34		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191732	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	79-00-5	Trichloroethane[1,1,2-]		0.44		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191652	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	79-01-6	Trichloroethene		0.36		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191462	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	75-69-4	Trichlorofluoromethane		0.5		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34194812	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	95-95-4	Trichlorophenol[2,4,5-]		1		1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34194802	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	88-06-2	Trichlorophenol[2,4,6-]		0.4		1	10.3		UG/L	U	FD	CS	SVOC	SW-846:827	General Engineering Labora	2/3/05	1/26/05
34191882	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	96-18-4	Trichloropropane[1,2,3-]		0.6		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191932	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	95-63-6	Trimethylbenzene[1,2,4-]		0.25		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191922	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	108-67-8	Trimethylbenzene[1,3,5-]		0.25		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34195382	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	99-35-4	Trinitrobenzene[1,3,5-]		0.42		10	1.62		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34195392	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	118-96-7	Trinitrotoluene[2,4,6-]		0.39		10	1.62		UG/L	U	FD	CS	HEXP	SW-846:832	General Engineering Labora	2/23/05	1/26/05
34296942	2826S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	RAD	H-3	Tritium				1	0.07	3.20E-03	PCI/ML		FD	CS	H3	GENERIC:L	University of Miami Tritium L	3/15/05	1/26/05
34192522	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	U	Uranium		0.02		1	0.18		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192532	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium		0.61		1	3.2		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34191432	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	75-01-4	Vinyl Chloride		0.55		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191832	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	95-47-6	Xylene[1,2-]		0.25		1	1		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34191822	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	ORGANIC	XYLENE[1,3	Xylene[1,3-]+Xylene[1,4-]		0.6		1	2		UG/L	U	FD	CS	VOC	SW-846:826	General Engineering Labora	2/9/05	1/26/05
34192542	2818S	RE16-05-57411	N	NA	DC	QC	Unfiltered		16-05998	0-0 FT	WS	WS	INORGANIC	ZN	Zinc		0.88		1	4.9		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192552	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	AL	Aluminum		15		1	239		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192562	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	SB	Antimony		0.28		1	2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192572	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	AS	Arsenic		2.2		1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192582	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	BA	Barium		0.22		1	2940		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192592	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	BE	Beryllium		0.08		1	0.2		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192602	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	CD	Cadmium		0.04		1	1		UG/L	U	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192612	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	CA	Calcium		5.5		1	20800		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192622	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	CR	Chromium		0.5		1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192632	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	CO	Cobalt		0.54		1	2.6		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192642	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	CU	Copper		1.4		1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34192652	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	FE	Iron		13		1	181		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34192662	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	PB	Lead		0.05		1	0.09		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192672	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	MG	Magnesium		5.2		1	5640		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192682	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	MN	Manganese		1.6		1	27.8		UG/L		FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192692	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	HG	Mercury		0.04		1	0.2		UG/L	U	FD	CS	METALS	SW-846:747	General Engineering Labora	2/1/05	1/26/05
34192702	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	NI	Nickel		0.69		1	2		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192712	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	K	Potassium		17		1	3380		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192722	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	SE	Selenium		2.8		1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/2/05	1/26/05
34192732	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	AG	Silver		0.84		1	5		UG/L	U	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192742	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	NA	Sodium		14		1	16300		UG/L		FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
34192752	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	TL	Thallium		0.02		1	0.04		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192762	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	U	Uranium		0.02		1	0.15		UG/L	J	FD	CS	METALS	SW-846:602	General Engineering Labora	2/1/05	1/26/05
34192772	2818S	RE16-05-57412	N	NA	DC	QC	Filtered		16-05998	0-0 FT	WS	WS	INORGANIC	V	Vanadium		0.61		1	1.7		UG/L	J	FD	CS	METALS	SW-846:601	General Engineering Labora	2/1/05	1/26/05
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