LANL TA-73

Department of Energy
National Nuclear Security Administration
Los Alamos Site Office
Los Alamos, New Mexico 87544

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NMED Hazardous Waste Bureau

Ms. Sandra Martin
NMED, Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Dear Ms Martin:

Subject: Interim Measures (IM) Completion Report, Solid Waste Management Unit 73-001(a), Technical Area 73

With this letter the Department of Energy, National Nuclear Security Administration (DOE/NNSA) is transmitting the Interim Measures Completion Report for the subject site. This report is being delivered in accordance with the time frame required in your July 23, 2003 letter and captures all field activities and sampling results. Two copies of the subject IM Report are included for your review and approval.

If you have questions or comments, please call me at (505) 667-5808.

Sincerely,

David R Gregory

David R. Gregory
Federal Project Director
DOE/NNSA

Enclosure: Certification Form
Interim Measure Completion Report

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See page 2

4905

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CERTIFICATION

CERTIFICATION BY: THE DEPARTMENT OF ENERGY/ NATIONAL NUCLEAR SECURITY ADMINISTRATION

Document Title: Interim Measures Completion Report Solid Waste Management Unit 73-011(a), Technical Area 73

I certify under penalty of law these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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.

David R Gregory

David Gregory, Federal Project Director
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March 1, 2004
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ER2004-0094

Department of Energy

Interim Measures Completion Report Solid Waste Management Unit 73-001(a), Technical Area 73

LOS ALAMOS, NM 87544

Interim Measures Completion Report, SWMU 73-001(a), Technical Area 73

March 1, 2004

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EXECUTIVE SUMMARY

This report details the activities conducted during execution of the Interim Measure at Solid Waste Management Unit (SWMU) 73-001(a) Airport Landfill Site at Technical Area-73 (TA-73), in Los Alamos, New Mexico.

The IM was planned and completed to comply with New Mexico Surface Water Regulations, prohibiting debris in a watercourse (NMWQCC 1995), and is part of ongoing Resource Conservation and Recovery Act (RCRA) corrective action activities at the airport landfill SWMUs. The IM started August 6 and confirmatory sampling was completed September 10, 2003. Approximately 430 yd^3 were removed from four drainages (A, B, C, and D2) part of SWMU 73-001(a). Debris was transported to the Los Alamos County Municipal Landfill for recycling or disposal. The debris, consisting of steel, tires, wood, automobile components, plastic, and miscellaneous rubbish was removed using a skyline logging system to minimize the impact to the trees, soils and tuff on this steep canyon side. Personnel from NMED Surface Water and Hazardous Waste Bureaus inspected the first and most complicated drainage (D2) to ensure that IM objectives were met.

Following debris removal, sixty soil and sediment samples were collected and analyzed for semivolatile organic compounds (SVOCs), target analyte list metals, polychlorinated biphenyls (PCBs), pesticides, perchlorate, $^{239/240}Pu$, ^{137}Cs, and ^{90}Sr. Total petroleum hydrocarbon (TPH) analysis was added and performed on 34 select sediment samples.

Risk screening identified several inorganic and organic contaminants of potential concern (COPCs). Although COPCs were identified in the screening assessment, the subsequent risk evaluation indicated no unacceptable risks or doses to human health and no unacceptable risk to ecological receptors. Based on the findings of this risk evaluation additional sampling, characterization or corrective action at this site is not warranted.

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ACRONYMS

AOC	area of concern
BV	background value
CCV	continuing calibration verification
COC	chain-of-custody
COPC	contaminants of potential concern
COPEC	contaminants of potential ecological concern
CQC	contractor quality control
CRDL	contract required detection limits
CVAA	cold vapor atomic absorption
DDD	dichlorodiphenyldichlorothane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DOE	U.S. Department of Energy
DOT	Department of Transportation
DQO	data quality objectives
EPA	U.S. Environmental Protection Agency
ER	environmental restoration
FAA	Federal Aviation Administration
FSP	field sampling plan
FTL	field team leader
GIS	geographic information system
GC/MS	gas chromatograph/mass spectrometer
GFAA	graphite furnace atomic absorption
GFPC	gas flow proportional counting
GMS	gamma spectrometers
GPS	global positioning system
HI	hazard index

HPLC	high-purity organic free water
HPT	High Performing Team
HSO	health and safety officer
HTRW	hazardous, toxic, or radioactive
IC	ion chromatography
ICP	inductively coupled plasma
ICV	initial calibration verification
IDL	instrument detection limit
IDW	investigation derived waste
IM	Interim Measure
LAC	Los Alamos County
LANL	Los Alamos National Laboratory
LCS	laboratory control sample
LIMS	laboratory information system
MDC	minimum detectable concentrate
MDL	method detection limit
MQO	measurement quality objectives
MS	matrix spike
MSD	matrix spike duplicate
MSGP	multi-sector general permit
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
PAH	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PM	project manager
PPE	personal protective equipment
ppb	parts per billion
ppm	parts per million

PrM	program manager
PQL	practical quantitation limits
PQO	project quality assurance officer
QAO	quality assurance officer
QAP	quality assurance plan
QAPP	quality assurance project plan
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recover Act
RCT	radiation control technician
RFD	reference doses
RFI	Resource Conservation and Recover Act Feasibility Investigation
RPD	relative percent difference
RPM	remedial project manager
SAL	screening action level
SAP	sampling and analysis plan
SDC	sample and document custodian
SDG	sample delivery group
SF	slope factor
SMO	sampling management office
SOPs	standard operating procedures
SSHASP	Site-Specific Health and Safety Plan
SSL	soil screening levels
STL	sampling team leader
SVOCs	semivolatile organic compounds
SWMU	solid waste management unit
SWPPP	Storm Water Pollution Prevention Plan
TA	technical area

TAL	target analyte list
TPH	total petroleum hydrocarbon
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
UTL	upper tolerance limit
WMP	waste management plan

1.0 INTRODUCTION

The purpose of the IM at Solid Waste Management Unit (SWMU) 73-001(a), Technical Area 73 (TA-73), was to remove and dispose of the surface debris in four drainages located on the south side of Pueblo Canyon, and collect and analyze soil samples to identify any residual contaminants. This IM was completed to fulfill the requirements of the New Mexico Surface Water Regulations, prohibiting debris in a watercourse (NMWQCC 1995), and is part of ongoing Resource Conservation and Recovery Act (RCRA) corrective action activities at the airport landfill SWMUs (*Figure 1*).

The drainages (A, B, C, and D2) are located on the south side of the Pueblo Canyon and adjacent to the Los Alamos County (LAC) Airport in Los Alamos, New Mexico. Pueblo Canyon is undeveloped except for county utility operations and is used moderately for recreational purposes. The drainage areas are on LAC property. The mesa top area, adjacent to the drainages, is leased to LAC from the U.S. Department of Energy (DOE). The LAC operates the county municipal airport located between Los Alamos and Pueblo Canyons (IM Plan, DOE 2003).

Debris was removed from the drainages using a skyline logging system in combination with manual retrieval. Approximately 430 yd^3 of debris was removed from the drainages, loaded into roll-off containers, and transported to the LAC Landfill for recycling or disposal. The skyline logging system was chosen by the DOE because of safety, environmental, and relative cost considerations and to minimize the impact to the soils and surrounding vegetation in steep and undulating terrain.

The municipal debris included steel, tires, wood, automobile components, plastic, and miscellaneous debris. Waste quantities for tires, steel, and miscellaneous debris is listed in Table 1. In accordance with the IM Plan, (DOE, June 2003 and approved by NMED, July 2003 here after referred to as IM Plan), debris items that were buried greater than 50% and debris items whose handling and removal presented a real and credible threat to workers (including concrete) remained in place.

Sixty confirmation samples (15 per drainage) were collected and analyzed for SVOCs, target analyte list metals, PCBs, pesticides, perchlorate, $^{239/240}Pu$, ^{137}Cs, and ^{90}Sr. TPH analysis was added to the list of analytes and performed on 34 select sediment samples. Contaminants detected in the drainage sediment include inorganic chemicals, organic chemicals (PCBs, pesticides, and SVOCs), and radionuclides. The two contaminant groups that are the primary contributors to the overall risk at this site are polycyclic aromatic hydrocarbons (PAHs) and PCBs.

During agency planning, the HPT determined that confirmation sample data needed to meet at minimum, EPA Level III data quality to support closure decisions for Drainages A, B, C, and D2. Based on this conclusion, a field sampling plan (FSP) and quality assurance project plan (QAPP) were developed as a framework for achieving acceptable data usability. Data validation and an assessment of data quality were completed as part of the sampling and analysis effort. The project data provided by the contract laboratory met all Level III reporting and quality requirements, with minor data quality exceptions due to quality control indicators. A summary of this information is provided in Appendix C.

2.0 BACKGROUND

SWMU 73-001(a) is an inactive municipal landfill within TA-73 and listed in Module VIII, Table A, of the Laboratory's Hazardous Waste Facility Permit (LANL 1990, 1585; 1994). This inactive landfill is located on DOE property at the Los Alamos County Airport. The mesa top has served as an airport facility since the late 1940s. Los Alamos County plans to maintain and operate this airport indefinitely.

The Airport Landfill received municipal waste from the laboratory and Los Alamos town site from 1943 until 1973 (IM Plan, DOE 2003). The landfill was located on the mesa top primarily because it was a secure and convenient location with easy access, was within close proximity to the Los Alamos town site, and had plenty of room for expansion (RFI, LANL 1998).

Solid waste was collected twice weekly from the laboratory and the town site and was burned on the edge of the hanging valley located adjacent to the airport runway (Miller 1963). This intentional burning ceased in 1965, when the county assumed operation of the landfill (Miller and Shaykin 1966). Heavy equipment was used to push the burned residues and ash into whichever permanent disposal area within the landfill was being used at the time (RFI, LANL 1998).

Debris associated with this landfill spilled into at least four drainages leading from the mesa top area down toward the bottom of Pueblo Canyon. Debris found in these drainages along the side slopes of the south side of Pueblo Canyon is composed of tires, car bodies, pieces of concrete and asphalt, empty drums, galvanized steel trash cans, and other miscellaneous debris items. The mesa top area is leased to LAC from the DOE. The LAC operates the county municipal airport located between Los Alamos and Pueblo Canyons. The drainage areas are on LAC property (LANL 1998).

DOE/LANL conducted a multi-phase Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) from 1994 to 1997 on TA-73. The investigation was conducted in several phases that included three primary tasks:

- Task 1, Field Surveys,
- Task 2, Surface Sampling, and
- Task 3, Subsurface Sampling.

As part of these tasks, several activities were completed, with geomorphic mapping and channel sediment sampling being the most relevant to the IM. During the geomorphic mapping, four primary drainages were identified that originated at or transected the surface of the landfill and extended to the canyon floor. Three sediment accumulation areas were identified in each of these four drainages from which channel sediment samples were collected. Two sediment samples were also collected from a secondary drainage immediately west of Drainage D2. A total of 15 sediment samples, including one quality assurance/quality control (QA/QC) duplicate, were collected from 13 locations (IM Plan, DOE 2003).

Tables 2-4 list the inorganic, radionuclide, and organic COPCs that were identified for sediment in the 1998 LANL RFI report summarizing the COPC, depth, and concentration or activity for each. The locations where the COPCs were detected are depicted in Figures 2.2-2, 2.2-3, and 2.2-4, of the IM Plan (DOE 2003).

A site plan (Figure 2) depicts remediated Drainages A, B, C, and D2 along the south side of the Pueblo Canyon with current site structures, topographic features, and sample locations. Figure 3 depicts sample locations with sample identification numbers and those analytes identified as COPCs. Figure 4 depicts the approximate extent of former large debris accumulation areas remediated during the execution of the interim measure.

A number of investigative activities have occurred at SWMU 73-001(a) and in the impacted drainages that bisect it. LANL began conducting field investigations in phases at the site in April of 1994 continuing through September of 1997. These efforts included the following three tasks.

- Task 1, Field Surveys,
- Task 2, Surface Sampling, and
- Task 3, Subsurface Sampling.

As part of these tasks, geomorphic mapping was completed. This effort concluded that four primary drainages either originate at, or bisect, the landfill extending to the Pueblo Canyon floor. In addition, field surveys identified four sediment accumulation areas in the drainages. Sediment samples were collected from each of the accumulation areas and nine locations throughout the drainage area at depths ranging from the ground surface to 1.67 ft.

The sediment samples obtained from the drainages were submitted to a LANL-DOE qualified laboratory for analysis, to determine what contaminants were present. Following analysis, the results underwent data validation in accordance with LANL SOPs.

None of the data used by LANL in the data evaluation, as presented in the *Interim Measures Plan for SWMU 73-001(a),* were rejected. A number of contaminants were qualified with 'J' laboratory and/or validation flags, indicating some variability in reported results. However, only two of the maximum concentrations used to perform risk screening evaluations, were qualified 'J' as estimated quantities. Both were detected at very low levels, and consequently contributed very little to the overall risk. There are no indications that any of the data utilized was outside of quality requirements sufficient to disqualify their use. The data utilized for this evaluation was of sufficient quality to aid in decision making at the site. The results of the initial RFI effort indicate the contaminants at the site include:

- Polynuclear aromatic hydrocarbons (PAHs),
- PCBs,
- Pesticides,
- Trace metals, and
- Radionuclides.

Maximum concentrations for contaminants detected in Drainages D1-D4 are presented in Tables 2–4. All were identified as being above background in the *Interim Measures Plan for PRS 73-001(a),* (LANL 2003).

Contamination is probably linked to past landfill use and operation. For example, the presence of widespread PAHs throughout the drainages may be the result of burning at the landfill or associated with asphalt.

PCBs were widely used as coolant materials in electrical transformers throughout the period of operation of the Los Alamos Airport Landfill. Their detection in area soils during the RFI sampling efforts does not clearly define where or from what source, the PCBs may have originated. There is insufficient historical data to determine if a source is present upgrade of the Drainages A, B, C, and D2.

Elevated levels of metals found in surface and near surface soils may be the result of the degradation of metal debris from the landfill. Use of pesticides 4,4'-DDE and 4,4'-DDT was commonplace in the 1940s and 1950s in an attempt to eradicate insects [primarily mosquitoes] while preparing to construct airfields. It is possible that their presence in this area resulted from such activities, although no documentation was available. These compounds contributed very little to the overall risks quantified at the site using historical information.

In the *Interim Measures Plan for PRS 73-001(a),* (DOE 2003), human health risk screening evaluations calculated from the RFI data concluded that the cumulative risk to residential receptors was 3.4×10^{-5}.

3.0 SCOPE OF ACTIVITIES

The scope of activities associated with this IM include the following:

- Identification of clean-up criteria,
- Removal of debris from four drainages,
- Waste segregation and disposal,
- Site restoration and erosions control,
- Confirmatory sampling and analysis, and
- Risk Assessment
- Completion of the IM Completion Report.

3.1 Identification of Cleanup Criteria

No activities were required for the identification of the clean-up criteria. The criteria followed for clean up during this project are those promulgated in the surface water regulations. This variance was proposed by the Surface Water Bureau in a letter to EPA VI (October 3, 2001). EPA VI accepted the NMED's proposal as consistent with NPDES and storm water regulations (April 16, 2002). Both agencies, state and federal, were in agreement that meeting the clean-up criteria discussed in Section 6.0 of this report (Section 3.0, IM Plan) constitutes the successful completion of this IM.

3.2 Removal of The Debris From the Four Drainages

- Development of a Site-Specific Health and Safety Plan,
- Daily safety meetings to address personnel and equipment,
- Mobilization of the Yarder and necessary support equipment,
- Staking each drainage for alignment of the skyline,
- Delivery of appropriate sanitation facilities,
- Delivery of base material for each Yarder pad and lay down area,
- Grading of the base material,
- Consolidation of the debris along each skyline corridor (corresponding to each drainage),
- Field screening of debris in each drainage for radioactive materials,
- Removal of debris,
- Daily reporting, and
- Inspections of each completed drainage by the DOE and the U.S. Army Corps of Engineers (USACE) prior to mobilization to the next drainage or demobilizing from the project site. Note that the first drainage cleaned, drainage D2, was inspected by the NMED on August 20, 2003, prior to mobilizing to drainage B.

3.3 Waste Segregation and Disposal of Debris From the Four Drainages

- Delivery of roll-off boxes,
- Segregation of tires for recycling from steel and other municipal trash,
- Unloading the debris from the Yarder and loading the debris into roll-off boxes,
- Field screening of removed debris for radiation levels prior to disposal,
- Scheduling roll-off box transportation to the LAC Landfill,
- Coordination of the delivery of the debris to the LAC Landfill,
- Delivery of street sweeper to maintain the airport tarmac during transportation activities,
- Documentation of each roll-off box load of debris removed from each of the drainages.

3.4 The Scope of Activities Associated With Site Restoration and Erosion Control

- Installation of 12 silt fences,
- Delivery of DOE approved mulch,
- Transportation of the mulch to affected areas in each drainage,

- Distribution of the mulch in the appropriate areas of the drainages,
- Re-seeding each drainage with a DOE approved seed mixture and at an approved application rate,
- Daily inspections of the silt fences ensuring proper function, and
- Fence repairs.

3.5 The Scope of Activities Associated With Confirmatory Sampling and Analysis

- Development of a sampling and analysis plan for review and approval,
- Scheduling the delivery of all sample containers, chain-of-custody (COC) forms, and related sampling supplies,
- Scheduling the delivery and receipt of the samples at the laboratory,
- Staking and surveying all sampling locations under the direction of the DOE,
- Photographing each sample location,
- Documenting each sample location,
- Obtaining soil samples from each drainage,
- Properly handling, packaging, and shipping samples in appropriate containers to the laboratory for analysis,
- Laboratory analysis, and
- Data validation.

3.6 Risk Assessment

- COPC identification
- Conceptual site model
- Human health screening assessment
- Ecological screening assessment

3.7 The Scope of Activities Associated With the IM Completion Report

- Review of the RFI Report and the IM Plan,
- Evaluation of historical and post-removal sample data,
- Development of appropriate summary tables in accordance with DOE guidance,
- Development of narrative related to sampling procedures, sampling activities, field investigation results, evaluation of data trends, and conclusions and recommendations related to observed site conditions,
- Development of tabulated list of the inorganic, radionuclide, and organic COPCs that were identified for sediment based on DOE guidance,
- Development of figures that accurately depict the confirmation sample locations, confirmation sample location numbers, confirmation sample locations where COPC were detected, topographic features, the locations of the drainages, the approximate locations of the large debris accumulation areas prior to removal, and current site improvements (to include Monitoring Well R-4 in the emergency landing field),
- Development of a discussion on the technical procedures used to implement the IM Plan, and
- Development of a Risk Assessment.
- Conveyance of all information derived from the field effort into an acceptable format specified by DOE

4.0 REMOVAL ACTIVITIES

Debris was removed from Drainages A, B, C, and D2 using a skyline logging system. Material was removed from the drainages by the skyline carriage system and offloaded to staging areas (on the mesa top) for waste segregation. Materials were segregated and compacted, as possible,

and prepared for final disposal. Materials were segregated and loaded into roll-off bins for disposal. The following sections detail the removal activities completed in the drainages.

4.1 Site Preparation and Debris Removal

Upon completion of the kickoff meeting and site safety meetings on August 6, 2003, site preparation began by scheduling the delivery of the portable restrooms, roll-off boxes, and a street sweeper for maintenance of the airport tarmac. To ensure that all debris removal activities complied with the health and safety plan, the health and safety officer was on-site at all times during fieldwork.

In accordance with Federal Aviation Administration (FAA) requirements, a Form 7460.1 (construction notification) was completed and submitted on June 27, 2003 prior to any construction work at the FAA regulated airport. Also in accordance with the FAA requirements, the airport tarmac was properly maintained with a vacuum operated street sweeper to ensure the removal of any small rocks and/or debris deposited on the tarmac from debris removal operations. A flag person was also posted to assist in truck-traffic control during transportation operations, as needed. Further, the Yarder was equipped with an FAA required 3 ft × 3 ft orange and white flag and the boom was laid down in the horizontal position at the end of each workday.

Silt fences were constructed and maintained across the bottom of each drainage prior to beginning debris removal work. A total of 12 silt fences were constructed across the bottom of Drainages A, B, C, and D2. The number of silt fences constructed deviated from the original quantity of four because many of the drainages appeared to split into minor drainages near the confluence of the Pueblo Canyon.

On August 6, 2003, crews began staking and labeling each of the drainages (A, B, C, and D2) to establish an alignment for the main line of the Skyline System within each drainage. Field crews began consolidating debris within the four drainages. . Debris collection and consolidation commenced with Drainage D2 and progressed to C, B, and A. The field crews made a minimum of six passes through and across each drainage between August 6 and August 14, 2003 to consolidate the debris along each skyline corridor. Roll-off boxes were placed at locations convenient to Yarder operations and acceptable to the DOE, USACE, Airport Manager, and the health and safety officer.

Each lay-down area was identified prior to mobilizing the heavy equipment to the drainage locations. The lay-down areas included the work area to be utilized for the staging of equipment, stockpiling recyclable materials and debris, and loading of materials. Yarder pads and landings were constructed at the airport facility using imported base material at the top of Drainage D2 and C. For Drainages A and B, Yarder pads were constructed at the airport facility using native materials, as these locations were not over the former landfill. Prior to construction, all pads and landing areas were inspected and approved by the DOE.

Sections of the airport fence were temporarily opened at the top of Drainage A to allow for the removal of the debris with the Yarder. The fence gap was securely closed at the end of each workday to prevent wildlife and people from entering the airport premises. At the end of the project, the fence was permanently repaired and approved by the Airport Manager.

On August 18, 2003, bulk debris removal operations commenced at Drainage D2 using the logging system. Debris removal progressed from Drainage D2, to B, then to A, and finally to Drainage C. All loads were transported uphill from the specified drainages. The Yarder lifted the debris with the mainline, skyline, and carriage to the top of the mesa where it was then unloaded from the carriage and loaded into a roll-off box with a Caterpillar 966 loader. The Yarder utilized four guy wires connected to counter weights on the opposite side of the skyline for stability. Two-tracked Caterpillar 561 crawlers weighing approximately 36,000 lbs each provided the guy wire counter weights. All guy wires were appropriately sized in accordance with the minimal requirements in the Site-Specific Health and Safety Plan (SSHASP).

The Yarder utilized in this debris removal effort was designed and manufactured by Madill/Thunderbird and is a Model TMY40. The model TMY40 Yarder was equipped with a carriage manufactured by Eagle Carriage and Machine, Inc. The carriage traveled up and down the skyline and was used to connect and transport loads of debris up the skyline.

The Yarder required an operator at all times while in use. Loads were connected to the carriage and unloaded at each landing area by experienced choke setters. Rigging requirements were dictated in the SSHASP for all work associated with this project. Debris was removed from the drainages using chokers, nets, and slings as approved in the SSHASP. All chokers, hitches, slings, links, and rings were rated above the anticipated loads to be lifted and transported in accordance with the SSHASP.

A 2,000-gallon water truck was on site at all times during the operation of the Yarder to provide fire suppression capabilities in accordance with the SSHASP. Precautions were taken to prevent fires caused by heat buildup associated with friction of the mainline against trees or other materials. All work was completed without any fire incidents.

DOE personnel inspected the drainages individually upon completion of the debris removal. The NMED was also invited to attend these inspections and participated in the inspection of Drainage D2. The purpose of these inspections was to ensure that the objectives of the removal phase of the IM were met, and acceptable to NMED, before moving the Skyline System to the next drainage.

Drainage D2 was inspected and approved on August 20, 2003, Drainage B was inspected and approved on August 21, 2003, Drainage A was inspected and approved on August 26, 2003, and Drainage C was inspected and approved on August 25, 2003. The inspection of Drainage A was considered the final inspection on the project. Authorization to demobilize was given to the contractor by the DOE on August 26, 2003. Upon completion of the final inspection, the total volume of debris removed from the above drainages was calculated at 430 yd^3.

The contractor utilized 20 yd^3 roll-off boxes and all roll-off boxes were filled to 100% capacity, with the exception of the final load. This method allowed for simple tracking of waste volumes during active debris removal. Each roll-off box was rated at ten tons and no overload conditions were encountered during the performance of this work.

Volume certification sheets were maintained on site and tallied at the end of each day to enable monitoring of the daily and cumulative removal progress. Table 1 lists the volume by type of debris, removed from each drainage and lists the dates of these activities. A total of 180 yd^3 of debris was removed from Drainage D2, 80 yd^3 of debris was removed from Drainage B, 120 yd^3 of debris was removed from Drainage A, and 50 yd^3 of debris was removed from Drainage C for a total of 430 yd^3.

4.2 Waste Segregation and Disposal

Tires were segregated from all other debris for recycling at the LAC Landfill. A total of 120 yd^3 of tires were removed during this effort. All scrap metal and other debris was transported to the LAC Landfill for disposal. Steel that was feasible to compact was compacted using the weight of the hydraulic loader. Flat steel and automobile frames that could not be compacted were loaded directly into a roll-off box. A total of 310 yd^3 of steel and other miscellaneous debris was transported to the LAC Landfill for disposal.

LANL ER Project - Standard Operating Procedures for Waste Characterization (ER-SOP-01.10, R1) were followed for the disposal of the municipal waste at the LAC landfill.

All removed debris and recyclable materials were managed by loading materials into roll off bins or trucks as soon as possible. This action enabled the waste removal team to minimize the potential for off-site migration caused by precipitation or wind. Transporters were required to cover all roll off boxes during transport to the LAC Landfill.

During the removal of debris from Drainage C, 11 drums containing various volumes of black tar were encountered and removed. A temporary containment area was constructed near the head of Drainage C. The containment area was lined with plastic and bermed. All leaking drums or drums containing liquids were over packed prior to placement into the containment area. The drums were then placed into the containment area for the storage and sampling, prior to disposal by the DOE.

Copies of all disposal receipts from the LAC landfill are located in Appendix D. They include: the date of disposal, the time, the gross weight of the load, the tare weight, and the net weight of the debris.

5.0 FIELD INVESTIGATION RESULTS

The overall scope of the Los Alamos Airport Landfill – Waste Removal Project was to remove solid waste in Drainages A, B, C, and D2, resulting from past landfill operations and to sample and report on the analyses. The objective of the sampling and analysis effort in these drainages was to effectively characterize the conditions that exist in each due to contact with the waste, and to determine if residual contamination is present, identify extent of residual contamination, and determine if additional characterization or corrective action is warranted.

To accomplish the stated sampling objectives, the field effort planned for the collection of up to 75 sediment samples, 5 field duplicates, and 5 field blanks for all of the major laboratory analyses to include:

- SVOCs,
- Target analyte list metals,
- PCBs,
- Pesticides,
- Perchlorate,
- ^{239}Plutonium,
- ^{137}Cesium, and
- ^{90}Strontium.

Total petroleum hydrocarbons (TPH) were identified as a contaminant of potential concern following the approval of the IM Plan. Because of the potential presence of TPH, field sample planning was structured to allow for biased sampling whenever areas of staining, stressed vegetation, or areas with odors were identified. Each sample collected was analyzed for both of the extractable fractions of TPH including diesel and motor oil.

The steepness of the area terrain generally prevents the build-up of sediments in the drainage system. However, within the lower reaches of each drainage, as they begin to flatten and join the Pueblo Canyon drainage system, there are areas where sediments accumulate. In accordance with the IM Plan, a second sediment sample was to be collected whenever sediment exceeded 2 ft in thickness. The second sample was to be collected approximately 2 ft below the first or at the bedrock interface, whichever was encountered first.

To ensure that project data quality objectives (DQOs) were met, a DOE certified laboratory was selected. In addition, during the procurement of the laboratory, a number of quality requirements related to schedule, sample handling and analysis, and report deliverables were specified to ensure that the data met project data requirements. Delivery schedules by the analytical laboratory were met and the laboratory adhered to project quality requirements.

5.1 Sampling Procedures

Following waste removal, sampling was completed in Drainages A, B, C, and D2 according to the IM Plan. The IM plan stated that "in general, if there is no visible evidence of contamination beneath removed debris, confirmatory samples will be collected at approximately 30-ft. intervals. As a standard practice confirmatory samples will also be colleted from any stained soil beneath removed debris. The samples will be surface soil or sediment grab samples collected using the spade-and-scoop technique. At sample locations where the soils are more than 24 in. deep, a second sample will be collected approximately 2 ft below the 1st."

The IM plan specified a total of 60 soil samples, 15 sample locations per drainage. The IM plan provided for and the sampling plan (DOE 2003) was written to meet sampling and analysis objectives of the IM to determine if residual contamination persists at detectable levels.

During field inspections conducted during and after debris removal it became apparent that biased sampling was the best means to achieve the sampling and analysis objectives of this IM.

NMED-HWB personnel were asked by DOE to participate in selection of sample locations, but were not able to assist. After discussions with NMED HWB, DOE made the decision to put greater emphasis on biased sampling immediately below locations of obvious soil staining, greatest debris concentration, and sediment accumulation areas. At these selected areas, sampling locations (two to three) were positioned perpendicular across drainages. Sampling was conducted from lower to higher elevations to prevent cross contamination.

Per the provisions of the project sampling and analysis plan (SAP), biased sampling was also conducted for TPH sample collection. The basic approach was to identify all areas where asphalt material was identified in each drainage during site surveying. Whenever asphalt was identified, TPH samples were collected at points downgrade until visual evidence of asphalt dissipated. By using this approach, TPH results were conservative, and provided a comprehensive look at the lateral extent of TPH deposition.

Sample collection was completed in accordance with the requirements outlined in the following LANL ER Project SOPs:

- ER-SOP-01.01, Rev. 1, *General Instructions for Field Investigations*, 12/13/01,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01,
- ER-SOP-01.03, Rev. 1, *Handling, Packaging, and Shipping of Samples*, 4/29/02,
- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03,
- ER-SOP-06.09, Rev. 1, *Spade and Scoop Method for Collection of Soil Samples*, 2/08/01,
- ER-SOP-06.10, Rev. 1, *Hand Auger and Thin-Wall Tube Sampler*, 8/26/98,
- ER-SOP-06.14, Rev. 0, *Sediment Material Collection*, 3/16/92,
- ER-SOP-01.05, Rev. 1, *Field Quality Control Samples*, 12/17/01,
- ER-SOP-15.09, Rev. 0, *Chain of Custody for Analytical Data Packages*, 3/27/00, and
- ER-SOP-1515, Rev. 0, *Sample Management Office: Receiving and Shipping of Analytical Samples*, 10/30/00.

Because sediment depths rarely exceeded 2 ft, sample collection was completed using ER-SOP-06.09, Rev. 1, *Spade and Scoop Method for Collection of Soil S*amples in concert with ER-SOP-06.14, Rev. 0, *Sediment Material Collection*. If sediment thicknesses varied significantly, the FTL was prepared to use hand augers and/or shovels to obtain representative samples at depth. To minimize the quantities of investigation derived waste (IDW) generated during sampling, the field team procured and brought to the work site, sufficient stainless steel:

- Scoops,
- Spades,
- Shovels,
- Brushes, and
- Hand augers.

Equipment decontamination occurred in accordance with LANL ER-SOP-01.08, Rev. 1, *Field Decontamination of Drilling and Sampling Equipment*. Following sample collection, all excess sediment at the sampling location was removed from the sampling device using a stiff nylon brush. This technique is referred to as "dry decontamination". The sample device was then covered in a plastic garbage bag to prevent the escape of any remaining residuals, not to be used again for this sampling effort. Similarly, the nylon brush used to perform dry decontamination was shaken to remove all loose residuals and also placed in the garbage bag. Once isolated, the nylon brush was not used again for decontamination on this sampling effort. Sampling equipment was segregated by drainage, and kept separated. Following completion of field activities, a radiation control technician performed a screen of all equipment and corresponding nylon brushes for radiation levels. Because none of the field equipment showed unsafe levels of radiation, all were disposed of without implemented wet decontamination provisions outlined in the Field Sampling Plan.

5.2 Surface Conditions

Drainages A, B, C, and D2 are located on the south side of the Pueblo Canyon and adjacent to the LAC Airport. Pueblo Canyon is undeveloped except for county utility operations and is used moderately for recreational purposes. The drainage areas are on LAC property. The mesa top area, adjacent to the drainages, is leased to LAC from the U.S. Department of Energy (DOE). The LAC operates the county municipal airport located between Los Alamos and Pueblo Canyons (LANL 2003).

TA-73 is situated on the mesa top and upper canyon slopes of the Pajarito Plateau. The surface of the plateau slopes generally eastward, with elevations ranging from approximately 7520 ft in the western part to 7280 ft in the eastern part. Pueblo Canyon bounds the northern edge of the TA while DP Canyon bounds it to the south beyond State Road 501. The walls of canyons cutting the Pajarito Plateau generally consist of vertical ledges alternating with steep slopes (LANL 1998). Topographic features of northern edge of the Pajarito Plateau in the vicinity of Drainages A, B, C, and D2 are depicted in Figure 1.

The exposed bedrock at TA-73 is comprised of cooling units 2–4 of the Tshirege (upper) Member of the Bandelier Tuff. The tuff ranges from non-welded to densely welded, depending on the cooling unit. A few feet of undifferentiated airfall separate the Tshirege member from the Otowi (underlying lower) Member of the Bandelier and water-reworked silicic tuffs designated the Cerro Toledo Tuffs. The Otowi Member is generally poorly welded to non-welded. The basal part of the Otowi is comprised of approximately 15 ft of air-fall pumice (Guaje pumice bed. The bedrock on mesa tops and upper canyon slopes are overlain by alluvium and soil ranging locally in thickness from zero to a few feet (LANL 1998).

Surface water runoff and sediment transport are among the potential migration pathways by which contaminants might be transported to off-site receptors. Surface water may also access subsurface contaminants exposed by soil erosion. Soil erosion is dependent upon several factors, including soil properties, the amount of vegetative cover, the slope of the contaminated area, exposure, the intensity and frequency of precipitation, and seismic activity (LANL 1998).

Northern New Mexico's semiarid environment supports diverse plant communities whose distribution is largely determined by elevation. Generally, arid-climate vegetation dominates at low elevations, and vegetation adapted to more consistent moisture grows at higher elevations. The varied topography and vertical relief of the Jemez Mountains and the Pajarito Plateau support an especially rich and diverse subset of regional vegetation. Vegetation types are classified into two main groups: wetland and upland. Most of the streams in LAC are ephemeral and do not support wetland vegetation. However, perennial flows from springs, Laboratory facilities, and LAC facilities create a few permanent or near-permanent streams in some canyons. The major vegetation in the canyons is subdivided into several plant communities, all of which are upland communities (LANL 1997).

Above the Rio Grande floodplain at elevations ranging from about 5,600 to 6,200 ft (1,707 to 1,890 m), one-seed juniper becomes the most common over story species. This species is often intermixed with lesser amounts of pinion. Both of these tree species, typical of the Great Basin Conifer Woodland community, are tolerant of a relatively dry climate. Together they form an open pinion-juniper woodland at elevations of about 6,200 to 6,900 ft (1,890 to 2,103 m) on the Pajarito Plateau (LANL 1997).

As the elevation increases toward the Jemez Mountains, the Great Basin Conifer Woodland community gradually grades into the Rocky Mountain Montane Conifer Forest community where increased precipitation allows ponderosa pine to become a dominant species at about 6,900 to 7,500 ft (2,103 to 2,286 m). White fir and Douglas fir grow along the north-facing slopes at intermediate elevations. These species are often intermixed with ponderosa pine and form a mixed-conifer community. Species of the Rocky Mountain Sub-alpine Conifer Forest and Woodland community occur along the extreme western edge of LAC and are more prevalent at the higher elevations of the Jemez Mountains (LANL1997)

Portions of the canyon systems are located primarily within a Ponderosa pine community. Other over-story species found in these canyons are one-seed juniper, Gambel oak, Douglas fir, white fir, Engleman spruce, Rocky Mountain maple, thinleaf alder, water birch, New Mexican olive, and Rio Grande cottonwood. The common mid-story species are Gambel oak, Fendler's rose, pinion pine, and willow. Shrub layer dominance depends on topography and elevation and can include skunk brush sumac, big sagebrush, rubber rabbit brush, willow, chokecherry, and Gambel oak. (Core Document for Canyon Investigations, ER Program, Page 3–42, April 1997)

The under story of Los Alamos Canyon and Pueblo Canyon is predominately blue grama grass, brome grass, and cheat grass. In the upper portions of the canyons, other under story species include: cutleaf coneflower, wild strawberry, and James geranium. In the middle portions of the canyons, other under story species includes redtop (a grass), raspberry, mountain muhly, bluegrass, sedge, western wheatgrass, dropseed, and needle grass. In the lower portions of the canyons, other understory species include rushes, bluegrass, Fendler's rose, western wheatgrass, dropseed, and needle grass. Open meadows are dominated by bluegrass, tarragon, and trailing fleabane. Forbs such as golden aster, tarragon, and horseweed reside in the middle and lower portions of the canyons. Along the stream channels, stinging nettle dominates a plant assemblage composed of sweetclover, horseweed, and raspberry (LANL 1997)

5.3 Surface Water Conditions

There are no perennial or ephemeral streams or stream channels within the TA-73 boundaries. Surface water is limited to storm water, most of the surface drainage of the TA flows to Pueblo Canyon, generally as sheet flow off the mesa top. The ephemeral stream in Pueblo Canyon flows only in the spring as snow is melting and during extended, moderate to heavy rainfall events (LANL 1998).

Silt fences were constructed across the bottom of each drainage prior to the removal of debris from any of the four drainages to retard surface runoff generated by precipitation events during the removal phase of this project. A total of 12 silt fences were constructed across the bottom of Drainages A, B, C, and D2. The number of silt fences constructed deviated from the original estimated quantity of four because many of the drainages appeared to split into minor drainages near the confluence with Pueblo Canyon.

Silt fences were manufactured by U.S. Netting and were designed to offer the highest soil filtering efficiency and the lowest flow rate to meet VTM-51 and AAHSTO M-288 requirements. These DOT approved silt fences were designed to meet the needs of the most demanding applications. The style #2130 filter fabric was designed to allow water to pass through the fabric, while trapping suspended soil particles. The filter fence was connected to wide crown 1 in. staples driven into heavy-duty solid hardwood stakes. Visual inspections of the silt fences were performed daily and within 12 hours of the end of a storm with rainfall amounts greater than 0.5 in. They were inspected for the presence of storm water runoff, sediment accumulation, and structural integrity.

In accordance with the LANL Meteorological Monitoring Program, the maximum precipitation during the performance of work occurred on August 23, 2003 at approximately 0.60 in., with the total precipitation during the month of August 2003 at 2.78 in. During the performance of both waste removal and sample collection no apparent transport of sediments was observed and no apparent storm water runoff or additional sediment accumulation was observed in the drainages following precipitation events. Upon completion of the fieldwork, LANL requested that the silt fences remain in place for their continued monitoring and maintenance. They remain in-place at the time of this reporting.

5.4 Site Restoration and Erosion Controls

Following waste removal, the contractor performed grading (hand raking) of the disturbed areas in the drainages upon completion of removal activities. Grading of the disturbed areas was followed by reseeding with 42 lbs of an approved native seed mixture provided by Rainier Seeds,

Inc. and the distribution of mulch in the drainages for erosion control. The native grass seed mixture utilized in this application was provided and approved by DOE and LANL.

The following summarizes the final restoration activities in Drainages A, B, C, and D2.

- Approximately 15 lbs of native grass seed and 10 yd^3 of mulch was applied to Drainage D2;
- Approximately 10 lbs of seed and 5 yd^3 of mulch was applied to Drainage B;
- Approximately 10 lbs of seed and 5 yd^3 of mulch was applied to Drainage A; and
- Approximately 7 lbs of seed and 5 yd^3 of mulch was applied to Drainage C.

The remaining seed (from the 50 lb bag) and mulch (approximately 15 yd^3) was broadcasted on select areas at the airport property at the request of the Airport Manager.

Prior to demobilization, all restoration work was inspected and approved by DOE, and LAC Airport Manager. LANL requested that the silt fences remain under their management program for an unspecified period of time.

6.0 REGULATORY CRITERIA

The criteria followed for clean up during this project are those promulgated in the surface water regulations and are consistent with RCRA corrective action activities. A notable variance to these criteria is a requirement to remove all debris from the drainages. Because of unique site conditions on the south side of Pueblo Canyon, including the steepness of the terrain and general difficulty associated with site accessibility, a decision was made to modify requirements for this project to exclude material that is more than 50% buried or material whose removal would create an immediate safety hazard. This variance was proposed by the Surface Water Bureau in a letter to EPA VI (October 3, 2001). EPA VI accepted the NMED's proposal as consistent with NPDES and storm water regulations (April 16, 2002). Both agencies, state and federal, are in agreement that meeting the following criteria will constitute the successful completion of this IM within the identified areas:

1. All refuse, including tires, wood debris, auto parts, and other metal scrap, in and around the several drainage channels should be removed, except those items that are substantially buried and therefore pose no reasonable potential to move. As a practical matter, items that are less than 50% buried in sediment should be removed. Items buried greater than 50% and most concrete shall remain provided the concrete does not exhibit visible staining that could be associated with contamination and is not a threat to mobilize by runoff. Items whose removal presents a real and credible threat to worker health and safety may also remain in place.

2. Appropriate erosion controls should be installed as a best management practice (BMP) where needed to prevent the movement of disturbed soil or other contaminants into surface water. All installed erosion control measures must be inspected and maintained on a regular basis to insure and assess their effectiveness.

3. At the base of the drainages containing refuse, one or more retention structures (or equivalent) should be constructed to control the potential pollutant load. These sources may contribute to waters of the US. Such structures should be constructed to and control storm water runoff from the landfill drainages and allow routine sampling.

4. If, after storm events, there is insufficient water to sample, it may be reasonably argued that no discharge from the drainages has occurred and, therefore, no water sampling/analysis is required. In addition, water sampling and analysis may be necessary for only one landfill drainage if it can be demonstrated that other drainage outfalls are "substantially identical" (i.e., show similar significant sources of pollutants and storm water discharge volumes; see 40 CFR 122.26, Storm Water Discharges, and Part 5.2.4 of the National Pollutant Discharge Elimination System [NPDES]). Finally, sampling and analysis must be performed in accordance with 40 CFR 136 and the NPDES storm water multi-sector general permit (MSGP) for industrial activities (65 FR 64746).

5. Routine inspection and maintenance of the retention structure(s) is required to ensure that they are functioning as intended. To prevent significant run-on, the landfill cap design for solid waste management units (SWMUs) 73-001(a,b,c,d) and 73-004(d) must include structural and/or nonstructural controls to divert storm water away from the drainages.

6. In accordance with Part 4.0 of the MSGP and 40 CFR 122.26, it is the responsibility of the permittee to develop, maintain, and implement a site-specific Storm Water Pollution Prevention Plan (SWPPP). All activities related to the landfill drainages, for example, should be documented in the site-specific SWPPP.

7. All activities will be required to comply with all other state and federal regulations.

In addition to these site-specific regulatory requirements, additional requirements apply to the evaluation of site conditions as they related to chemical constituents and contamination. Included

in these are regulatory limits identified by the HPT as appropriate. They serve as screening tools for determining:

- The presence or absence of contaminants, and
- Compliance with the regulatory endpoints for the site.

The two primary tools in performing such evaluations are published background values (BVs) and soil screening levels (SSLs) for each analyte of concern. For Drainages A, B, C, and D2 the HPT identified a specific set of BVs and SSLs to be used to screen site conditions and to determine a base list of COPCs. The following sources were utilized for BVs and SSLs:

1. Background concentrations for inorganic and radionuclide parameters were obtained from the *Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory, Document No. LA-UR-98-4847,* September 1998.

2. Soil Screening Limits (aka: Screening Action Limits) were obtained substantially from the *NMED Hazardous Waste Bureau and Groundwater Quality Bureau - Voluntary Remediation Program, Technical Background Document for Development of Soil Screening Levels, Table A-1, Residential Soil,* December 18, 2000.

3. For analytes of interest without published NMED SSLs, residential soil screening levels were obtained from the *USEPA Region VI, Appendix D, Corrective Action Strategy – High Priority Bright Line Screening Table for Human Health,* November 2000.

Table 5 lists the specific BVs and SSLs used to evaluate conditions in Drainages A, B, C, and D2.

7.0 SITE CONTAMINATION (RESIDUAL)

The following sections describe the collection of samples in Drainages A, B, C, and D2. They also present the data acquired from the sampling effort for this project.

7.1 Soil, Rock, and Sediment Sampling

Soil sampling in Drainages A, B, C, and D2 were completed in accordance with the sampling and analysis plan (see Section 5.1). The site was staked and surveyed with the assistance from DOE, on September 8, 2003. Surveying was completed using a hand-held Trimble Global Positioning System (GPS) at each of the 60 selected sample locations. A full-scale Geographic Information System (GIS) map of the key drainage areas is depicted in Figure 2. The base map for the site is the 7.5-minute U.S. Geological Survey (USGS) quadrangle for Pueblo Canyon and upgradient areas. Sample locations are identified in Figure 2, and each drainage has been blown up to aid in viewing sample collection areas.

Sample collection was completed on September 9, 2003. Samples were collected in groups of 15 in each drainage beginning at the lowest elevation and proceeding upgrade toward the drainage interface with the Los Alamos Airport. The sample identification numbers for each of the drainages are as follows:

Drainage A: LANL-WR-SS-1 through LANL-WR-SS-15

Drainage B: LANL-WR-SS-16 through LANL-WR-SS-30

Drainage D2: LANL-WR-SS-31 through LANL-WR-SS-45

Drainage C: LANL-WR-SS-46 through LANL-WR-SS-60.

Per the project SAP and LANL ER Project SOPs, sediment samples were collected by removing foreign debris from the ground surface (pine needles, branches, leaves, etc.) and a thin layer of soil at the ground surface (~1/8 in.). Samples were then collected at depths beginning at 1/8 in. and proceeding down to the bedrock interface.

Samples were collected in accordance with LANL-ER-SOP-06.09, Rev. 1, *Spade and Scoop Method for Collection of Soil Samples*, to ensure that sufficient sample volume was obtained allowing for all analyses to be completed. Appendix E contains the photographic log for all sample locations at the site. Table 6 provides a summary of the samples collected during post-removal sampling. Table 7 provides the analysis types and the analytical methods used to acquire the data.

The project SAP defined two methods of sample collection to assist in evaluating site conditions: biased and random sampling. Biased sampling was defined as an option in the SAP and was to be completed when hot spots or areas of localized contamination were identified. Biased sampling was implemented immediately below locations of obvious soil staining, greatest debris concentration, and sediment accumulation areas (Section 5.1). A total of 60 samples, comprised of 15 soil samples per drainage were collected at depths ranging from 3 in. to 15 in. total depth.

Each sample was labeled in accordance with the SAP and placed in back packs containing ice to ensure proper sampling handling. Following the completion of sampling in each drainage, the samples were placed in iced coolers, custody seals were affixed, and the coolers were placed in the project vehicle. The project vehicle was locked and remained that way until the field team returned with the samples from the next drainage. This process was repeated for all samples. No evidence of sample tampering was identified throughout the sampling effort. The COC records for field samples are contained in Appendix C, Analytical Reports.

A provision in the SAP required that a second sample be collected at depth whenever any location had sediment depth exceeding 2 ft. To comply with this requirement, the depth to

bedrock was determined during sample collection, and recorded in the field logbook. None of the selected sample locations contained sediment that exceeded 2 ft. Therefore, no depth samples were collected.

As part of field sample collection, field soil duplicates were collected in each of the key drainages. They were collected in the lower-most sediment accumulation areas, given the interest in these areas as possible contaminant accumulation points. To comply with the project SAP, collocated field duplicates were collected at four locations. This exceeds industry standards for duplicate frequency of 1 duplicate for 20 natural samples. However, a duplicate was collected in this way to ensure that precision evaluations could be made for each drainage. The following details the soil duplicates collected and the samples they are duplicates of:

- LANL-WR-SS-61 is a duplicate of LANL-WR-SS-32 (Drainage D2),
- LANL-WR-SS-62 is a duplicate of LANL-WR-SS-47 (Drainage C),
- LANL-WR-SS-63 is a duplicate of LANL-WR-SS-17 (Drainage B), and
- LANL-WR-SS-64 is a duplicate of LANL-WR-SS-1 (Drainage A).

To comply with SAP and standard industry guidance, three liquid field blanks were also collected. They were prepared in the field during sample collection activities to aid in evaluating the cleanliness of sample containers, field activities, sample storage, sample shipment, and laboratory preparation and analysis. Submission three field blanks satisfied standard QC requirements of one field blank for every 20 natural sample. The liquid field blanks are:

- LANL-WR-SS-65,
- LANL-WR-SS-66, and
- LANL-WR-SS-67.

After collection, each sample was prepared for shipment to the contract laboratory. Key elements of these activities included:

- Sealing all sample lids with Paraffin,
- Placing packing tape over each sample label,
- Placing each sample container in 1-gallon Ziploc bags,
- Over packing all samples with ice,
- Over packing coolers with popcorn,
- Affixing air bills to each of the coolers and retaining the original copy,
- Placing two copies of the COC forms inside the lid of the coolers,
- Placing custody seals on the coolers,
- Screening of all coolers to ensure radiation levels met DOT requirements, and
- Shipping of the samples via Federal Express.

Samples were shipped to the contract laboratory for analysis on September 11, 2003. They were received on September 12, 2003.

7.1.1 Field Quality Control Samples

Field quality control (QC) samples for sampling and analysis were to consist of a maximum of:

- Five collocated field duplicates, and
- Five field blanks.

Field QC samples were collected in such a way that the proper containers, preservative(s), and sufficient sample volumes were prepared to ensure that each analysis type had the proper frequency of field duplicates and field blanks. Based on preliminary estimates of 70 sediment samples, planned field QC frequencies of five field duplicates and five field blanks exceeds LANL requirements of one field duplicate and one field blank for every 20 sediment samples collected, providing room to expand the number of samples to 100 before additional QC samples were

required. Because no depth samples were required, the number of field QC were altered slightly in the field. A total of 60 solid samples were collected. To ensure that field precision could be evaluated, a field duplicate was collected from the lowest sediment accumulation area in each drainage. However, only three field blanks were required to satisfy the 1 in 20 field QC requirement. Therefore, only three field blanks were collected.

For organic parameters, high purity – organic free water (HPLC water) was placed in the container(s) for each analysis type, as outlined in Table 4 of the QAPP. The liquid blank was then preserved in accordance with the requirements outlined in Table 5 of the FSP. Once prepared, the field blanks were placed in coolers with the necessary ice, chains of custody, etc. and accompanied the samples to and from the site and to the analytical laboratory. Field blanks for inorganic/radionuclide analyses, were prepared similarly. The only difference was the purification system for the certified water. Instead of using organic free water, deionized water was used to prepare these blanks. Following placement in the proper sample containers, the inorganic blanks were also preserved in accordance with the requirements of the FSP and documented, stored, and shipped in accordance with LANL-ER-SOPs.

Field QC samples were collected in accordance with the following LANL ER Project SOPs:

- ER-SOP-01.01, Rev. 1, *General Instructions for Field Investigations*, 12/13/01,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01,
- ER-SOP-01.03, Rev. 1, *Handling, Packaging, and Shipping of Samples*, 4/29/02,
- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03,
- ER-SOP-01.05, Rev. 1, *Field Quality Control Samples*, 12/17/01, and
- ER-SOP-1515, Rev. 0, *Sample Management Office: Receiving and Shipping of Analytical Samples*, 10/30/00.

In addition to field blanks and field duplicates, one additional field QC sample accompanied each of the sample coolers. To ensure that the sample temperature requirements outlined in Table 5 of the FSP were met, a temperature blank was added to each cooler. The temperature blank consisted of a polyethylene bottle filled with deionized water. The temperature blank was placed in the cooler prior to shipment to verify the temperature of samples upon receipt at the laboratory. All of the samples met the 4°C +/-2°C requirements outlined in LANL-ER-SOPs and the FSP.

7.1.2 Documenting Sampling Locations

Documenting sample locations was a critical part of sampling activities. Data users and decision makers require good location information in order to determine the boundaries of contamination, determine possible trends in contaminant transport and deposition, and to determine any relationships to conditions at the Los Alamos Airport Landfill. They also require this information to determine if immediate actions are necessary at hot spot locations. To ensure that field sampling activities can be reconstructed, sample locations were documented using a three-pronged approach. The key aspects of this approach included:

- Staking each sample location,
- Mapping the stake location using a field global positioning system (GPS), and
- Logging all stake locations in the field logbook.

To initiate these activities, a complete inspection of the site was completed by the field team to identify each drainage, and where sample locations should be placed. To commence fieldwork, the field team located the point of origin for sampling in each drainage. To document its location, the sample was collected, a field number assigned, and the number entered onto a wood stake.

A GPS reading was then taken for the sample location, which was recorded in the field logbook. The stake was pounded securely into the ground at the point where the sample was to be collected, as a secondary means of finding the sample location. In the event that stakes become uprooted, the GPS readings will ensure locations can be found, if required. This procedure was

repeated for each of the sampling locations. The location information was then used to create a geographic information system (GIS) map of the site. The GIS map was used as a tool to present:

- Sample locations in each drainage (Figure 2),
- COPCs and affected sample locations (Figure 3), and
- COPCs and their geographic relationship to waste materials prior to their removal from the drainage system (Figure 4).

7.2 Soil, Rock, and Sediment Sample Field Screening Results

A health physics technician was present during waste removal operations to perform random field screening for radioactive materials. The health physics technician screened the debris prior to removal from the drainages and after the debris was removed (prior to sending the debris to the landfill).

The health physics technician was equipped with a Ludlum 2221 read-out meter with a 2 × 2 sodium iodide (gamma detector) for the detection of ^{137}Cesium and an alpha detector for the detection of ^{239}Plutonium. A separate meter (Ludlum 12) was also utilized with a beta detector to monitor ^{90}Strontium levels. No radioactive materials were observed during the performance of waste removal activities. A copy of all equipment and material survey forms for direct and indirect alpha, beta and gamma surveys are located in Appendix A with the survey instrument data information and source check logs.

As noted previously, following collection of post-removal samples in a given drainage, the field equipment was segregated into separate plastic bags and screened for radiation. The results of the field screening of sampling equipment are also contained in Appendix A.

7.3 Soil, Rock, and Sediment Sampling Analytical Results

The following sections describe analytical methods, summarize analytical results, and provide a comparison of analytical data to BVs and published residential soil screening levels.

7.3.1 Sample Analysis

Sample analysis was completed in accordance with the Los Alamos Airport Landfill Waste Removal Project – Quality Assurance Project Plan. The QAPP defines the analytical methods to be used for each parameter, the project-specific detection limits required for each analyte, and the quality assurance and reporting procedures required to ensure that project data met the RCRA based regulatory requirements of the project. Appendix B outlines the key elements of the QAPP. The standard methods used to acquire project data are defined in Table 7. The maximum detection/quantitation limits for each analyte of interest are outlined in Table 8. The following sections provide a brief description of each analysis type and the methods used to acquire data for each.

7.3.1.1 Semivolatile Organic Compounds

SVOCs were quantified using a standard USEPA extraction and analysis routine. Samples were extracted using USEPA Method 3550B. Liquid extracts were then analyzed using USEPA Method 8270C. Method 3550B is an ultrasonic solvent extraction method used to recover semivolatile organic constituents from solid materials. The resulting extract is analyzed using the Gas Chromatograph/Mass Spectrometer (GC/MS) specifications outlined in Method 8270C. Through the use of regular instrument calibrations, internal standards, surrogate compounds, laboratory control samples, and matrix spike/matrix spike duplicates, Method 8270C is able to accurately quantify key semivolatile compounds in the sub-part per billion range. All of the 67 samples collected were analyzed for SVOCs using the analytical scheme defined in these methods and the provisions outlined in the QAPP.

7.3.1.2 Total Metals

Total metals were quantified using standard USEPA digestion and analysis methods 3050B, 6010B, 6020, and the 7000 series methods. Sediments collected from each drainage were first digested using concentrated nitric acid, hydrogen peroxide, and/or hydrochloric acid to remove target metals from the sample matrix. Following filtration, the digestates were analyzed using three analytical techniques: (1) Inductively Coupled Plasma (ICP), (2) Graphite Furnace Atomic Absorption (GFAA), and (3) Cold Vapor Atomic Absorption (CVAA). Through the use of both instrument and batch quality control samples, these methods provide sensitivity in the sub-part per million range for each of the metals of interest. All of the 67 samples collected were analyzed for target analyte list metals using the analytical scheme defined in these methods and the provisions outlined in the QAPP.

7.3.1.3 Polychlorinated Biphenyls/Pesticides

PCBs and pesticides were also quantified using a standard USEPA extraction and analysis method. Samples analyzed for both PCBs and pesticides were extracted using USEPA Method 3550B. Liquid extracts were then analyzed using the specifications outlined in GC method 80801A for PCBs and 8082 for pesticides. Through the use of regular instrument calibrations, surrogate compounds, laboratory control samples, and matrix spike/matrix spike duplicates, both methods are able to accurately quantify key Aroclor and pesticide compounds in the sub-part per billion range. All of the 67 samples collected were analyzed for PCB/pesticides using the analytical scheme defined in these methods and the provisions outlined in the QAPP.

7.3.1.4 Perchlorate

Perchlorate was quantified using a water extraction of solid samples followed by instrumental quantitation. Samples analyzed for perchlorate were first extracted using a 1:10 solid to water extraction. The liquid extracts were then analyzed using the specifications outlined in USEPA Ion Chromatography (IC) Method 314.0. Using a combination of batch and instrument QC, Method 314.0 is capable of measuring perchlorate in the sub-part per million range. All of the 67 samples collected were analyzed for perchlorate using the analytical scheme defined in Method 314.0 and the provisions outlined in the QAPP.

7.3.1.5 Radionuclides

Radionuclides were quantified using three analytical methods with preparatory methods supporting two of the analysis types. Both ^{90}Strontium and $^{239/240}$Plutonium require chemical separations/sample preparation steps in order to allow for analysis. ^{137}Cesium does not require chemical separations or pre-treatment, samples are simply placed in containers with known geometries and analyzed. Once prepared or in the proper measurement container, the radionuclides were quantified using three analytical techniques. ^{90}Strontium was quantified using Gas Flow Proportional Counting (GFPC) under the specifications outlined in USEPA Method 905. $^{239/240}$Plutonium was quantified using Alpha Spec analysis under the specifications outlined in Method DOE A-01-RC. ^{137}Cesium results were quantified using Gamma Spec analysis under the specifications outlined in USEPA Method 901. All of the 67 samples collected were analyzed for these radionuclides using the analytical scheme defined in USEPA Methods 901, 905, and DOE A-01-RC and the provisions outlined in the QAPP.

7.3.1.6 Total Petroleum Hydrocarbons

Total Petroleum Hydrocarbons were also quantified using a standard USEPA extraction and analysis routine. Samples analyzed for both TPH as diesel and motor oil were extracted using USEPA Method 3550B. Liquid extracts were then analyzed using the specifications outlined in GC method 8015B. Through the use of regular instrument calibrations, surrogate compounds, laboratory control samples, and matrix spike/matrix spike duplicates method 8015B is able to accurately quantify these TPH fractions in the sub-part per million range. All of the 67 samples

collected were analyzed for TPH using the analytical scheme defined in these methods and the provisions outlined in the QAPP.

7.3.1.7 Laboratory Procedures

In addition to the defined procedures for sample preparation and analysis, the analytical laboratory was also directed to adhere to a number of project-specific requirements related to sample receiving, COC, storage, holding times, data reduction, and data reporting. Each of these key elements related to data quality is clearly defined in the QAPP. The approved QAPP was provided to the analytical laboratory, as part of the complete Sampling and Analysis Plan, prior to executing field work to ensure that key laboratory personnel were aware of the regulatory basis for the project and the data quality objectives related to these. Following their review, the laboratory quality assurance officer was required to sign the overriding Sampling and Analysis Plan, signifying the lab's concurrence to implement the procedures in the QAPP. The laboratory adhered to project requirements for each of the data quality and reporting requirements with minor deviations. Such deviations and the overall quality of reported results were catalogued as part of the data validation process.

7.3.2 Analytical Data Summary

The information in this section outlines the results of post-removal sampling for Drainages A, B, C, and D2. Table 12 provides a summary of all positive detections identified during the investigation. The reported results are compared with published LANL background concentrations (when available), and with residential soil screening levels published primarily by the NMED with supplemental information obtained from EPA Region 6. The information is organized as follows:

- Sample identification number,
- Drainage of collection,
- Target analyte or target compound,
- Concentration or activity,
- Laboratory and data validation flags,
- One-sigma total propagated uncertainty (for RAD parameters only),
- Background values (where applicable),
- Soil screening limits (SSLs),
- Comparison of concentrations and activities to BVs,
- Comparison of concentrations and activities to SSLs,
- Identification of results above background and SSLs (signified by shading), and
- Identification of COPCs.

Background concentrations that appear in Table 12 are those for *Canyon Sediments*. Background concentrations do not apply to the organic constituents characterized during this effort. An 'N/A' appears in the background entry for these compounds.

Several compounds do not have published NMED SSLs. In these cases, residential soil SSLs were obtained from the *USEPA Region VI, Appendix D, Corrective Action Strategy – High Priority Bright Line Screening Table for Human Health,* November 2000. The three compounds not having published NMED Residential Soil SSLs include: (1) Butyl Benzyl phthalate, (2) Carbazole, and (3) Methoxychlor. Two compounds have neither NMED or USEPA published SSLs. They are: (1) Endosulfan Sulfate and (2) Endrin Ketone. In each case, the most similar compound was used to identify the most reasonable SSL. For Endosulfan Sulfate, the NMED published SSL was substituted. For Endrin Ketone, the NMED published SSL for Endrin was used.

A complete analysis of sample results compared with both BVs and SSLs also appears in Table 12. Results appearing as negative quantities fall below the comparison values. Those results exceeding background are highlighted. Those compounds exceeding the SSL are identified as COPC and are also highlighted and appear in the right margin. In one case, the

reported arsenic concentration exceeds both the BV and the SSL (LANL-WR-SS-15). It should also be noted that the published BV for arsenic in Canyon Sediments (3.98 mg/kg) exceeds the SSL (3.90 mg/kg).

8.0 CONCLUSIONS

This IM Completion Report documents RCRA corrective actions completed in Drainages A, B, C, and D2. The following summarize the results of the waste removal and sampling and analysis efforts.

8.1 Waste Removal

Waste removal activities commenced on August 6, 2003 to remove surface and partially buried debris in Drainages A, B, C, and D2. Removal and all related activities were completed on August 26, 2003. The RCRA corrective action resulted in the removal of 430 yd^3 of municipal debris from and post-removal soil confirmation sampling. The primary method of debris removal incorporated the use of a skyline logging system to minimize the impact to the soils and surrounding vegetation.

The removal and disposal of the surface debris followed by confirmatory sampling and analysis was completed as an IM to comply with New Mexico Surface Water Regulations, prohibiting debris in a watercourse (NMWQCC 1995), and is part of ongoing RCRA corrective action activities at the airport landfill SWMUs. All municipal debris removed from the above drainages was transported to the LAC Landfill for recycling or disposal with the exception of 14 drums that were removed on August 26, 2004 from Drainage C. These drums were placed in over packs, characterized and disposed of at the Waste Management, Rio Rancho Landfill in Rio Rancho, New Mexico. Certification of debris removal and disposal was provided to NMED-HWB on November 13, 2003 (DOE 2003)

During the performance of the work, no apparent transport of sediments was observed and no apparent storm water runoff or additional sediment accumulation was observed in the drainages after precipitation events.

Random field screening was performed by a health physics technician prior to removing the debris from the drainages and after removing the debris from the drainages (prior to sending the debris to the landfill). No radioactive materials were detected during the performance of this work.

DOE inspected each drainage upon completion of the debris removal at each drainage. The NMED was invited to attend all inspections and participated in the inspection of Drainage D2. Drainage D2 was inspected and approved on August 20, 2003, Drainage B was inspected and approved on August 21, 2003, Drainage C was inspected and approved on August 25, 2003, and drainage A was inspected and approved on August 26, 2003. The inspection of Drainage A was considered the final inspection on the project. Authorization to demobilize was given to the contractor by the DOE on August 26, 2003. Upon completion of the final inspection, the total volume of debris removed from the above drainages was calculated at 430 yd^3. There were no injuries or accidents incurred during debris removal.

8.2 Post-Removal Sampling

Soil sampling in Drainages A, B, C, and D2 were completed in accordance with the SAP (Section 5.1). The site was staked and surveyed on September 8, 2003. Surveying was completed using a hand-held Trimble Global Positioning System (GPS) at each of the 60 selected sample locations.

Sample collection was completed on September 9, 2003. Samples were collected in groups of 15 in each drainage beginning at the lowest elevation and proceeding upgrade toward the drainage interface with the Los Alamos Airport. The sample groups for each of the drainages are as follows:

- Drainage A: LANL-WR-SS-1 through LANL-WR-SS-15
- Drainage B: LANL-WR-SS-16 through LANL-WR-SS-30

- Drainage D2: LANL-WR-SS-31 through LANL-WR-SS-45
- Drainage C: LANL-WR-SS-46 through LANL-WR-SS-60.

Per the project SAP and LANL ER Project Standard Operating Procedures, sediment samples were collected by removing foreign debris from the ground surface (pine needles, branches, leaves, etc.) and a thin layer of soil at the ground surface (~1/8 in.). Samples were then collected at depths beginning at 1/8 in. and proceeding down to the bedrock interface.

8.3 Sample Variability and Field Conditions

Per the provisions in the project QAPP, field duplicate samples have been used to determine the range or variability associated with this sampling effort. To evaluate variability, field duplicate results have been compared directly with the original sample they were intended to mimic. The precision of these measurements has been evaluated using a relative percent difference (RPD) comparison to illustrate natural variances in the sample matrix. Table 13 summarizes the results of this analysis.

Overall, a total of 952 data points were evaluated. 755 of the sample results, or 79.3% were reported as non-detects or were less than two times the reporting limit in both the original sample and field duplicate. Each of these results meets variability requirements. The remaining 197 data points, or 20.7% of the total, showed measurable levels of COPCs. 142 of these points, or 14.9% of the total, showed acceptable precision (RPD $\leq$ 35%). The remaining 54 results demonstrated precision outside of the +/- 35% agreement limit. Overall, 94.2% of the sample and duplicate results showed acceptable precision. The remaining 5.8% of sample/duplicates demonstrated precision outside of the +/- 35% limit prescribed for soil matrices. The following lists the COPCs affected by high variability and the sample pairs they affect.

Drainage A: All results showed acceptable variability

Drainage B: Lead

Drainage C: Aluminum, Barium, Calcium, Lead, Magnesium, Manganese, Potassium, and TPH (motor oil)

Drainage D2: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Endrin Ketone, Fluoranthene, gamma-Chlordane, Indeno(1,2,3)pyrene, 4,4-DDT, Lead, Phenanthrene, Pyrene, and Sodium.

The variability measured for lead in Drainages B has little impact on the use of project data, as both samples were measured below the area background concentration for lead or 20 mg/kg.

The variability noted for constituents in Drainage C also has little bearing on decision-making at the site, as all of the noted metals except lead are below area background concentrations. In the case of lead, the original sample result was above background at 25.3 mg/kg. The duplicate was measured at 16 mg/kg. The average of these two values is 20.6, which is at the area background. Both lead results are below published NMED residential soil SSLs (400 mg/kg). While the TPH values showed unacceptable agreement, both are significantly below the most conservative NMED action limits, with the original sample measured at 16 mg/kg and the duplicate at 30 mg/kg.

The variability noted for sodium in Drainage D2 has little impact on site decision-making as both sodium values are below the area background concentration of 1,470 mg/kg. The average of the two lead values is 25.8 mg/kg or slightly above the area background concentration of 20 mg/kg. Both results are well below the published NMED residential soil SSL. The measured level of 4,4-DDT in the original sample (6.9 ug/kg) likely will not contribute significantly to human health or ecological risks and is below the published NMED residential soil SSL. In addition, the field duplicate result was a non-detect indicating that any adjustments to 4,4-DDT during data

evaluation would likely lower the concentration to be considered at the site, and all 4,4-DDT results are below NMED residential soil SSLs.

The variability noted for key PAHs in Drainage D2 has a more significant effect on the evaluation and use of project data. Compounds which may contribute to risks at the site, particularly Benzo(a)pyrene, were found at their maximum concentrations in Drainage D2 (LANL-WR-SS-32). This sample was duplicated in this case by LANL-WR-SS-61. The majority of the PAH compounds were detected in the parts per million (ppm) range in LANL-WR-SS-32. The field duplicate values for this location were measured at or near the reporting limits for the same compounds, in the parts per billion (ppb) range. Detections for key PAH compounds were similar across the board for both. In addition, the quality of the reported results for these locations has been found to be within USEPA method/QAPP requirements by method validation. These factors indicate that the PAH compounds are likely present in Drainage D2 (Figures 3). Therefore, the variability is likely due to other factors. The detection of PAHs in drainages downgrade of the Los Alamos Landfill is consistent with previous LANL RFI investigations, which found that PAHs were distributed throughout the landfill complex and the downgradient drainages. Historical literature suggests that their deposition likely originated from three potential sources: (1) bi-monthly burning practices employed at the landfill during much of its operation, (2) recently area forest fires, and (3) surface water contact with asphalt at the airport and areas upgrade of the drainage system.

However, the wide range of concentrations between the two samples indicates the sample matrix likely has played a large role in variable results. Field observations gathered during sample collection indicate the soil at this location consists of sand with gravel. In addition, bedrock was measured at a rather shallow depth (5 in.). Based on the large particle sizes at this location, it is likely that any chemicals adsorbed to soils would be highly variable and unpredictable. In the absence of significant fines, the distribution of COPCs would be expected to be variable. In this case, the measured results bear this out with PAH concentrations ranging from non-detect to maximum levels of 1,400 ppb.

8.4 Data Trends

The distribution of contaminants detected in Drainages A, B, C, and D2 do not show a distribution of concentrations that would indicate migration of contaminants from the Los Alamos Airport Landfill through soils. However, it appears some contaminants in surface soils may be the result of sediment transport. This observation is consistent with the recommendations and observations detailed in the RFI Report (LANL 1998). The source of other contaminants could be attributed to fallout from nuclear weapons testing, airborne deposition from other LANL facilities such as historic stack emissions at the plutonium-processing facilities, which are in close proximity to the airport landfill, and the airport incinerator which functioned from 1947–1948 burning municipal trash. Contaminants such as PAHs and metals are naturally occurring; however, these operations may have contributed to overall contaminant loading.

The radionuclides and organic contaminants detected in the in the drainages generally bind tightly to particles and are persistent in the environment. The contaminants that have been retained as COPCs are Aroclor-1254, Arsenic, benzo[a]pyrene, dibenz[a,h]anthracene, iron and TPH. TPH is not further evaluated in this section because it appears to be associated with specific locations where asphalt was deposited from spillage at the airport.

The presence of persistent and relatively immobile radionuclides and organic compounds at low concentrations, limits the ability to determine contaminant migration patterns or determine specific-sources. The dispersion of contaminants by past landfill operations and other possible uses of the land near the base of the drainage have likely contributed to the contamination. Fallout from weapons testing is likely an important factor contributing to the radionuclide concentrations. Combustion products like PAHs, and other contaminants such as lead, mercury and zinc have likely been dispersed to the drainages by burning, runoff and sediment transport. Particulate contaminants the result of open landfill burning may be dispersed by turbulent airflow.

Soil particle size data was not collected during this investigation. However, the field team noted soil types for the sample locations. The soils were sands and gravels with some silt and clays. An attempt was made to use this cursory information to relate contaminant concentrations to soil types. Clearly many of these contaminants would be bound to silts and clays rather than sands or gravel. A small number of the contaminants such as PCBs, Benzo(a)pyrene, $^{239/240}$Pu and ^{137}Cs were compared to soil types by contaminant concentration. No correlation between contaminant locations, contaminant concentrations, and particle size could be established.

8.4.1 Radionuclide Properties and Distribution

The presence of radionuclides in the drainages does not indicate the presence of a source. There is no pattern of distribution within individual drainages. The radionuclides ^{137}Cs and $^{239/240}$Pu were detected in surface soils in all four drainages. ^{137}Cs and/or $^{239/240}$Pu were detected in all but three samples. ^{137}Cs and $^{239/240}$Pu are radionuclides that are not mobile in the environment.

^{137}Cs preferentially adheres to soil much more readily than to water. Respective ^{137}Cs concentrations associated with sandy soil, loam and clay can be as much as 280, 2,000 or more than 4,000 times higher than in interstitial water. Plutonium is typically very insoluble, with the oxide being less soluble in water than ordinary sand. It adheres tightly to soil particles and tends to remain in the top few centimeters of soil as the oxide (ATSDR 2003).

Drainage A is the eastern most sampling location and the greatest distance from the landfill operations. Samples have not been previously collected in this drainage. The highest concentration of ^{137}Cs was found at location LANL-WR-SS-2 at the bottom of Drainage A. ^{137}Cs was not detected in samples LANL-WR-SS-12 and LANL-WR-SS-13 of Drainage A near the top of the drainage.

The highest concentration (0.563 pCi/g) of $^{239/240}$Pu was detected in LANL-WR-SS-46 at the bottom Drainage C. $^{239/240}$Pu was found in Drainage C in all but one sample. The concentrations of $^{239/240}$Pu and those of ^{137}Cs do not show a distinct pattern of migration from relatively high concentrations to lower concentrations as the elevation of the drainage decreases. The RFI (LANL 1998) reported results for ^{137}Cs, and ^{239}Pu in surface soils and attributed the detection of these radionuclides to fallout or LANL operations. The remaining drainages do not show a pattern of radionuclide concentrations that indicate a surface soil source. The distribution of $^{239/240}$Pu and ^{137}Cs appear to indicate a pattern of distribution that is the result of fallout from weapons testing, with a potential contribution from other LANL facilities that had airborne releases of radionuclides (LANL 1998).

8.4.2 Organic Constituents

Organic contaminants were found in all but 9 samples and are widely dispersed and found at low concentrations. The organic compounds detected were in the general categories of pesticides, PCBs, and PAHs. All of these types of compounds are persistent in the environment. The broad class of PAHs, pesticides, and PCBs offer variability of persistence and mobility in the environment, but are generally considered persistent. PAHs unlike the other organic compounds detected can be naturally occurring. PAHs are typically associated with asphalt as well as combustion products produced naturally or by industrial sources. Pesticides are man-made chemicals used primarily to control insect populations. PCBs are generally found in the coolants of electrical transformers and other electrical devices.

8.4.2.1 Polynuclear Aromatic Hydrocarbon Properties and Distribution

PAHs released to the atmosphere are subject to short- and long-range transport and are removed by wet and dry deposition onto soil, water, and vegetation. PAHs in soil can volatilize, undergo abiotic degradation (photolysis and oxidation), biodegrade, or accumulate in plants. Transport and partitioning of PAHs in the environment are determined to a large extent by physicochemical properties such as water solubility, vapor pressure, Henry's law constant, octanol-water partition

coefficient (Kow), and organic carbon partition coefficient (Koc). In general, PAHs have low water solubilities. Some of the transport and partitioning characteristics (e.g., Henry's law constant, Koc values, and Kow values) of the 17 PAHs are roughly correlated to their molecular weights. The grouping of these PAHs are shown in Table 14.

In general, PAHs having two to three rings (naphthalene, acenaphthene, acenaphthylene, anthracene, fluorene, and phenanthrene) are present in air predominantly in the vapor phase. PAHs that have four rings (fluoranthene, pyrene, chrysene, benz[a]anthracene) exist both in the vapor and particulate phase, and PAHs having five or more rings(benzo[a]pyrene, benzo[g,h,i]perylene) are found predominantly in the particle phase (ATSDR 2003).

PAHs are narrowly distributed in Drainages A, B and C. PAHs, including benzo[a]pyrene, were detected in one sample in drainage A at sample location LANL-WR-SS-15 nearest the mesa rim. The distribution is similar in Drainage B. Drainage C showed PAHs in a single sample, LANL-WR-SS-51, at very low concentrations. PAHs are widely distributed in Drainage D2 with the highest concentrations found near the base of the drainage at sampling location LANL-WR-SS-32.The only PAH constituents with concentrations that exceeded the SSLs were reported from this sample, 5.3 mg/kg and 1.0 mg/kg benzo[a]pyrene and dibenz[a,h]anthracene respectively. Samples collected proximate and immediately downgradient to LANL-WR-SS-32 showed no detected concentrations of PAHs. With few detections and low concentrations a pattern of contaminant distribution cannot be established. A discussion of risks associated with PAHs is found in Appendix F.

8.4.2.2 DDT and DDE Properties and Distribution

DDT (1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane) is a pesticide that was once widely used to control insects on agricultural crops and insects that carry diseases. DDT does not occur naturally in the environment. Technical-grade DDT is a mixture of three isomers, *p,p'*-DDT (85%), *o,p'*-DDT (15%), and *o,o'*-DDT (trace amounts). Technical grade DDT may also contain DDE (1,1-dichloro-2,2-bis(*p*-chlorophenyl)ethylene) and DDD (1,1-dichloro-2,2-bis(*p*-chlorophenyl)ethane) as contaminants. DDD was also used as a pesticide, but to a far lesser extent than DDT. Both DDE and DDD are degradation products of DDT.

DDT, DDE, and DDD persist in soil, potentially for hundreds of years. They bind strongly to soil, and therefore, generally remain in the surface layers of soil. Most DDT degrades slowly into DDE and DDD, generally by the action of microorganisms. These chemicals may also evaporate or be entrained in the air with particles.

DDT and its degradation products may be transported from one medium to another by the processes of solubilization, adsorption, remobilization, bioaccumulation, and volatilization. Organic carbon partition coefficients for *p,p'*-DDT, *p,p'*-DDE, and *p,p'*-DDD, respectively, suggest that these compounds adsorb strongly to soil. They are only slightly soluble in water, with solubilities of 0.025, 0.12, and 0.090 mg/L for *p,p'*-DDT, *p,p'*-DDE, and *p,p'*-DDD, respectively. Therefore, loss of these compounds in runoff is primarily due to transport of particulate matter to which these compounds are bound. Aging is thought to be associated with the continuous diffusion of a chemical into micro pores within soil particles where it is sequestered or trapped, and is therefore unavailable to microorganisms, plants, and animals (ATSDR 2003).

DDE was detected (0.15 mg/Kg) in Drainage A in concentrations near the detection limit. Sample location LANL-WR-SS-15 had a relatively high detection of DDE. In Drainage A, DDE was not detected with DDT or DDD. In Drainage B and D2, DDE and DDT were detected at the same sample locations and at relatively low concentrations. In Drainage C, DDT was detected in two samples and DDE in four. DDD was detected in a single sample in all of the drainages.

DDT and its degradation products were widely dispersed through out the four drainages. A source of contamination is not evident based on a review of the data. The data suggests that DDT is degrading to DDE in the cases where they were found together or (as in drainage A) only DDE was detected.

8.4.2.3 Chlordane Properties and Distribution

Chlordane was used in the U.S. for approximately 40 years, mainly as a field crop insecticide and termiticide. Both of these uses involve the intentional application of the chemical to the soil. In air, chlordane exists predominately in the vapor phase, whereas particle adsorbed chlordane will contribute relatively minor amounts to the environmental burden.

In soil, chlordane adsorbs to the organic matter and volatilizes slowly over time. In general, chlordane remains in the top 20 cm of most soils and for some soils it stays at this level for over 20 years. Chlordane will bind tenaciously to dissolved organic carbon (DOC) in water which will result in increased apparent solubility and mobility in the presence of DOC. In general, sandy soils and soils with small amounts of organic matter retain chlordane less than soils with high clay and/or organic content. Soil moisture, however, is the most important factor. In dry soil, the organic vapors are much more strongly adsorbed with a resulting decrease in volatilization. Incorporation of chlordane into the soil reduces volatilization because of dilution and because volatilization depends on slow diffusion and convective flow processes. Chlordane degrades in air by both photolysis and oxidation. *trans*-Chlordane photochemically degrades more readily than the *cis*-isomer.

Only a few microorganisms have been isolated that are capable of degrading chlordane. White rot fungi was found to extensively degrade chlordane. The bulk of the literature indicates that chlordane does not degrade rapidly in soils and persists for over 20 years.

Gamma (trans) Chlordane was detected in three samples from Drainage A and in ten samples from drainage D2. Alpha (cis) Chlordane was detected in eight samples from Drainage D2. In the seven samples where both isomers were detected, the concentrations were approximately the same. Reasons as to the distribution of chlordane in only two drainages (primarily D2) are not evident based on the available data.

8.4.2.4 PCB Properties and Distribution

PCBs, particularly the highly chlorinated congeners, adsorb strongly to sediment and soil where they tend to persist with half-lives on the order of months to years. There is no abiotic process known that significantly degrades PCBs in soil and sediment. However, photolysis of PCBs from surface soil may occur. Biodegradation has been shown to occur under both aerobic and anaerobic conditions and is a major degradation process for PCBs in soil {ATSDR 2003?}.

The addition of a PCB mixture to an aerobic environment results in a fractionating effect where the less chlorinated species biodegrade first and leave behind, for long-term build-up, the more highly chlorinated species.

Aroclor 1254 was detected in Drainages A and D2 in nine and eleven samples respectively. Aroclor 1260 was detected in Drainage D2 and once in Drainage B. The concentrations of Aroclor 1260 are somewhat less than concentrations of Aroclor 1254 in the same locations. A pattern of PCB contamination could not be established.

8.4.2.5 Endrin Properties and Distribution

Endrin tends to persist in the environment mainly in forms sorbed to sediments and soil particles. A conservative estimate of its half-life in sandy loam soils is approximately 14 years. Biodegradation does not appear to be a significant fate process for endrin in soils. Hydrolysis in moist soils is also not expected to be significant. In combination, losses from volatilization, photodegradation, and heat transformation (primarily to endrin ketone, with minor amounts of endrin aldehyde) account for the rapid decrease in endrin residues on soil surfaces exposed to bright sunlight.

Endrin may be transported from soil to surface water via runoff from rain or irrigation. When released to water, endrin strongly adsorbs to sediment and bioconcentrates significantly in

aquatic organisms. No studies on the environmental fate of endrin aldehyde or endrin ketone could be found in the available literature. Limited information on the physical and/or chemical properties of endrin aldehyde indicates that it is highly insoluble in water, highly immobile in soil, and will not volatilize significantly from water or soil.

Endrin and endrin aldehyde were detected in two samples in Drainage A while endrin ketone was detected in six samples in Drainage A, one in Drainage C, and 13 in Drainage D2. The number of endrin ketone detections seems to indicate that endrin is degrading by heat transformation. The detections of endrin and degradation products are widely dispersed and without a pattern of migration.

8.4.3 Metals

The data from cadmium, lead, mercury, and arsenic were examined for contaminant migration patterns in the surface soils. Some metals showed higher concentrations near the canyon rim, but a pattern of migration to the base of the drainages could not be established.

8.4.3.1 Properties of Cadmium

The oxide and sulfide are relatively insoluble while the chloride and sulfate salts are soluble. The adsorption of cadmium onto soils and silicon or aluminum oxides is strongly pH-dependent, increasing as conditions become more alkaline. When the pH is below 6.0-7.0, cadmium is desorbed from these materials. Cadmium found in association with carbonate minerals, precipitate as stable solid compounds co-precipitates with hydrous iron oxides and is less likely to be mobilized by re-suspension of sediments or biological activity (ATSDR 2003).

8.4.3.2 Properties of Lead

The fate of lead in soil is affected by the specific or exchange adsorption at mineral interfaces, the precipitation of sparingly soluble solid forms of the compound, and the formation of relatively stable organic-metal complexes or chelates with soil organic matter. These processes are dependent on such factors as soil pH, soil type, particle size, organic matter content of soil, the presence of inorganic colloids and iron oxides, cation exchange capacity, and the amount of lead in soil (ATSDR 2003).

8.4.3.3 Properties of Mercury

Mercury has three valence states. The specific state and form in which the compound is found in an environmental medium is dependent upon a number of factors, including the redox potential and pH of the medium. Vaporization of mercury from soils may be controlled by temperature, with emissions from contaminated soils being greater in warmer weather when soil microbial reduction of valence state (Hg+2) to the more volatile elemental mercury is greatest. The sorption process is related to the organic matter content of the soil or sediment. Mercury is strongly sorbed to humic materials in soil at a pH higher than 4.0.

Mercury has been shown to volatilize from the surface of more acidic soils (i.e., soil pH of less than 3.0). Mercury is sorbed to soil with high iron and aluminum content up to a maximum loading capacity of 15 g/kg (15,000 ppm). Inorganic mercury sorbed to particulate material is not readily desorbed. Mobilization of sorbed mercury from particulates can occur through chemical or biological reduction to elemental mercury and bioconversion to volatile organic forms. Metallic mercury may move through the top 3–4 cm of dry soil at atmospheric pressure; however, it is unlikely that further penetration would occur (ATSDR 2003).

8.4.3.4 Properties of Arsenic

Arsenic in soil may be transported by wind or in runoff or may leach into the subsurface soil. However, because many arsenic compounds tend to partition to soil or sediment under oxidizing conditions, leaching usually does not transport arsenic to any great depth. Arsenic is largely

immobile in well-developed soils. Therefore, it tends to concentrate and remain in upper soil layers indefinitely. Downward migration of arsenic has been shown to be greater in a sandy soil than in a clay loam. The most influential parameter affecting arsenic, and the only one of any significance, was the iron content of the soil. Arsenic, which is adsorbed to iron and manganese oxides, may be released under reducing conditions. This may occur in saturated sediments or during flooding conditions. In addition to reductive dissolution, when nutrient levels are adequate, microbial action can also result in dissolution. Drying of the previously flooded soil increases arsenic adsorption, possibly due to alterations in iron mineralogy (ATSDR 2003).

8.4.3.5 Cadmium, Lead, Mercury, and Arsenic Distribution

Cadmium concentrations in Drainages A, B, and D2 trend from relatively high concentrations near the mesa rim to lower concentrations at the base of the drainages. While this trend is observed, there is not a strong correlation between sample locations and corresponding concentration. The limited number of samples, various sources, soil types, plus other variables do not allow for statistical interpretation. Lead, mercury, and arsenic do not show a pattern of distribution in the drainages. Concentrations above background values for these metals are included in the risk evaluation in Appendix F.

8.5 Contaminants of Potential Concern – Risk Analysis

This section summarizes the screening of sample data for use in both human health and ecological risk assessments. The COPC identified by this effort are also outlined.

8.5.1 Drainage A

The following inorganic constituents are identified as COPCs in Drainage A:

- antimony,
- cadmium,
- cobalt,
- copper,
- iron,
- lead,
- mercury,
- nickel
- selenium,
- vanadium, and
- zinc.

The following organic chemicals are identified as COPCs in Drainage A:

- Polychlorinated biphenyls (PCBs): Aroclor-1254
- Pesticides: endrin ketone, dichlorodiphenyldichloroethylene (DDE), endrin aldehyde, gamma-chlordane, endosulfan I, endrin, methoxychlor, endosulfan sulfate
- Semivolatile organic chemicals (SVOCs): fluoranthene, pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, di-n-butyl phthalate, phenanthrene.

The single radionuclide identified as a COPC in Drainage A is $^{239/240}$Plutonium.

8.5.2 Drainage B

The following inorganic constituents are identified as COPCs in Drainage B:

- cadmium,
- iron,

- lead,
- selenium,
- vanadium, and
- zinc.

The following organic chemicals are identified as COPCs in Drainage B:

- PCBs: Aroclor-1260
- Pesticides: DDE, dichlorodiphenyltrichloroethane (DDT), Dieldrin
- SVOCs: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, phenanthrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, fluoranthene, fluorene, pyrene.

The single radionuclide identified as a COPC is $^{239/240}$Pu.

8.5.3 Drainage C

The following inorganic constituents are identified as COPCs in Drainage C:

- cadmium,
- lead,
- selenium, and
- zinc.

The following organic chemicals are identified as COPCs in Drainage C:

- Pesticides: DDE, DDT, endrin ketone
- SVOCs: butylbenzyl phthalate, chrysene, fluoranthene, phenanthrene, pyrene, di-n-butyl phthalate, phenol.

Only $^{239/240}$Pu was identified as a radionuclide COPC for Drainage C. ^{137}Cs was detected in several samples above the fallout value for sediment of 0.9 pCi/g (LANL 1998). However, the concentrations did not exceed the maximum fallout concentration of 1.28 pCi/g (LANL 1998) therefore ^{137}Cs is not retained as a COPC.

8.5.4 Drainage D2

The following inorganic constituents are identified as COPCs in Drainage D2:

- antimony,
- cadmium,
- lead,
- mercury,
- selenium,
- vanadium, and
- zinc

The following organic chemicals are identified as COPCs in Drainage D2:

- PCBs: Aroclor-1254, Aroclor-1260
- Pesticides: DDD, DDE, DDT, alpha-chlordane, endrin ketone, gamma-chlordane, dieldrin
- SVOCs: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, phenanthrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, carbazole, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, pyrene, 2-methylnaphthalene, dibenzofuran, naphthalene, butylbenzyl phthalate.

The single radionuclide identified as a COPC in Drainage D2 was $^{239/240}Pu$.

8.6 Risk Assessment Results

The COPCs identified in the airport drainages were assessed for their potential to pose unacceptable risks to human and ecological receptors. The human health screening assessment was based on a recreational trail user scenario. The assessment found that all noncarcinogenic and carcinogenic COPCs had 95% UCLs or maximum concentrations less than their SSLs. The HIs for noncarcinogenic COPCs ranged from 0.02 to 0.3 and the total incremental cancer risk ranged from 4×10^{-10} to 5×10^{-6}. These risk values do not exceed NMED's target levels for systemic hazard (HI=1.0) and cancer risk (1×10^{-5}) (NMED 2000). The total radiological dose ranged from 0.01 mrem/yr to 0.039 mrem/yr, which is less than the DOE's target dose of 15 mrem/yr (DOE 2000).

The ecological screening assessment identified several inorganic and organic COPECs. The COPECs were evaluated in the context of frequency of detection, population exposure, and background. The results found that no COPECs are retained and the contaminants do not to pose a potential adverse impact to ecological receptors.

The risk screening assessments on contaminants in the airport drainages resulted in no potential unacceptable risks or doses to human health and no potential unacceptable risk to ecological receptors. Therefore, neither additional corrective action nor additional sampling is needed for the airport drainages. The complete Risk Assessment for this IM is in Appendix F.

9.0 RECOMMENDATIONS

The objectives of the IM were met. Debris from the four drainages has been removed and disposed of, soil samples were collected and analyzed, and a risk evaluation completed. Based on the findings of this risk evaluation additional sampling, characterization or corrective action at this site is not warranted.

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Table 1.
Waste Quantities and Type Summary

Drainage	Waste Type	Waste Volume (yd^3)	Date Removed from Site	Approximate Time Hauled to Landfill
D2	Tires	20	18-Aug-03	3:30 PM
D2	Steel and misc. debris	20	19-Aug-03	8:30 AM
D2	Tires	20	19-Aug-03	9:30 AM
D2	Steel and misc. debris	20	19-Aug-03	10:35 AM
D2	Tires	20	19-Aug-03	11:20 AM
D2	Steel and misc. debris	20	19-Aug-03	12:30 PM
D2	Tires	20	19-Aug-03	2:40 PM
D2	Tires	20	20-Aug-03	11:30 AM
D2	Steel and misc. debris	20	20-Aug-03	12:30 PM
Summary of Waste Quantities and Types Removed By Drainage				
Total Volume of Tires Removed (yd^3) =				100
Total Volume of Steel and Misc. Debris Removed (yd^3) =				80
Total Debris Waste Volume Removed From Drainage (yd^3) =				180

Drainage	Waste Type	Waste Volume ($yd^{3)}$	Date Removed from Site	Approximate Time Hauled to Landfill
B	Steel and misc. debris	20	21-Aug-03	2:00 PM
B	Steel and misc. debris	20	21-Aug-03	2:50 PM
B	Steel and misc. debris	20	21-Aug-03	3:20 PM
B	Steel and misc. debris	20	21-Aug-03	3:50 PM
Summary of Waste Quantities and Types Removed By Drainage				
Total Volume of Tires Removed (yd^3) =				*See Note
Total Volume of Steel and Misc. Debris Removed (yd^3) =				80
Total Debris Waste Volume Removed From Drainage (yd^3) =				80

** Tires removed at this drainage did not fill a roll-off bin. The roll -off bin was transported to the next drainage until completely filled, then transported to the Los Alamos County landfill for recycling.*

Table 1 (cont).
Waste Quantities and Type Summary

Drainage	Waste Type	Waste Volume (yd^3)	Date Removed from Site	Approximate Time Hauled to Landfill
A	Steel and misc. debris	20	22-Aug-03	2:00 PM
A	Steel and misc. debris	20	22-Aug-03	2:45 PM
A	Steel and misc. debris	20	25-Aug-03	9:00 AM
A	Steel and misc. debris	20	25-Aug-03	9:50 AM
A	Steel and misc. debris	20	25-Aug-03	10:30 AM
A	Steel and misc. debris	20	26-Aug-03	9:15 AM
Summary of Waste Quantities and Types Removed By Drainage				
Total Volume of Tires Removed (yd^3) =				*See Note
Total Volume of Steel and Misc. Debris Removed (yd^3) =				120
Total Debris Waste Volume Removed From Drainage (yd^3) =				120

** Tires removed at this drainage did not fill a roll-off bin. The roll -off bin was transported to the next drainage until completely filled, then transported to the Los Alamos County landfill for recycling.*

Drainage	Waste Type	Waste Volume (yd^3)	Date Removed from Site	Approximate Time Hauled to Landfill
C	Tires	20	26-Aug-03	10:00 AM
C	Steel and misc. debris	20	26-Aug-03	11:00 AM
C	Steel and misc. debris	10	26-Aug-03	3:00 PM
Summary of Waste Quantities and Types Removed By Drainage				
Total Volume of Tires Removed (yd^3) =				20
Total Volume of Steel and Misc. Debris Removed (yd^3) =				30
Total Debris Waste Volume Removed From Drainage (yd^3) =				50

Summary of Waste Quantities and Types Removed By Project	
Total Volume of Tires Removed (yd^3) =	120
Total Volume of Steel and Misc. Debris Removed (yd^3) =	310
Total Debris Waste Volume Removed From All Drainages (yd^3) =	430

Table 2.
Maximum Concentrations for Inorganic Constituents RFI Investigation

Contaminant	Depth	Concentration	Units	Flag(s)
Beryllium	0–0.5'	1.9	mg/kg	N/A
Cadmium	0–1'	0.68	mg/kg	N/A
Lead	0–1'	48.4	mg/kg	N/A
Uranium (total)	0–1'	8.1	mg/kg	N/A
Zinc	0–1'	234	mg/kg	N/A

Table 3.
Maximum Activity for Radionuclide Constituents RFI Investigation

Contaminant	Depth	Concentration	Units	Flag(s)
^{137}Cesium	0.1'	0.195	pCi/g	N/A
^{239}Plutonium	0–1'	0.419	pCi/g	N/A

Table 4.
Maximum Concentrations for Organic Constituents RFI Investigation

Contaminant	Depth (ft)	Concentration	Units	Flag(s)
Acenaphthene	0–0.83	0.64	mg/kg	N/A
Anthracene	0–0.83	0.94	mg/kg	N/A
Aroclor-1254	0–1	0.12	mg/kg	N/A
Aroclor-1260	0–1.25	0.09	mg/kg	N/A
Benzo(a)anthracene	0–0.83	1.6	mg/kg	N/A
Benzo(a)pyrene	0–0.83	1.4	mg/kg	N/A
Benzo(b)fluoranthene	0–0.83	1.4	mg/kg	N/A
Benzo(k)fluoranthene	0–0.83	1.4	mg/kg	N/A
Bis(2-ethylhexyl)phthalate	0–0.5	0.37	mg/kg	J
Chlordane (alpha)	0–1	0.007	mg/kg	N/A
Chlordane (gamma)	0–1	0.015	mg/kg	N/A
Chrysene	0–0.83	1.8	mg/kg	N/A
4,4'-DDE	0.25–0.83	0.004	mg/kg	N/A
4,4'-DDT	0–1	0.057	mg/kg	N/A
Dibenz(a,h)anthracene	0–0.83	0.24	mg/kg	J
Indeno(1,2,3-cd)pyrene	0–0.83	0.85	mg/kg	N/A

Table 5.
Regulatory Criteria for Post-Removal Sampling

Target Analyte/Target Compound	Background Value (mg/kg)	Soil Screening Level (mg/kg)
2-Methylnaphthalene	N/A	53
4,4'-DDD	N/A	24
4,4'-DDE	N/A	17
4,4'-DDE	N/A	17
4,4'-DDT	N/A	17
Acenaphthene	N/A	2,800
alpha-Chlordane	N/A	1.6
Aluminum	15,400	74,000
Anthracene	N/A	16,000
Antimony	0.83	30
Aroclor 1254	N/A	1.1
Aroclor 1260	N/A	1.1
Arsenic	3.98	3.90
Barium	127	5,200
Benzo(a)anthracene	N/A	6.2
Benzo(a)pyrene	N/A	0.62
Benzo(b)fluoranthene	N/A	6.2
Benzo(ghi)perylene	N/A	1,800
Benzo(k)fluoranthene	N/A	62
Beryllium	1.31	150
Butyl benzyl phthalate	N/A	240
Cadmium	0.40	70
Calcium	4,400	NP
Carbazole	N/A	2,400
Chromium	10.5	100,000
Chrysene	N/A	610
Chrysene	N/A	610
Cobalt	4.73	4,500
Copper	11.2	2,800
Dibenz(a,h)anthracene	N/A	0.62
Dibenzofuran	N/A	2,900

Table 5 (cont.).
Regulatory Criteria for Post-Removal Sampling

Target Analyte/Target Compound	Background Value (mg/kg)	Soil Screening Level (mg/kg)
Dieldrin	N/A	0.30
Di-n-butyl phthalate	N/A	6,100
Endosulfan I	N/A	370
Endosulfan sulfate	N/A	370
Endrin	N/A	18
Endrin aldehyde	N/A	18
Fluoranthene	N/A	2,300
Fluorene	N/A	2,100
gamma-Chlordane	N/A	1.6
Indeno(1,2,3-cd)pyrene	N/A	6.2
Iron	13,800	23,000
Lead	19.7	400
Magnesium	2,370	NP
Manganese	543	7,800
Mercury	0.1	23
Methoxychlor	N/A	3,100
Naphthalene	N/A	53
Nickel	9.4	1,500
Phenanthrene	N/A	1,800
Phenol	N/A	37,000
Potassium	2,690	NP
Pyrene	N/A	1,800
Selenium	0.3	380
Silver	1.0	380
Sodium	1,470	NP
Thallium	0.73	6.1
TPH (as diesel)	N/A	100
TPH (as motor oil)	N/A	100
Vanadium	19.7	530
Zinc	60.2	23,000

Table 6.
Summary of Samples Collected for Post-Removal Sampling

Sample ID	Depth (ft)	Description of Media	Analysis Codes	Method References
LANL-WR-SS-1	0-0.58	Sand	1, 2, 3, 4, 5, 6, 7*	A, B, C, D, E, F, G**
LANL-WR-SS-2	0-1.2	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-3	0.1.2	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-4	0-0.58	Sand w/silt	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-5	0-0.51	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-6	0-0.5	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-7	0-0.63	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-8	0-0.5	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-9	0-0.5	Sand w/loam	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-10	0-0.48	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-11	0-0.71	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-12	0-0.48	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-13	0-0.42	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-14	0-0.42	Silty Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-15	0-0.42	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-16	0-0.38	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-17	0-0.75	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-18	0-0.58	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-19	0-0.50	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-20	0-0.33	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-21	0-0.33	Sandy Silt w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-22	0-0.33	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-23	0-0.30	Sandy Silt w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-24	0-0.75	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-25	0-0.33	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-26	0-0.33	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-27	0-0.42	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-28	0-0.58	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-29	0-1.25	Sandy Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-30	0-0.71	Sandy Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-31	0-0.42	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-32	0-0.42	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-33	0-0.33	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-34	0-0.50	Silty Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-35	0-0.33	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-36	0-0.38	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-37	0-0.25	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-38	0-0.42	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-39	0-0.67	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-40	0-0.67	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-41	0-0.29	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-42	0-0.75	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G

* Analysis Codes are defined in Table 7
** Analysis Types are defined in Table 7

Table 6 (cont.).
Summary of Samples Collected for Post-Removal Sampling

Sample ID	Depth (ft)	Description of Media	Analysis Codes	Method References
LANL-WR-SS-43	0-0.50	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-44	0-0.46	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-45	0-1.20	Clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-46	0-0.42	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-47	0-0.58	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-48	0-0.50	Silty Clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-49	0-0.67	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-50	0-0.42	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-51	0-0.38	Sandy Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-52	0-0.58	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-53	0-0.38	Silty Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-54	0-0.33	Silty Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-55	0-0.42	Silty Clay w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-56	0-0.42	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-57	0-0.33	Silty Sand w/clay	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-58	0-0.42	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-59	0-0.54	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-60	0-0.38	Silty Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-61 (Dup SS-32)	0-0.42	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-62 (Dup SS-47)	0-0.58	Silty Clay w/sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-63 (Dup SS-17)	0-0.75	Sand w/gravel	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-64 (Dup SS-01)	0-0.58	Sand	1, 2, 3, 4, 5, 6, 7	A, B, C, D, E, F, G
LANL-WR-SS-65	Field Blank	N/A	8, 9, 10, 11, 12, 13	H, I, J, K, L, M, N
LANL-WR-SS-66	Field Blank	N/A	8, 9, 10, 11, 12, 13	H, I, J, K, L, M, N
LANL-WR-SS-67	Field Blank	N/A	8, 9, 10, 11, 12, 13	H, I, J, K, L, M, N

Table 7.
Analyses Performed and Analytical Methods Used for Post-Removal Sampling

Analysis Request	*Matrix	Analysis Code	Method
Semivolatile Organic Compounds	Solid	1	A - USEPA 3550B, 8270C
Total Metals	Solid	2	B - USEPA 3050B, 6010B, 6020, 7000 series
PCB/Pesticides	Solid	3	C - USEPA 3550B, 8081A/8082
Perchlorates	Solid	4	D - USEPA 314
^{137}Cs	Solid	5	E - USEPA 901

Table 7.
Analyses Performed and Analytical Methods Used for Post-Removal Sampling

Analysis Request	*Matrix	Analysis Code	Method
^{90}Sr	Solid	6	F - USEPA 905
^{239}Pu	Solid	7	G - DOE A-01-RC
**TPH (Diesel and Motor Oil)	Solid	N/A	USEPA 3550B, 3630C, 8015B
Semivolatile Organic Compounds	Field Blank	8	H - USEPA 3520C, 8270C
Total Metals	Field Blank	9	I - USEPA 3010A, 6010B, 6020, 7000 series
PCB/Pesticides	Field Blank	10	J - USEPA 3520C, 8081A/8082
Perchlorates	Field Blank	11	K - USEPA 314
^{137}Cs	Field Blank	12	L - USEPA 901
^{90}Sr	Field Blank	13	M - USEPA 905
^{239}Pu	Field Blank	14	N - DOE A-01-RC

Table 8.
Maximum Project Detection and Quantitation Limits

Analyte of Concern	Liquid Reporting Limit (ug/L)	Solid Reporting Limit (ug/kg)
Acenaphthene	10	660
Acenaphthylene	10	660
Anthracene	10	660
Benzo(a)anthracene	10	110
Benzo(b)fluoranthene	10	110
Benzo(k)fluoranthene	10	110
Benzo(g,h,i)perylene	50	110
Benzo(a)pyrene	10	110
Bis(2-chlorethoxy)methane	10	660
Bis(2-choroethyl)ether	10	660
Bis(2-ethylhexyl)phthalate	10	330
4-Bromophenyl phenyl ether	10	660
Butyl Benzyl phthalate	100	330
Carbazole	10	330
4-Chloroaniline	20	1,300
4-Chloro-3-methylphenol	20	1,300
2-Chloronaphthalene	10	330
2-Chlorophenol	10	660
1-Chloropropane	20	660
4-Chlorophenyl phenyl ether	10	660
Chrysene	10	110
Dibenz(a,h)anthracene	10	110
Dibenzofuran	10	110
Di-n-butyl phthalate	10	330
1,2-Dichlorobenzene	10	660
1,3-Dichlorobenzene	10	660
1,4-Dichlorobenzene	10	660
3,3'-Dichlorobenzidine	20	1,300
2,4-Dichlorophenol	10	660
Diethyl phthalate	10	660
2,4-Dimethylphenol	10	660
Dimethyl phthalate	10	330
4,6-Dinitro-2-methylphenol	20	3,300
2,4-Dinitrophenol	50	3,300
2,4-Dinitrotoluene	10	660
2,6-Dinitrotoluene	10	660
Di-n-butylphthalate	10	330
Di-n-octylphthalate	10	330
Fluoranthene	10	110

Table 8.
Maximum Project Detection and Quantitation Limits

Analyte of Concern	Liquid Reporting Limit (ug/L)	Solid Reporting Limit (ug/kg)
Fluorene	10	110
Hexachlorobenzene	10	660
Hexachlorobutadiene	10	660
Hexachlorocyclopentadiene	10	660
Hexachloroethane	10	660
Indeno(1,2,3-cd)pyrene	10	110
Isophorone	10	660
2-Methylnaphthalene	10	110
2-Methylphenol	10	660
4-Methylphenol	10	660
Naphthalene	10	110
2-Nitroaniline	50	3,300
3-Nitroaniline	50	3,300
4-Nitroaniline	20	660
Nitrobenzene	10	660
2-Nitrophenol	10	660
4-Nitrophenol	50	3,300
N-Nitrosodiphenylamine	10	660
N-Nitroso-di-n-propylamine	10	660
Pentachlorophenol	20	330
Phenanthrene	10	330
Phenol	10	660
Pyrene	10	110
1,2,4-Trichlrorbenzene	10	660
2,4,5-Trichlorophenol	10	660
2,4,6-Trichlorophenol	10	660
Aldrin	10	670
α-BHC	10	670
β-BHC	10	670
γ-BHC (Lindane)	10	670
δ-BHC	10	670
α-Chlordane	10	670
γ-Chlordane	10	670
4,4'-DDD	10	670
4,4'-DDE	10	670
4,4'-DDT	10	670
Dieldrin	10	670
Endosulfan I	10	670
Endosulfan II	10	670
Endosulfan sulfate	10	670
Endrin	10	670
Endrin aldehyde	10	670
Endrin ketone	10	670
Heptachlor	10	670
Heptachlor epoxide	10	670
Methoxychlor	10	670
Toxaphene	10	670
Aroclor-1016	10	110
Aroclor-1221	10	110
Aroclor-1232	10	110
Aroclor-1242	10	110
Aroclor-1248	10	110
Aroclor-1254	10	110
Aroclor-1260	10	110
Aroclor-1262	10	110
Aroclor-1268	10	110
TPH – Diesel	30	2,000
TPH – Motor Oil	30	2,000

Table 8 (cont).
Maximum Project Detection and Quantitation Limits

Analyte of Concern	Liquid Reporting Limit	Units	Solid Reporting Limit	Units
Aluminum	30	ug/L	100	ug/kg
Antimony	21	ug/L	40	ug/kg
Arsenic	10	ug/L	35	ug/kg
Barium	5	ug/L	30	ug/kg
Beryllium	5	ug/L	30	ug/kg
Cadmium	5	ug/L	30	ug/kg
Calcium	100	ug/L	250	ug/kg
Chromium	10	ug/L	30	ug/kg
Cobalt	10	ug/L	30	ug/kg
Copper	20	ug/L	50	ug/kg
Iron	100	ug/L	250	ug/kg
Lead	5	ug/L	20	ug/kg
Magnesium	100	ug/L	250	ug/kg
Manganese	10	ug/L	30	ug/kg
Mercury	0.2	ug/L	10	ug/kg
Nickel	10	ug/L	30	ug/kg
Potassium	100	ug/L	250	ug/kg
Selenium	20	ug/L	35	ug/kg
Silver	10	ug/L	30	ug/kg
Sodium	100	ug/L	250	ug/kg
Thallium	30	ug/L	50	ug/kg
Tin	20	ug/L	50	ug/kg
Vanadium	10	ug/L	20	ug/kg
Zinc	10	ug/L	20	ug/kg
Perchlorate	4	ug/L	40	ug/kg
Radionuclides				
^{137}Cesium	10	pci/L	0.1	pCi/g
^{239}Plutonium	0.2	pci/L	0.05	pCi/g
^{90}Strontium	1	pci/L	0.5	pCi/g

Table 9.
Data Quality Exceptions for Radionuclide Constituents

Analysis Request	Sample ID	Qualifier	Explanation
^{137}Cesium	LANL-WR-SS-41 to 67	J	Results are estimated due to duplicate imprecision.

Table 10.
Data Quality Exceptions for Organic Constituents

Analysis Request	Sample ID	Qualifier	Explanation
alpha-Chlordane	LANL-WR-SS-32, LANL-WR-SS-36, LANL-WR-SS-37, LANL-WR-SS-38, LANL-WR-SS-40, LANL-WR-SS-42, LANL-WR-SS-43, LANL-WR-SS-44	PJ	Results are estimated due to poor dual column agreement.
gamma-Chlordane	LANL-WR-SS-10, LANL-WR-SS-14, LANL-WR-SS-15, LANL-WR-SS-32, LANL-WR-SS-34, LANL-WR-SS-36, LANL-WR-SS-37, LANL-WR-SS-38, LANL-WR-SS-39, LANL-WR-SS-40, LANL-WR-SS-43, LANL-WR-SS-44, LANL-WR-SS-45, LANL-WR-SS-61	PJ	Results are estimated due to poor dual column agreement.
4,4' DDE	LANL-WR-SS-7, LANL-WR-SS-8, LANL-WR-SS-10, LANL-WR-SS-14, LANL-WR-SS-15, LANL-WR-SS-21, LANL-WR-SS-23 to 27, LANL-WR-SS-29, LANL-WR-SS-30, LANL-WR-SS-32, LANL-WR-SS-34 to 45 LANL-WR-SS-47, LANL-WR-SS-49, LANL-WR-SS-51, LANL-WR-SS-55, LANL-WR-SS-61, LANL-WR-SS-62	PJ	Results are estimated due to poor dual column agreement.
4,4' DDT	LANL-WR-SS-21 to 23, LANL-WR-SS-25 to 27, LANL-WR-SS-29 to 30, LANL-WR-SS-32, LANL-WR-SS-34 to 45, LANL-WR-SS-47, LANL-WR-SS-49, LANL-WR-SS-51, LANL-WR-SS-62	PJ	Results are estimated due to poor dual column agreement.

Table 10 (cont.).
Data Quality Exceptions for Organic Constituents

Analysis Request	Sample ID	Qualifier	Explanation
Endrin	LANL-WR-SS-14, LANL-WR-SS-15	PJ	Results are estimated due to poor dual column agreement.
Endrin Aldehyde	LANL-WR-SS-10, LANL-WR-SS-14	PJ	Results are estimated due to poor dual column agreement.
Endrin Ketone	LANL-WR-SS-7 to 8, LANL-WR-SS-10, LANL-WR-SS-14 to 15, LANL-WR-SS-32, LANL-WR-SS-34 to 40, LANL-WR-SS-42 to 45, LANL-WR-SS-57, LANL-WR-SS-61	PJ	Results are estimated due to poor dual column agreement.
Endosulfan Sulfate	LANL-WR-SS-14, LANL-WR-SS-15	PJ	Results are estimated due to poor dual column agreement.
Endosulfan I	LANL-WR-SS-14	PJ	Results are estimated due to poor dual column agreement.
2,4-Dinitrophenol	LANLWR-SS-41 to 54	UJ	Results are estimated due to poor initial calibration check performance.
Bis(2-ethylhexyl) phtalate, Di-n-octyl phthalate, Benzol(b) fluoranthene, Benzo(k) fluoranthene, Benzo(a) pyrene, Indeno(1,2,3-cd) pyrene, Benzo(g,h,I) perylene, Dibenzo(a,h) anthracene	LANL-WR-SS-57	UJ	Results are estimated due to low internal low internal recovery.
Total Petroleum Hydrocarbons (TPH)	LANL-WR-SS-50 to 64	J-	Results are underestimated due to low surrogate and matrix spike recoveries.
TPH	LANL-WR-SS-25, LANL-WR-SS-31 to 64	J-, UJ	Results are underestimated due to low surrogate recoveries.

Table 11.
Data Quality Exceptions for Inorganic Constituents

Analysis Request	Sample ID	Qualifier	Explanation
Aluminum	LANL-WR-SS-1 to LANL-WR-SS-64 (all solid samples)	J-, UJ	Aluminum was measured below the lower warning limit in the in all of the associated LCS. All solid sample results are underestimated.
Antimony	LANL-WR-SS-1 to LANL-WR-SS-40 and LANL-WR-SS-61 to LANL-WR-SS-64	J-, UJ	For three of four sample groups the Antimony matrix spike fell below the lower warning limit. All associated sample results are underestimated.
Chromium	LANL-WR-SS-61 to LANL-WR-SS-64	J, UJ	The chromium duplicate fell outside of the +/- 35% precision criteria. Associated results are qualified due to imprecision.
Lead	LANL-WR-SS-61 to LANL-WR-SS-64	J-, UJ	The lead matrix spike fell below the lower warning limit. The associated samples are underestimated. The qualification is bolstered by imprecision in the duplicate sample.
Magnesium	LANL-WR-SS-41 to LANL-WR-SS-60	J, UJ	The magnesium serial dilution fell outside of the +/-10% Precision criteria. All results are Estimated due to this imprecision.
Nickel	LANL-WR-SS-61 to LANL-WR-SS-64	J, UJ	The nickel duplicate sample fell outside of the +/-35% precision criteria. Associated samples are qualified due to imprecision.
Zinc	LANL-WR-SS-1 to LANL-WR-SS-20 and LANL-WR-SS-61 to LANL-WR-SS-64	J-, UJ	The zinc matrix spike fell below the lower warning limit. The associated samples are underestimated.

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Radionuclide	Activity (pCi/g)	TPU (pCi/g)	MDC (pCi/g)	Laboratory & Validation Flags	Background Value (pCi/g)	Soil Screening Level (pCi/g)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-1	A	Cesium 137	7.48E-01	7.70E-02	1.00E-01		9.00E-01	5.10E+00	-1.52E-01	-4.35E+00	No
LANL-WR-SS-10	A	Cesium 137	6.34E-01	7.30E-02	1.20E-01		9.00E-01	5.10E+00	-2.66E-01	-4.47E+00	No
LANL-WR-SS-11	A	Cesium 137	6.78E-01	7.70E-02	1.20E-01		9.00E-01	5.10E+00	-2.22E-01	-4.42E+00	No
LANL-WR-SS-14	A	Cesium 137	9.90E-01	1.10E-01	1.20E-01		9.00E-01	5.10E+00	9.00E-02	-4.11E+00	No
LANL-WR-SS-15	A	Cesium 137	5.77E-01	8.20E-02	1.40E-01		9.00E-01	5.10E+00	-3.23E-01	-4.52E+00	No
LANL-WR-SS-2	A	Cesium 137	1.16E+00	1.10E-01	1.30E-01		9.00E-01	5.10E+00	2.60E-01	-3.94E+00	No
LANL-WR-SS-3	A	Cesium 137	2.58E-01	5.20E-02	7.80E-02		9.00E-01	5.10E+00	-6.42E-01	-4.84E+00	No
LANL-WR-SS-4	A	Cesium 137	5.34E-01	6.70E-02	9.80E-02		9.00E-01	5.10E+00	-3.66E-01	-4.57E+00	No
LANL-WR-SS-5	A	Cesium 137	6.25E-01	7.50E-02	1.10E-01		9.00E-01	5.10E+00	-2.75E-01	-4.48E+00	No
LANL-WR-SS-6	A	Cesium 137	1.47E-01	3.30E-02	7.90E-02		9.00E-01	5.10E+00	-7.53E-01	-4.95E+00	No
LANL-WR-SS-64	A (Dup SS-1)	Cesium 137	4.70E-01	1.30E-01	9.00E-02		9.00E-01	5.10E+00	-4.30E-01	-4.63E+00	No
LANL-WR-SS-7	A	Cesium 137	8.38E-01	9.40E-02	1.10E-01		9.00E-01	5.10E+00	-6.20E-02	-4.26E+00	No
LANL-WR-SS-8	A	Cesium 137	7.93E-01	9.40E-02	1.30E-01		9.00E-01	5.10E+00	-1.07E-01	-4.31E+00	No
LANL-WR-SS-9	A	Cesium 137	1.21E-01	3.70E-02	9.80E-02		9.00E-01	5.10E+00	-7.79E-01	-4.98E+00	No
LANL-WR-SS-16	B	Cesium 137	1.46E-01	3.30E-02	7.60E-02		9.00E-01	5.10E+00	-7.54E-01	-4.95E+00	No
LANL-WR-SS-18	B	Cesium 137	2.40E-01	3.50E-02	6.60E-02		9.00E-01	5.10E+00	-6.60E-01	-4.86E+00	No
LANL-WR-SS-21	B	Cesium 137	6.70E-01	9.60E-02	1.40E-01		9.00E-01	5.10E+00	-2.30E-01	-4.43E+00	No
LANL-WR-SS-22	B	Cesium 137	9.70E-01	1.00E-01	1.20E-01		9.00E-01	5.10E+00	7.00E-02	-4.13E+00	No
LANL-WR-SS-23	B	Cesium 137	4.09E-01	6.50E-02	1.40E-01		9.00E-01	5.10E+00	-4.91E-01	-4.69E+00	No
LANL-WR-SS-24	B	Cesium 137	1.47E-01	4.00E-02	8.40E-02		9.00E-01	5.10E+00	-7.53E-01	-4.95E+00	No
LANL-WR-SS-25	B	Cesium 137	1.50E-01	2.90E-02	6.60E-02		9.00E-01	5.10E+00	-7.50E-01	-4.95E+00	No
LANL-WR-SS-26	B	Cesium 137	5.40E-01	6.80E-02	1.20E-01		9.00E-01	5.10E+00	-3.60E-01	-4.56E+00	No
LANL-WR-SS-27	B	Cesium 137	5.05E-01	6.10E-02	9.40E-02		9.00E-01	5.10E+00	-3.95E-01	-4.60E+00	No
LANL-WR-SS-28	B	Cesium 137	4.20E-01	6.60E-02	1.20E-01		9.00E-01	5.10E+00	-4.80E-01	-4.68E+00	No
LANL-WR-SS-29	B	Cesium 137	4.18E-01	9.20E-02	1.30E-01		9.00E-01	5.10E+00	-4.82E-01	-4.68E+00	No
LANL-WR-SS-30	B	Cesium 137	3.43E-01	6.10E-02	1.30E-01		9.00E-01	5.10E+00	-5.57E-01	-4.76E+00	No
LANL-WR-SS-46	C	Cesium 137	7.38E-01	9.10E-02	1.20E-01	J	9.00E-01	5.10E+00	-1.62E-01	-4.36E+00	No
LANL-WR-SS-47	C	Cesium 137	8.17E-01	9.30E-02	1.20E-01	J	9.00E-01	5.10E+00	-8.30E-02	-4.28E+00	No
LANL-WR-SS-48	C	Cesium 137	1.90E-01	4.70E-02	1.00E-01	J	9.00E-01	5.10E+00	-7.10E-01	-4.91E+00	No
LANL-WR-SS-49	C	Cesium 137	2.02E-01	5.00E-02	1.30E-01	J	9.00E-01	5.10E+00	-6.98E-01	-4.90E+00	No
LANL-WR-SS-50	C	Cesium 137	3.66E-01	6.20E-02	1.20E-01	J	9.00E-01	5.10E+00	-5.34E-01	-4.73E+00	No
LANL-WR-SS-51	C	Cesium 137	5.33E-01	9.00E-02	1.40E-01	J	9.00E-01	5.10E+00	-3.67E-01	-4.57E+00	No
LANL-WR-SS-52	C	Cesium 137	1.58E-01	4.20E-02	1.40E-01	J	9.00E-01	5.10E+00	-7.42E-01	-4.94E+00	No
LANL-WR-SS-53	C	Cesium 137	8.65E-01	9.60E-02	1.20E-01	J	9.00E-01	5.10E+00	-3.50E-02	-4.24E+00	No
LANL-WR-SS-54	C	Cesium 137	9.22E-01	9.60E-02	1.40E-01	J	9.00E-01	5.10E+00	2.20E-02	-4.18E+00	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Radionuclide	Activity (pCi/g)	TPU (pCi/g)	MDC (pCi/g)	Laboratory & Validation Flags	Background Value (pCi/g)	Soil Screening Level (pCi/g)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-55	C	Cesium 137	5.28E-01	7.90E-02	1.40E-01	J	9.00E-01	5.10E+00	-3.72E-01	-4.57E+00	No
LANL-WR-SS-56	C	Cesium 137	1.84E-01	4.20E-02	8.80E-02	J	9.00E-01	5.10E+00	-7.16E-01	-4.92E+00	No
LANL-WR-SS-57	C	Cesium 137	7.41E-01	7.80E-02	9.00E-02	J	9.00E-01	5.10E+00	-1.59E-01	-4.36E+00	No
LANL-WR-SS-58	C	Cesium 137	4.00E-02	2.40E-02	9.10E-02	J	9.00E-01	5.10E+00	-8.60E-01	-5.06E+00	No
LANL-WR-SS-59	C	Cesium 137	1.58E-01	5.50E-02	1.20E-01	J	9.00E-01	5.10E+00	-7.42E-01	-4.94E+00	No
LANL-WR-SS-60	C	Cesium 137	2.50E-01	5.00E-02	1.30E-01	J	9.00E-01	5.10E+00	-6.50E-01	-4.85E+00	No
LANL-WR-SS-62	C (Dup SS-47)	Cesium 137	1.15E+00	1.20E-01	1.40E-01		9.00E-01	5.10E+00	2.50E-01	-3.95E+00	No
LANL-WR-SS-31	D2	Cesium 137	2.52E-01	4.80E-02	1.30E-01		9.00E-01	5.10E+00	-6.48E-01	-4.85E+00	No
LANL-WR-SS-33	D2	Cesium 137	4.81E-01	7.40E-02	1.40E-01		9.00E-01	5.10E+00	-4.19E-01	-4.62E+00	No
LANL-WR-SS-41	D2	Cesium 137	2.20E-01	4.90E-02	1.20E-01	J	9.00E-01	5.10E+00	-6.80E-01	-4.88E+00	No
LANL-WR-SS-42	D2	Cesium 137	2.60E-02	3.00E-02	1.20E-01	J	9.00E-01	5.10E+00	-8.74E-01	-5.07E+00	No
LANL-WR-SS-43	D2	Cesium 137	1.01E-01	3.00E-02	1.30E-01	J	9.00E-01	5.10E+00	-7.99E-01	-5.00E+00	No
LANL-WR-SS-45	D2	Cesium 137	1.60E-01	3.80E-02	1.00E-01	J	9.00E-01	5.10E+00	-7.40E-01	-4.94E+00	No
LANL-WR-SS-1	A	Plutonium 239/40	1.69E-01	3.00E-02	1.40E-02		6.80E-02	1.10E+02	1.01E-01	-1.10E+02	No
LANL-WR-SS-10	A	Plutonium 239/40	3.36E-01	4.10E-02	1.20E-02		6.80E-02	1.10E+02	2.68E-01	-1.10E+02	No
LANL-WR-SS-11	A	Plutonium 239/40	8.80E-02	2.30E-02	3.50E-02		6.80E-02	1.10E+02	2.00E-02	-1.10E+02	No
LANL-WR-SS-13	A	Plutonium 239/40	3.30E-02	1.30E-02	1.30E-02	J	6.80E-02	1.10E+02	-3.50E-02	-1.10E+02	No
LANL-WR-SS-14	A	Plutonium 239/40	2.41E-01	3.30E-02	1.20E-02		6.80E-02	1.10E+02	1.73E-01	-1.10E+02	No
LANL-WR-SS-15	A	Plutonium 239/40	2.12E-01	3.20E-02	1.20E-02		6.80E-02	1.10E+02	1.44E-01	-1.10E+02	No
LANL-WR-SS-2	A	Plutonium 239/40	1.73E-01	3.10E-02	1.50E-02		6.80E-02	1.10E+02	1.05E-01	-1.10E+02	No
LANL-WR-SS-3	A	Plutonium 239/40	7.10E-02	2.00E-02	2.90E-02		6.80E-02	1.10E+02	3.00E-03	-1.10E+02	No
LANL-WR-SS-4	A	Plutonium 239/40	6.10E-02	1.60E-02	1.10E-02		6.80E-02	1.10E+02	-7.00E-03	-1.10E+02	No
LANL-WR-SS-5	A	Plutonium 239/40	6.40E-02	1.70E-02	1.10E-02		6.80E-02	1.10E+02	-4.00E-03	-1.10E+02	No
LANL-WR-SS-6	A	Plutonium 239/40	3.00E-02	1.20E-02	1.20E-02	J	6.80E-02	1.10E+02	-3.80E-02	-1.10E+02	No
LANL-WR-SS-64	A (Dup SS-1)	Plutonium 239/40	8.90E-02	1.80E-02	1.90E-02		6.80E-02	1.10E+02	2.10E-02	-1.10E+02	No
LANL-WR-SS-7	A	Plutonium 239/40	1.27E-01	2.70E-02	3.00E-02		6.80E-02	1.10E+02	5.90E-02	-1.10E+02	No
LANL-WR-SS-8	A	Plutonium 239/40	1.22E-01	2.50E-02	1.40E-02		6.80E-02	1.10E+02	5.40E-02	-1.10E+02	No
LANL-WR-SS-16	B	Plutonium 239/40	1.61E-01	3.10E-02	1.60E-02		6.80E-02	1.10E+02	9.30E-02	-1.10E+02	No
LANL-WR-SS-17	B	Plutonium 239/40	1.26E-02	7.30E-03	1.10E-02	J	6.80E-02	1.10E+02	-5.54E-02	-1.10E+02	No
LANL-WR-SS-18	B	Plutonium 239/40	3.80E-02	1.50E-02	3.20E-02	J	6.80E-02	1.10E+02	-3.00E-02	-1.10E+02	No
LANL-WR-SS-20	B	Plutonium 239/40	2.35E-02	9.60E-03	1.10E-02	J	6.80E-02	1.10E+02	-4.45E-02	-1.10E+02	No
LANL-WR-SS-21	B	Plutonium 239/40	1.19E-01	2.20E-02	1.00E-02		6.80E-02	1.10E+02	5.10E-02	-1.10E+02	No
LANL-WR-SS-22	B	Plutonium 239/40	1.38E-01	2.50E-02	2.40E-02		6.80E-02	1.10E+02	7.00E-02	-1.10E+02	No
LANL-WR-SS-23	B	Plutonium 239/40	1.01E-01	2.00E-02	1.10E-02		6.80E-02	1.10E+02	3.30E-02	-1.10E+02	No
LANL-WR-SS-25	B	Plutonium 239/40	2.66E-02	9.40E-03	9.00E-03	J	6.80E-02	1.10E+02	-4.14E-02	-1.10E+02	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Radionuclide	Activity (pCi/g)	TPU (pCi/g)	MDC (pCi/g)	Laboratory & Validation Flags	Background Value (pCi/g)	Soil Screening Level (pCi/g)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-26	B	Plutonium 239/40	7.80E-02	1.80E-02	1.10E-02		6.80E-02	1.10E+02	1.00E-02	-1.10E+02	No
LANL-WR-SS-27	B	Plutonium 239/40	2.32E-01	3.40E-02	1.30E-02		6.80E-02	1.10E+02	1.64E-01	-1.10E+02	No
LANL-WR-SS-28	B	Plutonium 239/40	1.41E-01	2.40E-02	2.20E-02		6.80E-02	1.10E+02	7.30E-02	-1.10E+02	No
LANL-WR-SS-29	B	Plutonium 239/40	8.70E-02	2.00E-02	1.20E-02	J	6.80E-02	1.10E+02	1.90E-02	-1.10E+02	No
LANL-WR-SS-30	B	Plutonium 239/40	3.80E-02	1.10E-02	9.00E-03	J	6.80E-02	1.10E+02	-3.00E-02	-1.10E+02	No
LANL-WR-SS-46	C	Plutonium 239/40	5.63E-01	4.60E-02	9.00E-03	J	6.80E-02	1.10E+02	4.95E-01	-1.09E+02	No
LANL-WR-SS-47	C	Plutonium 239/40	2.35E-01	2.80E-02	8.00E-03	J	6.80E-02	1.10E+02	1.67E-01	-1.10E+02	No
LANL-WR-SS-48	C	Plutonium 239/40	2.20E-02	1.00E-02	2.20E-02	J	6.80E-02	1.10E+02	-4.60E-02	-1.10E+02	No
LANL-WR-SS-50	C	Plutonium 239/40	2.80E-02	1.60E-02	6.00E-03	J	6.80E-02	1.10E+02	-4.00E-02	-1.10E+02	No
LANL-WR-SS-51	C	Plutonium 239/40	1.28E-01	2.10E-02	9.00E-03		6.80E-02	1.10E+02	6.00E-02	-1.10E+02	No
LANL-WR-SS-52	C	Plutonium 239/40	2.33E-02	8.80E-03	9.00E-03	J	6.80E-02	1.10E+02	-4.47E-02	-1.10E+02	No
LANL-WR-SS-53	C	Plutonium 239/40	3.19E-01	3.80E-02	2.30E-02		6.80E-02	1.10E+02	2.51E-01	-1.10E+02	No
LANL-WR-SS-54	C	Plutonium 239/40	2.50E-01	3.10E-02	1.00E-02		6.80E-02	1.10E+02	1.82E-01	-1.10E+02	No
LANL-WR-SS-55	C	Plutonium 239/40	6.30E-02	1.50E-02	1.90E-02		6.80E-02	1.10E+02	-5.00E-03	-1.10E+02	No
LANL-WR-SS-56	C	Plutonium 239/40	6.60E-02	1.60E-02	1.00E-02		6.80E-02	1.10E+02	-2.00E-03	-1.10E+02	No
LANL-WR-SS-57	C	Plutonium 239/40	1.99E-01	2.60E-02	9.00E-03		6.80E-02	1.10E+02	1.31E-01	-1.10E+02	No
LANL-WR-SS-58	C	Plutonium 239/40	9.50E-02	1.70E-02	8.00E-03		6.80E-02	1.10E+02	2.70E-02	-1.10E+02	No
LANL-WR-SS-59	C	Plutonium 239/40	1.36E-01	2.10E-02	1.70E-02		6.80E-02	1.10E+02	6.80E-02	-1.10E+02	No
LANL-WR-SS-60	C	Plutonium 239/40	8.00E-02	1.60E-02	9.00E-03		6.80E-02	1.10E+02	1.20E-02	-1.10E+02	No
LANL-WR-SS-62	C (Dup SS-47)	Plutonium 239/40	1.80E-01	3.00E-02	1.30E-02		6.80E-02	1.10E+02	1.12E-01	-1.10E+02	No
LANL-WR-SS-31	D2	Plutonium 239/40	4.30E-02	1.50E-02	1.40E-02	J	6.80E-02	1.10E+02	-2.50E-02	-1.10E+02	No
LANL-WR-SS-32	D2	Plutonium 239/40	3.10E-02	1.20E-02	1.20E-02	J	6.80E-02	1.10E+02	-3.70E-02	-1.10E+02	No
LANL-WR-SS-33	D2	Plutonium 239/40	2.01E-01	2.60E-02	1.80E-02	J	6.80E-02	1.10E+02	1.33E-01	-1.10E+02	No
LANL-WR-SS-35	D2	Plutonium 239/40	2.42E-01	2.60E-02	7.00E-03	J	6.80E-02	1.10E+02	1.74E-01	-1.10E+02	No
LANL-WR-SS-36	D2	Plutonium 239/40	1.16E-02	5.80E-03	7.80E-03	J	6.80E-02	1.10E+02	-5.64E-02	-1.10E+02	No
LANL-WR-SS-37	D2	Plutonium 239/40	6.30E-02	1.40E-02	8.00E-03	J	6.80E-02	1.10E+02	-5.00E-03	-1.10E+02	No
LANL-WR-SS-38	D2	Plutonium 239/40	1.39E-01	2.10E-02	1.60E-02	J	6.80E-02	1.10E+02	7.10E-02	-1.10E+02	No
LANL-WR-SS-39	D2	Plutonium 239/40	9.20E-03	5.30E-03	8.30E-03	J	6.80E-02	1.10E+02	-5.88E-02	-1.10E+02	No
LANL-WR-SS-40	D2	Plutonium 239/40	8.20E-03	4.70E-03	7.40E-03	J	6.80E-02	1.10E+02	-5.98E-02	-1.10E+02	No
LANL-WR-SS-41	D2	Plutonium 239/40	7.20E-02	1.50E-02	8.00E-03	J	6.80E-02	1.10E+02	4.00E-03	-1.10E+02	No
LANL-WR-SS-42	D2	Plutonium 239/40	3.32E-01	3.90E-02	2.80E-02	J	6.80E-02	1.10E+02	2.64E-01	-1.10E+02	No
LANL-WR-SS-43	D2	Plutonium 239/40	6.80E-02	1.40E-02	1.60E-02	J	6.80E-02	1.10E+02	0.00E+00	-1.10E+02	No
LANL-WR-SS-44	D2	Plutonium 239/40	3.90E-02	1.10E-02	8.00E-03	J	6.80E-02	1.10E+02	-2.90E-02	-1.10E+02	No
LANL-WR-SS-45	D2	Plutonium 239/40	9.70E-02	1.80E-02	8.00E-03	J	6.80E-02	1.10E+02	2.90E-02	-1.10E+02	No
LANL-WR-SS-61	D2 (Dup SS-32)	Plutonium 239/40	1.21E-02	6.10E-03	8.20E-03	J	6.80E-02	1.10E+02	-5.59E-02	-1.10E+02	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-10	A	[3] Endrin aldehyde	0.0033	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-10	A	[3] Endrin ketone	0.0078	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-10	A	4,4'-DDE	0.011	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-10	A	Aroclor 1254	1.3	D	N/A	1.1	N/A	0.2	Yes
LANL-WR-SS-10	A	gamma-Chlordane	0.005	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-11	A	Aroclor 1254	0.065		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-14	A	[1] Methoxychlor	0.009	PJ	N/A	3100	N/A	-3100.0	No
LANL-WR-SS-14	A	[2] Endosulfan sulfate	0.0020	PJ	N/A	370	N/A	-370.0	No
LANL-WR-SS-14	A	[3] Endrin aldehyde	0.0085	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-14	A	[3] Endrin ketone	0.0120	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-14	A	4,4'-DDE	0.049	DPJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-14	A	Aroclor 1254	3.5	D	N/A	1.1	N/A	2.4	Yes
LANL-WR-SS-14	A	Endosulfan I	0.0025	PJ	N/A	370	N/A	-370.0	No
LANL-WR-SS-14	A	Endrin	0.0024	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-14	A	Fluoranthene	0.1500		N/A	2300	N/A	-2299.9	No
LANL-WR-SS-14	A	gamma-Chlordane	0.025	DPJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-14	A	Pyrene	0.14		N/A	1800	N/A	-1799.9	No
LANL-WR-SS-15	A	[1] Methoxychlor	0.011	PJ	N/A	3100	N/A	-3100.0	No
LANL-WR-SS-15	A	[2] Endosulfan sulfate	0.0059	PJ	N/A	370	N/A	-370.0	No
LANL-WR-SS-15	A	[3] Endrin ketone	0.0120	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-15	A	4,4'-DDE	0.15	DPJ	N/A	17	N/A	-16.9	No
LANL-WR-SS-15	A	Aroclor 1254	12.0	D	N/A	1.1	N/A	10.9	Yes
LANL-WR-SS-15	A	Benzo(a)anthracene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-15	A	Benzo(a)pyrene	0.10	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-15	A	Benzo(b)fluoranthene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-15	A	Benzo(k)fluoranthene	0.14		N/A	62	N/A	-61.9	No
LANL-WR-SS-15	A	Chrysene	0.13		N/A	610	N/A	-609.9	No
LANL-WR-SS-15	A	Di-n-butyl phthalate	0.10	J	N/A	6100	N/A	-6099.9	No
LANL-WR-SS-15	A	Endrin	0.0068	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-15	A	Fluoranthene	0.2100		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-15	A	gamma-Chlordane	0.072	DPJ	N/A	1.6	N/A	-1.5	No
LANL-WR-SS-15	A	Phenanthrene	0.10	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-15	A	Pyrene	0.20		N/A	1800	N/A	-1799.8	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-2	A	Aroclor 1254	0.08		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-4	A	Aroclor 1254	0.06		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-5	A	[3] Endrin ketone	0.0021	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-5	A	Aroclor 1254	0.13		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-6	A	Anthracene	0.37		N/A	16000	N/A	-15999.6	No
LANL-WR-SS-7	A	[3] Endrin ketone	0.0072	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-7	A	4,4'-DDE	0.009	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-7	A	Aroclor 1254	0.75		N/A	1.1	N/A	-0.4	No
LANL-WR-SS-8	A	[3] Endrin ketone	0.0060	J	N/A	18	N/A	-18.0	No
LANL-WR-SS-8	A	4,4'-DDE	0.005	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-8	A	Aroclor 1254	0.41		N/A	1.1	N/A	-0.7	No
LANL-WR-SS-64	A (DUP-SS-1)	TPH (as Diesel)	11	J	N/A	100	N/A	-89.0	No
LANL-WR-SS-64	A (DUP-SS-1)	TPH (as Motor Oil)	5.6	J	N/A	100	N/A	-94.4	No
LANL-WR-SS-19	B	Fluoranthene	0.0750	J	N/A	2300	N/A	-2299.9	No
LANL-WR-SS-19	B	Pyrene	0.08	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-20	B	Fluoranthene	0.0770	J	N/A	2300	N/A	-2299.9	No
LANL-WR-SS-20	B	Pyrene	0.08	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-21	B	4,4'-DDE	0.003		N/A	17	N/A	-17.0	No
LANL-WR-SS-21	B	4,4'-DDT	0.003	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-22	B	4,4'-DDT	0.003	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-23	B	4,4'-DDE	0.004		N/A	17	N/A	-17.0	No
LANL-WR-SS-23	B	4,4'-DDT	0.004		N/A	17	N/A	-17.0	No
LANL-WR-SS-23	B	Fluoranthene	0.0740	J	N/A	2300	N/A	-2299.9	No
LANL-WR-SS-25	B	4,4'-DDE	0.007		N/A	17	N/A	-17.0	No
LANL-WR-SS-25	B	4,4'-DDT	0.013		N/A	17	N/A	-17.0	No
LANL-WR-SS-25	B	Benzo(a)anthracene	0.08	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-25	B	Benzo(a)pyrene	0.08	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-25	B	Chrysene	0.09	J	N/A	610	N/A	-609.9	No
LANL-WR-SS-25	B	Fluoranthene	0.1500		N/A	2300	N/A	-2299.9	No
LANL-WR-SS-25	B	Phenanthrene	0.11	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-25	B	Pyrene	0.14		N/A	1800	N/A	-1799.9	No
LANL-WR-SS-25	B	TPH (as Diesel)	60		N/A	100	N/A	-40.0	No
LANL-WR-SS-26	B	4,4'-DDE	0.004		N/A	17	N/A	-17.0	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-26	B	4,4'-DDT	0.002	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-27	B	4,4'-DDE	0.033		N/A	17	N/A	-17.0	No
LANL-WR-SS-27	B	4,4'-DDT	0.010		N/A	17	N/A	-17.0	No
LANL-WR-SS-29	B	4,4'-DDE	0.021		N/A	17	N/A	-17.0	No
LANL-WR-SS-29	B	4,4'-DDT	0.016		N/A	17	N/A	-17.0	No
LANL-WR-SS-29	B	Benzo(a)pyrene	0.09	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-29	B	Benzo(b)fluoranthene	0.14		N/A	6.2	N/A	-6.1	No
LANL-WR-SS-29	B	Benzo(k)fluoranthene	0.09	J	N/A	62	N/A	-61.9	No
LANL-WR-SS-29	B	Chrysene	0.09	J	N/A	610	N/A	-609.9	No
LANL-WR-SS-29	B	Dieldrin	0.003		N/A	0.30	N/A	-0.3	No
LANL-WR-SS-29	B	Fluoranthene	0.2000		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-29	B	Indeno(1,2,3-cd)pyrene	0.10	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-29	B	Pyrene	0.12	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-30	B	4,4'-DDE	0.004		N/A	17	N/A	-17.0	No
LANL-WR-SS-30	B	4,4'-DDT	0.004	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-30	B	Aroclor 1260	0.07		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Fluoranthene	0.098	J	N/A	2300	N/A	-2299.9	No
LANL-WR-SS-63	B (DUP-SS-17)	Pyrene	0.08	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-63	B (DUP-SS-17)	TPH (as Diesel)	30	J	N/A	100	N/A	-70.0	No
LANL-WR-SS-63	B (DUP-SS-17)	TPH (as Motor Oil)	30	J	N/A	100	N/A	-70.0	No
LANL-WR-SS-46	C	TPH (as Motor Oil)	17	J	N/A	100	N/A	-83.0	No
LANL-WR-SS-47	C	[1] Butyl benzyl phthalate	0.09	J	N/A	240	N/A	-239.9	No
LANL-WR-SS-47	C	4,4'-DDE	0.0038		N/A	17	N/A	-17.0	No
LANL-WR-SS-47	C	4,4'-DDT	0.0032	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-47	C	TPH (as Motor Oil)	16	J	N/A	100	N/A	-84.0	No
LANL-WR-SS-48	C	TPH (as Motor Oil)	12	J	N/A	100	N/A	-88.0	No
LANL-WR-SS-49	C	4,4'-DDE	0.0020	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-49	C	4,4'-DDT	0.0033		N/A	17	N/A	-17.0	No
LANL-WR-SS-49	C	TPH (as Motor Oil)	18	J	N/A	100	N/A	-82.0	No
LANL-WR-SS-50	C	TPH (as Diesel)	11	J	N/A	100	N/A	-89.0	No
LANL-WR-SS-50	C	TPH (as Motor Oil)	12	J	N/A	100	N/A	-88.0	No
LANL-WR-SS-51	C	4,4'-DDE	0.0110		N/A	17	N/A	-17.0	No
LANL-WR-SS-51	C	4,4'-DDT	0.0098		N/A	17	N/A	-17.0	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-51	C	Chrysene	0.09	J	N/A	610	N/A	-609.9	No
LANL-WR-SS-51	C	Fluoranthene	0.15		N/A	2300	N/A	-2299.9	No
LANL-WR-SS-51	C	Phenanthrene	0.14	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-51	C	Pyrene	0.15		N/A	1800	N/A	-1799.9	No
LANL-WR-SS-51	C	TPH (as Diesel)	76	J	N/A	100	N/A	-24.0	[4] Yes
LANL-WR-SS-51	C	TPH (as Motor Oil)	80	J	N/A	100	N/A	-20.0	[4] Yes
LANL-WR-SS-52	C	Di-n-butyl phthalate	0.09	J	N/A	6100	N/A	-6099.9	No
LANL-WR-SS-52	C	Phenol	0.11	J	N/A	37000	N/A	-36999.9	No
LANL-WR-SS-52	C	TPH (as Diesel)	8.4	J	N/A	100	N/A	-91.6	No
LANL-WR-SS-52	C	TPH (as Motor Oil)	32	J	N/A	100	N/A	-68.0	No
LANL-WR-SS-53	C	TPH (as Motor Oil)	21	J	N/A	100	N/A	-79.0	No
LANL-WR-SS-55	C	4,4'-DDE	0.0032		N/A	17	N/A	-17.0	No
LANL-WR-SS-55	C	TPH (as Diesel)	20	J	N/A	100	N/A	-80.0	No
LANL-WR-SS-55	C	TPH (as Motor Oil)	21	J	N/A	100	N/A	-79.0	No
LANL-WR-SS-56	C	TPH (as Motor Oil)	7	J	N/A	100	N/A	-93.0	No
LANL-WR-SS-57	C	[3] Endrin ketone	0.0026	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-57	C	TPH (as Diesel)	640	D	N/A	100	N/A	540.0	Yes
LANL-WR-SS-57	C	TPH (as Motor Oil)	710	D	N/A	100	N/A	610.0	Yes
LANL-WR-SS-58	C	TPH (as Motor Oil)	15	J	N/A	100	N/A	-85.0	No
LANL-WR-SS-59	C	TPH (as Diesel)	47	J	N/A	100	N/A	-53.0	No
LANL-WR-SS-59	C	TPH (as Motor Oil)	48	J	N/A	100	N/A	-52.0	No
LANL-WR-SS-62	C (DUP-SS-47)	4,4'-DDE	0.0028	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-62	C (DUP-SS-47)	4,4'-DDT	0.0021		N/A	17	N/A	-17.0	No
LANL-WR-SS-62	C (DUP-SS-47)	TPH (as Motor Oil)	30	J	N/A	100	N/A	-70.0	No
LANL-WR-SS-31	D2	TPH (as Motor Oil)	16	J	N/A	100	N/A	-84.0	No
LANL-WR-SS-32	D2	[1] Carbazole	0.08	J	N/A	2400	N/A	-2399.9	No
LANL-WR-SS-32	D2	[3] Endrin ketone	0.0056	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-32	D2	4,4'-DDE	0.0023	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-32	D2	4,4'-DDT	0.0069	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-32	D2	Acenaphthene	0.1500	J	N/A	2800	N/A	-2799.9	No
LANL-WR-SS-32	D2	alpha-Chlordane	0.0033	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-32	D2	Anthracene	1.2	J D	N/A	16000	N/A	-15998.8	No
LANL-WR-SS-32	D2	Aroclor 1254	0.14		N/A	1.1	N/A	-1.0	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-32	D2	Aroclor 1260	0.25		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-32	D2	Benzo(a)anthracene	5.30	D	N/A	6.2	N/A	-0.9	No
LANL-WR-SS-32	D2	Benzo(a)pyrene	4.90	D	N/A	0.62	N/A	4.3	Yes
LANL-WR-SS-32	D2	Benzo(b)fluoranthene	3.50	D	N/A	6.2	N/A	-2.7	No
LANL-WR-SS-32	D2	Benzo(ghi)perylene	1.60	D	N/A	1800	N/A	-1798.4	No
LANL-WR-SS-32	D2	Benzo(k)fluoranthene	5.00	D	N/A	62	N/A	-57.0	No
LANL-WR-SS-32	D2	Chrysene	5.50	D	N/A	610	N/A	-604.5	No
LANL-WR-SS-32	D2	Dibenz(a,h)anthracene	1.00		N/A	0.62	N/A	0.38	Yes
LANL-WR-SS-32	D2	Fluoranthene	8.50	D	N/A	2300	N/A	-2291.5	No
LANL-WR-SS-32	D2	Fluorene	0.170		N/A	2100	N/A	-2099.8	No
LANL-WR-SS-32	D2	gamma-Chlordane	0.004	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-32	D2	Indeno(1,2,3-cd)pyrene	2.00	D	N/A	6.2	N/A	-4.2	No
LANL-WR-SS-32	D2	Phenanthrene	3.20	D	N/A	1800	N/A	-1796.8	No
LANL-WR-SS-32	D2	Pyrene	9.10	D	N/A	1800	N/A	-1790.9	No
LANL-WR-SS-33	D2	TPH (as Motor Oil)	41	J	N/A	100	N/A	-59.0	No
LANL-WR-SS-34	D2	[1] Carbazole	0.29	J	N/A	2400	N/A	-2399.7	No
LANL-WR-SS-34	D2	[1] Dibenzofuran	0.23		N/A	2900.0	N/A	-2899.8	No
LANL-WR-SS-34	D2	2-Methylnaphthalene	0.1		N/A	53	N/A	-52.9000	No
LANL-WR-SS-34	D2	[3] Endrin ketone	0.0068	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-34	D2	4,4'-DDE	0.0019	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-34	D2	4,4'-DDT	0.0100	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-34	D2	Acenaphthene	0.35		N/A	2800	N/A	-2799.7	No
LANL-WR-SS-34	D2	Anthracene	0.63		N/A	16000	N/A	-15999.4	No
LANL-WR-SS-34	D2	Aroclor 1254	0.09		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-34	D2	Aroclor 1260	0.18		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-34	D2	Benzo(a)anthracene	0.93		N/A	6.2	N/A	-5.3	No
LANL-WR-SS-34	D2	Benzo(a)pyrene	0.94		N/A	0.62	N/A	0.3	Yes
LANL-WR-SS-34	D2	Benzo(b)fluoranthene	0.67		N/A	6.2	N/A	-5.5	No
LANL-WR-SS-34	D2	Benzo(ghi)perylene	0.60		N/A	1800	N/A	-1799.4	No
LANL-WR-SS-34	D2	Benzo(k)fluoranthene	0.83		N/A	62	N/A	-61.2	No
LANL-WR-SS-34	D2	Chrysene	0.97		N/A	610	N/A	-609.0	No
LANL-WR-SS-34	D2	Dibenz(a,h)anthracene	0.18		N/A	0.62	N/A	-0.4	No
LANL-WR-SS-34	D2	Fluoranthene	2.20		N/A	2300	N/A	-2297.8	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-34	D2	Fluorene	0.410		N/A	2100	N/A	-2099.6	No
LANL-WR-SS-34	D2	gamma-Chlordane	0.0022	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-34	D2	Indeno(1,2,3-cd)pyrene	0.66		N/A	6.2	N/A	-5.5	No
LANL-WR-SS-34	D2	Naphthalene	0.38		N/A	53	N/A	-52.6	No
LANL-WR-SS-34	D2	Phenanthrene	2.30		N/A	1800	N/A	-1797.7	No
LANL-WR-SS-34	D2	Pyrene	1.80		N/A	1800	N/A	-1798.2	No
LANL-WR-SS-35	D2	[3] Endrin ketone	0.0038	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-35	D2	4,4'-DDE	0.0059		N/A	17	N/A	-17.0	No
LANL-WR-SS-35	D2	4,4'-DDT	0.0078	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-35	D2	Aroclor 1254	0.12		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-35	D2	Aroclor 1260	0.18		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-35	D2	Benzo(a)anthracene	0.10	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-35	D2	Benzo(a)pyrene	0.12	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-35	D2	Benzo(b)fluoranthene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-35	D2	Benzo(k)fluoranthene	0.10	J	N/A	62	N/A	-61.9	No
LANL-WR-SS-35	D2	Chrysene	0.11	J	N/A	610	N/A	-609.9	No
LANL-WR-SS-35	D2	Fluoranthene	0.16		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-35	D2	Indeno(1,2,3-cd)pyrene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-35	D2	Phenanthrene	0.10	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-35	D2	Pyrene	0.15		N/A	1800	N/A	-1799.9	No
LANL-WR-SS-36	D2	[3] Endrin ketone	0.0051	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-36	D2	4,4'-DDE	0.0033	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-36	D2	4,4'-DDT	0.0052	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-36	D2	alpha-Chlordane	0.0033	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-36	D2	Aroclor 1254	0.07		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-36	D2	Aroclor 1260	0.13		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-36	D2	Benzo(a)anthracene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-36	D2	Benzo(a)pyrene	0.11	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-36	D2	Chrysene	0.13		N/A	610	N/A	-609.9	No
LANL-WR-SS-36	D2	Fluoranthene	0.16		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-36	D2	gamma-Chlordane	0.0031	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-36	D2	Indeno(1,2,3-cd)pyrene	0.09	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-36	D2	Phenanthrene	0.08	J	N/A	1800	N/A	-1799.9	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-36	D2	Pyrene	0.19		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-37	D2	[3] Endrin ketone	0.0120	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-37	D2	4,4'-DDE	0.0037		N/A	17	N/A	-17.0	No
LANL-WR-SS-37	D2	4,4'-DDT	0.0120	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-37	D2	alpha-Chlordane	0.0033	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-37	D2	Anthracene	0.11	J	N/A	16000	N/A	-15999.9	No
LANL-WR-SS-37	D2	Aroclor 1254	0.09		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-37	D2	Aroclor 1260	0.15		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-37	D2	Benzo(a)anthracene	0.43		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-37	D2	Benzo(a)pyrene	0.40		N/A	0.62	N/A	-0.2	No
LANL-WR-SS-37	D2	Benzo(b)fluoranthene	0.34		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-37	D2	Benzo(ghi)perylene	0.30		N/A	1800	N/A	-1799.7	No
LANL-WR-SS-37	D2	Benzo(k)fluoranthene	0.33		N/A	62	N/A	-61.7	No
LANL-WR-SS-37	D2	Chrysene	0.47		N/A	610	N/A	-609.5	No
LANL-WR-SS-37	D2	Dibenz(a,h)anthracene	0.09	J	N/A	0.62	N/A	-0.5	No
LANL-WR-SS-37	D2	Fluoranthene	0.66		N/A	2300	N/A	-2299.3	No
LANL-WR-SS-37	D2	gamma-Chlordane	0.0034	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-37	D2	Indeno(1,2,3-cd)pyrene	0.33		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-37	D2	Phenanthrene	0.34		N/A	1800	N/A	-1799.7	No
LANL-WR-SS-37	D2	Pyrene	0.74		N/A	1800	N/A	-1799.3	No
LANL-WR-SS-38	D2	[3] Endrin ketone	0.0036	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-38	D2	4,4'-DDD	0.0022	PJ	N/A	24	N/A	-23.9978	No
LANL-WR-SS-38	D2	4,4'-DDE	0.0041		N/A	17	N/A	-17.0	No
LANL-WR-SS-38	D2	4,4'-DDT	0.0220		N/A	17	N/A	-17.0	No
LANL-WR-SS-38	D2	alpha-Chlordane	0.0035	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-38	D2	Aroclor 1260	0.11		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-38	D2	Benzo(a)anthracene	0.13		N/A	6.2	N/A	-6.1	No
LANL-WR-SS-38	D2	Benzo(a)pyrene	0.14		N/A	0.62	N/A	-0.5	No
LANL-WR-SS-38	D2	Benzo(b)fluoranthene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-38	D2	Benzo(ghi)perylene	0.12		N/A	1800	N/A	-1799.9	No
LANL-WR-SS-38	D2	Benzo(k)fluoranthene	0.11	J	N/A	62	N/A	-61.9	No
LANL-WR-SS-38	D2	Chrysene	0.14		N/A	610	N/A	-609.9	No
LANL-WR-SS-38	D2	Fluoranthene	0.22		N/A	2300	N/A	-2299.8	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-38	D2	gamma-Chlordane	0.0048		N/A	1.6	N/A	-1.6	No
LANL-WR-SS-38	D2	Indeno(1,2,3-cd)pyrene	0.12		N/A	6.2	N/A	-6.1	No
LANL-WR-SS-38	D2	Phenanthrene	0.15	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-38	D2	Pyrene	0.24		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-39	D2	[1] Butyl benzyl phthalate	0.21	J	N/A	240	N/A	-239.8	No
LANL-WR-SS-39	D2	[3] Endrin ketone	0.0039	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-39	D2	4,4'-DDE	0.0030	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-39	D2	4,4'-DDT	0.0066	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-39	D2	Acenaphthene	0.0720	J	N/A	2800	N/A	-2799.9	No
LANL-WR-SS-39	D2	Anthracene	0.09	J	N/A	16000	N/A	-15999.9	No
LANL-WR-SS-39	D2	Aroclor 1254	0.09		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-39	D2	Aroclor 1260	0.15		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-39	D2	Benzo(a)anthracene	0.42		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-39	D2	Benzo(a)pyrene	0.44		N/A	0.62	N/A	-0.2	No
LANL-WR-SS-39	D2	Benzo(b)fluoranthene	0.38		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-39	D2	Benzo(ghi)perylene	0.21		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-39	D2	Benzo(k)fluoranthene	0.45		N/A	62	N/A	-61.6	No
LANL-WR-SS-39	D2	Chrysene	0.49		N/A	610	N/A	-609.5	No
LANL-WR-SS-39	D2	Fluoranthene	0.80		N/A	2300	N/A	-2299.2	No
LANL-WR-SS-39	D2	gamma-Chlordane	0.0023	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-39	D2	Indeno(1,2,3-cd)pyrene	0.27		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-39	D2	Phenanthrene	0.54		N/A	1800	N/A	-1799.5	No
LANL-WR-SS-39	D2	Pyrene	0.82		N/A	1800	N/A	-1799.2	No
LANL-WR-SS-39	D2	TPH (as Diesel)	14		N/A	100	N/A	-86.0	No
LANL-WR-SS-39	D2	TPH (as Motor Oil)	15	J	N/A	100	N/A	-85.0	No
LANL-WR-SS-40	D2	[3] Endrin ketone	0.0051	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-40	D2	4,4'-DDE	0.0018		N/A	17	N/A	-17.0	No
LANL-WR-SS-40	D2	4,4'-DDT	0.0073	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-40	D2	alpha-Chlordane	0.0025	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-40	D2	Aroclor 1254	0.07		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-40	D2	Aroclor 1260	0.21		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-40	D2	Benzo(a)anthracene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-40	D2	Benzo(a)pyrene	0.12		N/A	0.62	N/A	-0.5	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-40	D2	Benzo(b)fluoranthene	0.09	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-40	D2	Benzo(k)fluoranthene	0.12		N/A	62	N/A	-61.9	No
LANL-WR-SS-40	D2	Chrysene	0.12		N/A	610	N/A	-609.9	No
LANL-WR-SS-40	D2	Fluoranthene	0.19		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-40	D2	gamma-Chlordane	0.0035		N/A	1.6	N/A	-1.6	No
LANL-WR-SS-40	D2	Phenanthrene	0.11	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-40	D2	Pyrene	0.19		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-41	D2	TPH (as Motor Oil)	55	J	N/A	100	N/A	-45.0	No
LANL-WR-SS-42	D2	[3] Endrin ketone	0.0100	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-42	D2	4,4'-DDE	0.0047	J	N/A	17	N/A	-17.0	No
LANL-WR-SS-42	D2	4,4'-DDT	0.0230	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-42	D2	Acenaphthene	0.0780	J	N/A	2800	N/A	-2799.9	No
LANL-WR-SS-42	D2	alpha-Chlordane	0.0023	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-42	D2	Anthracene	0.17	J	N/A	16000	N/A	-15999.8	No
LANL-WR-SS-42	D2	Aroclor 1254	0.09		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-42	D2	Aroclor 1260	0.13		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-42	D2	Benzo(a)anthracene	0.54		N/A	6.2	N/A	-5.7	No
LANL-WR-SS-42	D2	Benzo(a)pyrene	0.50		N/A	0.62	N/A	-0.1	No
LANL-WR-SS-42	D2	Benzo(b)fluoranthene	0.36		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-42	D2	Benzo(ghi)perylene	0.30		N/A	1800	N/A	-1799.7	No
LANL-WR-SS-42	D2	Benzo(k)fluoranthene	0.55		N/A	62	N/A	-61.5	No
LANL-WR-SS-42	D2	Chrysene	0.60		N/A	610	N/A	-609.4	No
LANL-WR-SS-42	D2	Dieldrin	0.004	PJ	N/A	0.30	N/A	-0.3	No
LANL-WR-SS-42	D2	Fluoranthene	0.99		N/A	2300	N/A	-2299.0	No
LANL-WR-SS-42	D2	Indeno(1,2,3-cd)pyrene	0.32		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-42	D2	Phenanthrene	0.62		N/A	1800	N/A	-1799.4	No
LANL-WR-SS-42	D2	Pyrene	1.00		N/A	1800	N/A	-1799.0	No
LANL-WR-SS-43	D2	[3] Endrin ketone	0.0120	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-43	D2	4,4'-DDE	0.0076	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-43	D2	4,4'-DDT	0.0190	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-43	D2	alpha-Chlordane	0.0032	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-43	D2	Anthracene	0.13	J	N/A	16000	N/A	-15999.9	No
LANL-WR-SS-43	D2	Aroclor 1254	0.27		N/A	1.1	N/A	-0.8	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-43	D2	Benzo(a)anthracene	0.42		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-43	D2	Benzo(a)pyrene	0.42		N/A	0.62	N/A	-0.2	No
LANL-WR-SS-43	D2	Benzo(b)fluoranthene	0.40		N/A	6.2	N/A	-5.8	No
LANL-WR-SS-43	D2	Benzo(ghi)perylene	0.23		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-43	D2	Benzo(k)fluoranthene	0.41		N/A	62	N/A	-61.6	No
LANL-WR-SS-43	D2	Chrysene	0.47		N/A	610	N/A	-609.5	No
LANL-WR-SS-43	D2	Fluoranthene	0.73		N/A	2300	N/A	-2299.3	No
LANL-WR-SS-43	D2	gamma-Chlordane	0.0048	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-43	D2	Indeno(1,2,3-cd)pyrene	0.25		N/A	6.2	N/A	-6.0	No
LANL-WR-SS-43	D2	Phenanthrene	0.49		N/A	1800	N/A	-1799.5	No
LANL-WR-SS-43	D2	Pyrene	0.78		N/A	1800	N/A	-1799.2	No
LANL-WR-SS-43	D2	TPH (as Motor Oil)	93		N/A	100	N/A	-7.0	No
LANL-WR-SS-44	D2	[3] Endrin ketone	0.0049	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-44	D2	4,4'-DDE	0.0020	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-44	D2	4,4'-DDT	0.0150	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-44	D2	alpha-Chlordane	0.0024	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-44	D2	Anthracene	0.08	J	N/A	16000	N/A	-15999.9	No
LANL-WR-SS-44	D2	Aroclor 1254	0.07		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-44	D2	Aroclor 1260	0.11		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-44	D2	Benzo(a)anthracene	0.29		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-44	D2	Benzo(a)pyrene	0.30		N/A	0.62	N/A	-0.3	No
LANL-WR-SS-44	D2	Benzo(b)fluoranthene	0.25		N/A	6.2	N/A	-6.0	No
LANL-WR-SS-44	D2	Benzo(ghi)perylene	0.19		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-44	D2	Benzo(k)fluoranthene	0.31		N/A	62	N/A	-61.7	No
LANL-WR-SS-44	D2	Chrysene	0.32		N/A	610	N/A	-609.7	No
LANL-WR-SS-44	D2	Fluoranthene	0.47		N/A	2300	N/A	-2299.5	No
LANL-WR-SS-44	D2	gamma-Chlordane	0.0032		N/A	1.6	N/A	-1.6	No
LANL-WR-SS-44	D2	Indeno(1,2,3-cd)pyrene	0.21		N/A	6.2	N/A	-6.0	No
LANL-WR-SS-44	D2	Phenanthrene	0.30	J	N/A	1800	N/A	-1799.7	No
LANL-WR-SS-44	D2	Pyrene	0.56		N/A	1800	N/A	-1799.4	No
LANL-WR-SS-45	D2	[3] Endrin ketone	0.0088	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-45	D2	4,4'-DDE	0.0067	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-45	D2	4,4'-DDT	0.0260	PJ	N/A	17	N/A	-17.0	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection:	Target Analyte / Target Compound:	Concentration: (mg/kg)	Laboratory & Validation Flags:	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-45	D2	Anthracene	0.16	J	N/A	16000	N/A	-15999.8	No
LANL-WR-SS-45	D2	Aroclor 1254	0.24		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-45	D2	Aroclor 1260	0.24		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-45	D2	Benzo(a)anthracene	0.28		N/A	6.2	N/A	-5.9	No
LANL-WR-SS-45	D2	Benzo(a)pyrene	0.27		N/A	0.62	N/A	-0.4	No
LANL-WR-SS-45	D2	Benzo(b)fluoranthene	0.23		N/A	6.2	N/A	-6.0	No
LANL-WR-SS-45	D2	Benzo(ghi)perylene	0.16		N/A	1800	N/A	-1799.8	No
LANL-WR-SS-45	D2	Benzo(k)fluoranthene	0.30		N/A	62	N/A	-61.7	No
LANL-WR-SS-45	D2	Chrysene	0.31		N/A	610	N/A	-609.7	No
LANL-WR-SS-45	D2	Fluoranthene	0.57		N/A	2300	N/A	-2299.4	No
LANL-WR-SS-45	D2	gamma-Chlordane	0.0029	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-45	D2	Indeno(1,2,3-cd)pyrene	0.17		N/A	6.2	N/A	-6.0	No
LANL-WR-SS-45	D2	Phenanthrene	0.63		N/A	1800	N/A	-1799.4	No
LANL-WR-SS-45	D2	Pyrene	0.56		N/A	1800	N/A	-1799.4	No
LANL-WR-SS-61	D2 (DUP-SS-32)	[3] Endrin ketone	0.0035	PJ	N/A	18	N/A	-18.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	4,4'-DDE	0.0023	PJ	N/A	17	N/A	-17.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Aroclor 1254	0.14		N/A	1.1	N/A	-1.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Aroclor 1260	0.18		N/A	1.1	N/A	-0.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Benzo(a)anthracene	0.12		N/A	6.2	N/A	-6.1	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Benzo(a)pyrene	0.13		N/A	0.62	N/A	-0.5	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Benzo(b)fluoranthene	0.11	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Benzo(ghi)perylene	0.11	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Benzo(k)fluoranthene	0.14		N/A	62	N/A	-61.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Chrysene	0.15		N/A	610	N/A	-609.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Fluoranthene	0.24		N/A	2300	N/A	-2299.8	No
LANL-WR-SS-61	D2 (DUP-SS-32)	gamma-Chlordane	0.0020	PJ	N/A	1.6	N/A	-1.6	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Indeno(1,2,3-cd)pyrene	0.10	J	N/A	6.2	N/A	-6.1	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Phenanthrene	0.11	J	N/A	1800	N/A	-1799.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Pyrene	0.23		N/A	1800	N/A	-1799.8	No

1 - Used EPA Region 6 SSL; no published NMED SSL
2 - Used Endosulfan SSL as no published SSL for Endosulfan Sulfate
3 - Used Endrin SSL - no published SSL for Endrin Ketone

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-1	A	Aluminum	2240	J	15400	74000	-13160	-71760.0	No
LANL-WR-SS-1	A	Arsenic	0.75		3.98	3.90	-3	-3.2	No
LANL-WR-SS-1	A	Barium	25		127	5200	-102	-5175.0	No
LANL-WR-SS-1	A	Beryllium	0.26		1.31	150	-1	-149.7	No
LANL-WR-SS-1	A	Cadmium	0.11		0.40	70	-0.290	-69.9	No
LANL-WR-SS-1	A	Calcium	512	B	4400	NP	-3888.000	N/A	No
LANL-WR-SS-1	A	Chromium	2.80		10.5	100000	-8	-99997.2	No
LANL-WR-SS-1	A	Cobalt	1.70		4.73	4500	-3	-4498.3	No
LANL-WR-SS-1	A	Copper	2.80		11.2	2800	-8	-2797.2	No
LANL-WR-SS-1	A	Iron	7670		13800	23000	-6130	-15330.0	No
LANL-WR-SS-1	A	Lead	10.9		19.7	400	-9	-389.1	No
LANL-WR-SS-1	A	Magnesium	441		2370	NP	-1929	N/A	No
LANL-WR-SS-1	A	Manganese	250		543	7800	-293	-7550.0	No
LANL-WR-SS-1	A	Nickel	2.00		9.4	1500	-7	-1498.0	No
LANL-WR-SS-1	A	Potassium	476	B	2690	NP	-2214	N/A	No
LANL-WR-SS-1	A	Sodium	39.6	B	1470	NP	-1430	N/A	No
LANL-WR-SS-1	A	Vanadium	6.8		19.7	530	-13	-523.2	No
LANL-WR-SS-1	A	Zinc	41.2	J	60.2	23000	-19	-22958.8	No
LANL-WR-SS-10	A	Aluminum	2780	J	15400	74000	-12620	-71220.0	No
LANL-WR-SS-10	A	Antimony	3.4	J	0.83	30	2.57	-26.6	No
LANL-WR-SS-10	A	Arsenic	1.00		3.98	3.90	-3	-2.9	No
LANL-WR-SS-10	A	Barium	29.9		127	5200	-97	-5170.1	No
LANL-WR-SS-10	A	Beryllium	0.46		1.31	150	-1	-149.5	No
LANL-WR-SS-10	A	Cadmium	0.53		0.40	70	0.130	-69.5	No
LANL-WR-SS-10	A	Calcium	1670		4400	NP	-2730.000	N/A	No
LANL-WR-SS-10	A	Chromium	3.50		10.5	100000	-7	-99996.5	No
LANL-WR-SS-10	A	Cobalt	1.70		4.73	4500	-3	-4498.3	No
LANL-WR-SS-10	A	Copper	5.70		11.2	2800	-6	-2794.3	No
LANL-WR-SS-10	A	Iron	7800		13800	23000	-6000	-15200.0	No
LANL-WR-SS-10	A	Lead	27		19.7	400	7	-373.0	No
LANL-WR-SS-10	A	Magnesium	470		2370	NP	-1900	N/A	No
LANL-WR-SS-10	A	Manganese	285		543	7800	-258	-7515.0	No
LANL-WR-SS-10	A	Mercury	0.06		0.1	23	-0.038	-22.9	No
LANL-WR-SS-10	A	Nickel	3.00		9.4	1500	-6	-1497.0	No
LANL-WR-SS-10	A	Potassium	595		2690	NP	-2095	N/A	No
LANL-WR-SS-10	A	Selenium	0.48	B	0.3	380	0.18	-379.5	No
LANL-WR-SS-10	A	Sodium	65.1	B	1470	NP	-1405	N/A	No
LANL-WR-SS-10	A	Vanadium	5.9		19.7	530	-14	-524.1	No
LANL-WR-SS-10	A	Zinc	130	J	60.2	23000	70	-22870.0	No
LANL-WR-SS-11	A	Aluminum	2230	J	15400	74000	-13170	-71770.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-11	A	Antimony	0.72	BJ	0.83	30	-0.11	-29.3	No
LANL-WR-SS-11	A	Arsenic	0.86		3.98	3.90	-3	-3.0	No
LANL-WR-SS-11	A	Barium	27.3		127	5200	-100	-5172.7	No
LANL-WR-SS-11	A	Beryllium	0.54		1.31	150	-1	-149.5	No
LANL-WR-SS-11	A	Cadmium	0.20		0.40	70	-0.200	-69.8	No
LANL-WR-SS-11	A	Calcium	989		4400	NP	-3411.000	N/A	No
LANL-WR-SS-11	A	Chromium	2.80		10.5	100000	-8	-99997.2	No
LANL-WR-SS-11	A	Cobalt	1.20		4.73	4500	-4	-4498.8	No
LANL-WR-SS-11	A	Copper	4.10		11.2	2800	-7	-2795.9	No
LANL-WR-SS-11	A	Iron	7160		13800	23000	-6640	-15840.0	No
LANL-WR-SS-11	A	Lead	17.2		19.7	400	-3	-382.8	No
LANL-WR-SS-11	A	Magnesium	394		2370	NP	-1976	N/A	No
LANL-WR-SS-11	A	Manganese	306		543	7800	-237	-7494.0	No
LANL-WR-SS-11	A	Mercury	0.04		0.1	23	-0.062	-23.0	No
LANL-WR-SS-11	A	Nickel	2.10		9.4	1500	-7	-1497.9	No
LANL-WR-SS-11	A	Potassium	406	B	2690	NP	-2284	N/A	No
LANL-WR-SS-11	A	Selenium	0.22	B	0.3	380	-0.08	-379.8	No
LANL-WR-SS-11	A	Sodium	54.8	B	1470	NP	-1415	N/A	No
LANL-WR-SS-11	A	Vanadium	5.1		19.7	530	-15	-524.9	No
LANL-WR-SS-11	A	Zinc	62.7	J	60.2	23000	3	-22937.3	No
LANL-WR-SS-12	A	Aluminum	1210	J	15400	74000	-14190	-72790.0	No
LANL-WR-SS-12	A	Antimony	0.19	BJ	0.83	30	-0.64	-29.8	No
LANL-WR-SS-12	A	Arsenic	0.27	B	3.98	3.90	-4	-3.6	No
LANL-WR-SS-12	A	Barium	11.1		127	5200	-116	-5188.9	No
LANL-WR-SS-12	A	Beryllium	0.46		1.31	150	-1	-149.5	No
LANL-WR-SS-12	A	Cadmium	0.052	B	0.40	70	-0.348	-69.9	No
LANL-WR-SS-12	A	Calcium	959		4400	NP	-3441.000	N/A	No
LANL-WR-SS-12	A	Chromium	1.30		10.5	100000	-9	-99998.7	No
LANL-WR-SS-12	A	Cobalt	0.49	B	4.73	4500	-4	-4499.5	No
LANL-WR-SS-12	A	Copper	2.10		11.2	2800	-9	-2797.9	No
LANL-WR-SS-12	A	Iron	7430		13800	23000	-6370	-15570.0	No
LANL-WR-SS-12	A	Lead	10.6		19.7	400	-9	-389.4	No
LANL-WR-SS-12	A	Magnesium	263		2370	NP	-2107	N/A	No
LANL-WR-SS-12	A	Manganese	356		543	7800	-187	-7444.0	No
LANL-WR-SS-12	A	Nickel	1.10	B	9.4	1500	-8	-1498.9	No
LANL-WR-SS-12	A	Potassium	604		2690	NP	-2086	N/A	No
LANL-WR-SS-12	A	Selenium	0.31	B	0.3	380	0.01	-379.7	No
LANL-WR-SS-12	A	Sodium	137	B	1470	NP	-1333	N/A	No
LANL-WR-SS-12	A	Vanadium	2.3		19.7	530	-17	-527.7	No
LANL-WR-SS-12	A	Zinc	57.4	J	60.2	23000	-3	-22942.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-13	A	Aluminum	1000	J	15400	74000	-14400	-73000.0	No
LANL-WR-SS-13	A	Antimony	0.27	BJ	0.83	30	-0.56	-29.7	No
LANL-WR-SS-13	A	Arsenic	0.38	B	3.98	3.90	-4	-3.5	No
LANL-WR-SS-13	A	Barium	10.4		127	5200	-117	-5189.6	No
LANL-WR-SS-13	A	Beryllium	0.46		1.31	150	-1	-149.5	No
LANL-WR-SS-13	A	Cadmium	0.067	B	0.40	70	-0.333	-69.9	No
LANL-WR-SS-13	A	Calcium	1620		4400	NP	-2780.000	N/A	No
LANL-WR-SS-13	A	Chromium	0.94	B	10.5	100000	-10	-99999.1	No
LANL-WR-SS-13	A	Cobalt	0.38	B	4.73	4500	-4	-4499.6	No
LANL-WR-SS-13	A	Copper	2.50		11.2	2800	-9	-2797.5	No
LANL-WR-SS-13	A	Iron	7080		13800	23000	-6720	-15920.0	No
LANL-WR-SS-13	A	Lead	12.6		19.7	400	-7	-387.4	No
LANL-WR-SS-13	A	Magnesium	206		2370	NP	-2164	N/A	No
LANL-WR-SS-13	A	Manganese	299		543	7800	-244	-7501.0	No
LANL-WR-SS-13	A	Mercury	0.04	B	0.1	23	-0.065	-23.0	No
LANL-WR-SS-13	A	Nickel	1.10	B	9.4	1500	-8	-1498.9	No
LANL-WR-SS-13	A	Potassium	513	B	2690	NP	-2177	N/A	No
LANL-WR-SS-13	A	Sodium	194	B	1470	NP	-1276	N/A	No
LANL-WR-SS-13	A	Vanadium	2.3	B	19.7	530	-17	-527.7	No
LANL-WR-SS-13	A	Zinc	65	J	60.2	23000	5	-22935.0	No
LANL-WR-SS-14	A	Aluminum	3490	J	15400	74000	-11910	-70510.0	No
LANL-WR-SS-14	A	Antimony	2.3	J	0.83	30	1.47	-27.7	No
LANL-WR-SS-14	A	Arsenic	1.4		3.98	3.90	-3	-2.5	No
LANL-WR-SS-14	A	Barium	55.6		127	5200	-71	-5144.4	No
LANL-WR-SS-14	A	Beryllium	0.44		1.31	150	-1	-149.6	No
LANL-WR-SS-14	A	Cadmium	0.61		0.40	70	0.210	-69.4	No
LANL-WR-SS-14	A	Calcium	2090		4400	NP	-2310.000	N/A	No
LANL-WR-SS-14	A	Chromium	4.30		10.5	100000	-6	-99995.7	No
LANL-WR-SS-14	A	Cobalt	2.50		4.73	4500	-2	-4497.5	No
LANL-WR-SS-14	A	Copper	8.00		11.2	2800	-3	-2792.0	No
LANL-WR-SS-14	A	Iron	7580		13800	23000	-6220	-15420.0	No
LANL-WR-SS-14	A	Lead	33.9		19.7	400	14	-366.1	No
LANL-WR-SS-14	A	Magnesium	830		2370	NP	-1540	N/A	No
LANL-WR-SS-14	A	Manganese	341		543	7800	-202	-7459.0	No
LANL-WR-SS-14	A	Mercury	0.07		0.1	23	-0.032	-22.9	No
LANL-WR-SS-14	A	Nickel	4.20		9.4	1500	-5	-1495.8	No
LANL-WR-SS-14	A	Potassium	1150		2690	NP	-1540	N/A	No
LANL-WR-SS-14	A	Selenium	0.23	B	0.3	380	-0.07	-379.8	No
LANL-WR-SS-14	A	Sodium	53.1	B	1470	NP	-1417	N/A	No
LANL-WR-SS-14	A	Vanadium	8.7		19.7	530	-11	-521.3	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-14	A	Zinc	111	J	60.2	23000	51	-22889.0	No
LANL-WR-SS-15	A	Aluminum	5710	J	15400	74000	-9690	-68290.0	No
LANL-WR-SS-15	A	Antimony	26.8	J	0.83	30	26	-3.2	No
LANL-WR-SS-15	A	Arsenic	4.0		3.98	3.90	0.020	0.1	Yes
LANL-WR-SS-15	A	Barium	127		127	5200	0	-5073.0	No
LANL-WR-SS-15	A	Beryllium	0.63		1.31	150	-1	-149.4	No
LANL-WR-SS-15	A	Cadmium	49.3		0.40	70	48.900	-20.7	No
LANL-WR-SS-15	A	Calcium	5160		4400	NP	760.000	N/A	No SSL; > BV
LANL-WR-SS-15	A	Chromium	7.40		10.5	100000	-3	-99992.6	No
LANL-WR-SS-15	A	Cobalt	5.70		4.73	4500	1	-4494.3	No
LANL-WR-SS-15	A	Copper	35.6		11.2	2800	24	-2764.4	No
LANL-WR-SS-15	A	Iron	26900		13800	23000	13100	3900.0	Yes
LANL-WR-SS-15	A	Lead	114		19.7	400	94	-286.0	No
LANL-WR-SS-15	A	Magnesium	1280		2370	NP	-1090	N/A	No
LANL-WR-SS-15	A	Manganese	423		543	7800	-120	-7377.0	No
LANL-WR-SS-15	A	Mercury	0.21		0.1	23	0.110	-22.8	No
LANL-WR-SS-15	A	Nickel	14.7		9.4	1500	5	-1485.3	No
LANL-WR-SS-15	A	Potassium	1380		2690	NP	-1310	N/A	No
LANL-WR-SS-15	A	Selenium	0.27	B	0.3	380	-0.03	-379.7	No
LANL-WR-SS-15	A	Silver	0.024	B	1.0	380	-0.98	-380.0	No
LANL-WR-SS-15	A	Sodium	59.1	B	1470	NP	-1411	N/A	No
LANL-WR-SS-15	A	Vanadium	23.7		19.7	530	4	-506.3	No
LANL-WR-SS-15	A	Zinc	2030	J	60.2	23000	1970	-20970.0	No
LANL-WR-SS-2	A	Aluminum	1780	J	15400	74000	-13620	-72220.0	No
LANL-WR-SS-2	A	Antimony	0.22	BJ	0.83	30	-0.61	-29.8	No
LANL-WR-SS-2	A	Arsenic	0.65		3.98	3.90	-3	-3.3	No
LANL-WR-SS-2	A	Barium	21.4		127	5200	-106	-5178.6	No
LANL-WR-SS-2	A	Beryllium	0.25		1.31	150	-1	-149.8	No
LANL-WR-SS-2	A	Cadmium	0.086	B	0.40	70	-0.314	-69.9	No
LANL-WR-SS-2	A	Calcium	522	B	4400	NP	-3878.000	N/A	No
LANL-WR-SS-2	A	Chromium	1.90		10.5	100000	-9	-99998.1	No
LANL-WR-SS-2	A	Cobalt	1.10		4.73	4500	-4	-4498.9	No
LANL-WR-SS-2	A	Copper	2.40		11.2	2800	-9	-2797.6	No
LANL-WR-SS-2	A	Iron	4250		13800	23000	-9550	-18750.0	No
LANL-WR-SS-2	A	Lead	9.1		19.7	400	-11	-390.9	No
LANL-WR-SS-2	A	Magnesium	327		2370	NP	-2043	N/A	No
LANL-WR-SS-2	A	Manganese	225		543	7800	-318	-7575.0	No
LANL-WR-SS-2	A	Mercury	0.02	B	0.1	23	-0.080	-23.0	No
LANL-WR-SS-2	A	Nickel	1.50		9.4	1500	-8	-1498.5	No
LANL-WR-SS-2	A	Potassium	442	B	2690	NP	-2248	N/A	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-2	A	Selenium	0.14	B	0.3	380	-0.16	-379.9	No
LANL-WR-SS-2	A	Sodium	41.2	B	1470	NP	-1429	N/A	No
LANL-WR-SS-2	A	Vanadium	3.7		19.7	530	-16	-526.3	No
LANL-WR-SS-2	A	Zinc	25.3	J	60.2	23000	-35	-22974.7	No
LANL-WR-SS-3	A	Aluminum	3200	J	15400	74000	-12200	-70800.0	No
LANL-WR-SS-3	A	Arsenic	1.2		3.98	3.90	-3	-2.7	No
LANL-WR-SS-3	A	Barium	44.6		127	5200	-82	-5155.4	No
LANL-WR-SS-3	A	Beryllium	0.44		1.31	150	-1	-149.6	No
LANL-WR-SS-3	A	Cadmium	0.084	B	0.40	70	-0.316	-69.9	No
LANL-WR-SS-3	A	Calcium	1210		4400	NP	-3190.000	N/A	No
LANL-WR-SS-3	A	Chromium	3.40		10.5	100000	-7	-99996.6	No
LANL-WR-SS-3	A	Cobalt	2.00		4.73	4500	-3	-4498.0	No
LANL-WR-SS-3	A	Copper	3.50		11.2	2800	-8	-2796.5	No
LANL-WR-SS-3	A	Iron	6270		13800	23000	-7530	-16730.0	No
LANL-WR-SS-3	A	Lead	10.4		19.7	400	-9	-389.6	No
LANL-WR-SS-3	A	Magnesium	600		2370	NP	-1770	N/A	No
LANL-WR-SS-3	A	Manganese	320		543	7800	-223	-7480.0	No
LANL-WR-SS-3	A	Nickel	2.80		9.4	1500	-7	-1497.2	No
LANL-WR-SS-3	A	Potassium	667		2690	NP	-2023	N/A	No
LANL-WR-SS-3	A	Sodium	51.1	B	1470	NP	-1419	N/A	No
LANL-WR-SS-3	A	Vanadium	7.5		19.7	530	-12	-522.5	No
LANL-WR-SS-3	A	Zinc	30	J	60.2	23000	-30	-22970.0	No
LANL-WR-SS-4	A	Aluminum	2790	J	15400	74000	-12610	-71210.0	No
LANL-WR-SS-4	A	Antimony	0.16	BJ	0.83	30	-0.67	-29.8	No
LANL-WR-SS-4	A	Arsenic	1.2		3.98	3.90	-3	-2.7	No
LANL-WR-SS-4	A	Barium	30.2		127	5200	-97	-5169.8	No
LANL-WR-SS-4	A	Beryllium	0.35		1.31	150	-1	-149.7	No
LANL-WR-SS-4	A	Cadmium	0.11		0.40	70	-0.290	-69.9	No
LANL-WR-SS-4	A	Calcium	729		4400	NP	-3671.000	N/A	No
LANL-WR-SS-4	A	Chromium	3.50		10.5	100000	-7	-99996.5	No
LANL-WR-SS-4	A	Cobalt	1.80		4.73	4500	-3	-4498.2	No
LANL-WR-SS-4	A	Copper	3.60		11.2	2800	-8	-2796.4	No
LANL-WR-SS-4	A	Iron	6340		13800	23000	-7460	-16660.0	No
LANL-WR-SS-4	A	Lead	12.6		19.7	400	-7	-387.4	No
LANL-WR-SS-4	A	Magnesium	587		2370	NP	-1783	N/A	No
LANL-WR-SS-4	A	Manganese	259		543	7800	-284	-7541.0	No
LANL-WR-SS-4	A	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-4	A	Potassium	659		2690	NP	-2031	N/A	No
LANL-WR-SS-4	A	Sodium	48.4	B	1470	NP	-1422	N/A	No
LANL-WR-SS-4	A	Vanadium	6.5		19.7	530	-13	-523.5	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-4	A	Zinc	37	J	60.2	23000	-23	-22963.0	No
LANL-WR-SS-5	A	Aluminum	2990	J	15400	74000	-12410	-71010.0	No
LANL-WR-SS-5	A	Antimony	0.24	BJ	0.83	30	-0.59	-29.8	No
LANL-WR-SS-5	A	Arsenic	1.0		3.98	3.90	-3	-2.9	No
LANL-WR-SS-5	A	Barium	32.3		127	5200	-95	-5167.7	No
LANL-WR-SS-5	A	Beryllium	0.38		1.31	150	-1	-149.6	No
LANL-WR-SS-5	A	Cadmium	0.17		0.40	70	-0.230	-69.8	No
LANL-WR-SS-5	A	Calcium	915		4400	NP	-3485.000	N/A	No
LANL-WR-SS-5	A	Chromium	3.10		10.5	100000	-7	-99996.9	No
LANL-WR-SS-5	A	Cobalt	1.60		4.73	4500	-3	-4498.4	No
LANL-WR-SS-5	A	Copper	4.20		11.2	2800	-7	-2795.8	No
LANL-WR-SS-5	A	Iron	6950		13800	23000	-6850	-16050.0	No
LANL-WR-SS-5	A	Lead	15.4		19.7	400	-4	-384.6	No
LANL-WR-SS-5	A	Magnesium	578		2370	NP	-1792	N/A	No
LANL-WR-SS-5	A	Manganese	383		543	7800	-160	-7417.0	No
LANL-WR-SS-5	A	Mercury	0.02	B	0.1	23	-0.081	-23.0	No
LANL-WR-SS-5	A	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-5	A	Potassium	546	B	2690	NP	-2144	N/A	No
LANL-WR-SS-5	A	Sodium	55.2	B	1470	NP	-1415	N/A	No
LANL-WR-SS-5	A	Vanadium	6.0		19.7	530	-14	-524.0	No
LANL-WR-SS-5	A	Zinc	45.1	J	60.2	23000	-15	-22954.9	No
LANL-WR-SS-6	A	Aluminum	3800	J	15400	74000	-11600	-70200.0	No
LANL-WR-SS-6	A	Antimony	0.24	BJ	0.83	30	-0.59	-29.8	No
LANL-WR-SS-6	A	Arsenic	2.1		3.98	3.90	-2	-1.8	No
LANL-WR-SS-6	A	Barium	48.7		127	5200	-78	-5151.3	No
LANL-WR-SS-6	A	Beryllium	0.42		1.31	150	-1	-149.6	No
LANL-WR-SS-6	A	Cadmium	0.28		0.40	70	-0.120	-69.7	No
LANL-WR-SS-6	A	Calcium	1780		4400	NP	-2620.000	N/A	No
LANL-WR-SS-6	A	Chromium	4.50		10.5	100000	-6	-99995.5	No
LANL-WR-SS-6	A	Cobalt	2.40		4.73	4500	-2	-4497.6	No
LANL-WR-SS-6	A	Copper	6.90		11.2	2800	-4	-2793.1	No
LANL-WR-SS-6	A	Iron	7060		13800	23000	-6740	-15940.0	No
LANL-WR-SS-6	A	Lead	28.3		19.7	400	9	-371.7	No
LANL-WR-SS-6	A	Magnesium	786		2370	NP	-1584	N/A	No
LANL-WR-SS-6	A	Manganese	376		543	7800	-167	-7424.0	No
LANL-WR-SS-6	A	Mercury	0.04		0.1	23	-0.061	-23.0	No
LANL-WR-SS-6	A	Nickel	3.20		9.4	1500	-6	-1496.8	No
LANL-WR-SS-6	A	Potassium	1160		2690	NP	-1530	N/A	No
LANL-WR-SS-6	A	Sodium	71.8	B	1470	NP	-1398	N/A	No
LANL-WR-SS-6	A	Vanadium	8.2		19.7	530	-12	-521.8	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-6	A	Zinc	55.9	J	60.2	23000	-4	-22944.1	No
LANL-WR-SS-7	A	Aluminum	2930	J	15400	74000	-12470	-71070.0	No
LANL-WR-SS-7	A	Antimony	0.35	BJ	0.83	30	-0.48	-29.7	No
LANL-WR-SS-7	A	Arsenic	0.67		3.98	3.90	-3	-3.2	No
LANL-WR-SS-7	A	Barium	37		127	5200	-90	-5163.0	No
LANL-WR-SS-7	A	Beryllium	0.42		1.31	150	-1	-149.6	No
LANL-WR-SS-7	A	Cadmium	0.3		0.40	70	-0.100	-69.7	No
LANL-WR-SS-7	A	Calcium	1530		4400	NP	-2870.000	N/A	No
LANL-WR-SS-7	A	Chromium	3.20		10.5	100000	-7	-99996.8	No
LANL-WR-SS-7	A	Cobalt	1.60		4.73	4500	-3	-4498.4	No
LANL-WR-SS-7	A	Copper	4.90		11.2	2800	-6	-2795.1	No
LANL-WR-SS-7	A	Iron	6960		13800	23000	-6840	-16040.0	No
LANL-WR-SS-7	A	Lead	17.7		19.7	400	-2	-382.3	No
LANL-WR-SS-7	A	Magnesium	497		2370	NP	-1873	N/A	No
LANL-WR-SS-7	A	Manganese	341		543	7800	-202	-7459.0	No
LANL-WR-SS-7	A	Nickel	2.50		9.4	1500	-7	-1497.5	No
LANL-WR-SS-7	A	Potassium	675		2690	NP	-2015	N/A	No
LANL-WR-SS-7	A	Selenium	0.37	B	0.3	380	0.07	-379.6	No
LANL-WR-SS-7	A	Sodium	68.1	B	1470	NP	-1402	N/A	No
LANL-WR-SS-7	A	Vanadium	5.7		19.7	530	-14	-524.3	No
LANL-WR-SS-7	A	Zinc	57.3	J	60.2	23000	-3	-22942.7	No
LANL-WR-SS-8	A	Aluminum	2820	J	15400	74000	-12580	-71180.0	No
LANL-WR-SS-8	A	Antimony	1.2	J	0.83	30	0.37	-28.8	No
LANL-WR-SS-8	A	Arsenic	1.2		3.98	3.90	-3	-2.7	No
LANL-WR-SS-8	A	Barium	40.9		127	5200	-86	-5159.1	No
LANL-WR-SS-8	A	Beryllium	0.49		1.31	150	-1	-149.5	No
LANL-WR-SS-8	A	Cadmium	0.53		0.40	70	0.130	-69.5	No
LANL-WR-SS-8	A	Calcium	1740		4400	NP	-2660.000	N/A	No
LANL-WR-SS-8	A	Chromium	3.60		10.5	100000	-7	-99996.4	No
LANL-WR-SS-8	A	Cobalt	1.90		4.73	4500	-3	-4498.1	No
LANL-WR-SS-8	A	Copper	8.30		11.2	2800	-3	-2791.7	No
LANL-WR-SS-8	A	Iron	9930		13800	23000	-3870	-13070.0	No
LANL-WR-SS-8	A	Lead	48		19.7	400	28	-352.0	No
LANL-WR-SS-8	A	Magnesium	586		2370	NP	-1784	N/A	No
LANL-WR-SS-8	A	Manganese	376		543	7800	-167	-7424.0	No
LANL-WR-SS-8	A	Mercury	0.04		0.1	23	-0.062	-23.0	No
LANL-WR-SS-8	A	Nickel	4.60		9.4	1500	-5	-1495.4	No
LANL-WR-SS-8	A	Potassium	539	B	2690	NP	-2151	N/A	No
LANL-WR-SS-8	A	Sodium	68.4	B	1470	NP	-1402	N/A	No
LANL-WR-SS-8	A	Vanadium	6.2		19.7	530	-14	-523.8	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-8	A	Zinc	82.3	J	60.2	23000	22	-22917.7	No
LANL-WR-SS-9	A	Aluminum	3400	J	15400	74000	-12000	-70600.0	No
LANL-WR-SS-9	A	Antimony	0.2	BJ	0.83	30	-0.63	-29.8	No
LANL-WR-SS-9	A	Arsenic	0.96		3.98	3.90	-3	-2.9	No
LANL-WR-SS-9	A	Barium	43.2		127	5200	-84	-5156.8	No
LANL-WR-SS-9	A	Beryllium	0.88		1.31	150	0	-149.1	No
LANL-WR-SS-9	A	Cadmium	0.14		0.40	70	-0.260	-69.9	No
LANL-WR-SS-9	A	Calcium	1760		4400	NP	-2640.000	N/A	No
LANL-WR-SS-9	A	Chromium	1.80		10.5	100000	-9	-99998.2	No
LANL-WR-SS-9	A	Cobalt	0.64	B	4.73	4500	-4	-4499.4	No
LANL-WR-SS-9	A	Copper	7.90		11.2	2800	-3	-2792.1	No
LANL-WR-SS-9	A	Iron	5480		13800	23000	-8320	-17520.0	No
LANL-WR-SS-9	A	Lead	14		19.7	400	-6	-386.0	No
LANL-WR-SS-9	A	Magnesium	328		2370	NP	-2042	N/A	No
LANL-WR-SS-9	A	Manganese	264		543	7800	-279	-7536.0	No
LANL-WR-SS-9	A	Mercury	0.03	B	0.1	23	-0.075	-23.0	No
LANL-WR-SS-9	A	Nickel	1.80		9.4	1500	-8	-1498.2	No
LANL-WR-SS-9	A	Potassium	888		2690	NP	-1802	N/A	No
LANL-WR-SS-9	A	Selenium	0.47	B	0.3	380	0.17	-379.5	No
LANL-WR-SS-9	A	Sodium	179	B	1470	NP	-1291	N/A	No
LANL-WR-SS-9	A	Vanadium	2.9		19.7	530	-17	-527.1	No
LANL-WR-SS-9	A	Zinc	43.1	J	60.2	23000	-17	-22956.9	No
LANL-WR-SS-64	A (DUP-SS-1)	Aluminum	1910	J	15400	74000	-13490	-72090.0	No
LANL-WR-SS-64	A (DUP-SS-1)	Arsenic	0.94		3.98	3.90	-3	-3.0	No
LANL-WR-SS-64	A (DUP-SS-1)	Barium	21.8		127	5200	-105	-5178.2	No
LANL-WR-SS-64	A (DUP-SS-1)	Beryllium	0.21		1.31	150	-1	-149.8	No
LANL-WR-SS-64	A (DUP-SS-1)	Cadmium	0.086	B	0.4	70	-0.314	-69.9	No
LANL-WR-SS-64	A (DUP-SS-1)	Calcium	506	B	4400	NP	-3894.000	N/A	No
LANL-WR-SS-64	A (DUP-SS-1)	Chromium	1.90	J	10.5	100000	-9	-99998.1	No
LANL-WR-SS-64	A (DUP-SS-1)	Cobalt	1.40		4.73	4500	-3	-4498.6	No
LANL-WR-SS-64	A (DUP-SS-1)	Copper	2.20		11.2	2800	-9	-2797.8	No
LANL-WR-SS-64	A (DUP-SS-1)	Iron	5230		13800	23000	-8570	-17770.0	No
LANL-WR-SS-64	A (DUP-SS-1)	Lead	10.8	J	19.7	400	-9	-389.2	No
LANL-WR-SS-64	A (DUP-SS-1)	Magnesium	388	J	2370	NP	-1982	N/A	No
LANL-WR-SS-64	A (DUP-SS-1)	Manganese	237		543	7800	-306	-7563.0	No
LANL-WR-SS-64	A (DUP-SS-1)	Mercury	0.02	B	0.1	23	-0.079	-23.0	No
LANL-WR-SS-64	A (DUP-SS-1)	Nickel	1.60	J	9.4	1500	-8	-1498.4	No
LANL-WR-SS-64	A (DUP-SS-1)	Potassium	359	B	2690	NP	-2331	N/A	No
LANL-WR-SS-64	A (DUP-SS-1)	Selenium	0.15	B	0.3	380	-0.15	-379.9	No
LANL-WR-SS-64	A (DUP-SS-1)	Silver	0.017	B	1.0	380	-0.98	-380.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-64	A (DUP-SS-1)	Sodium	35.4	B	1470	NP	-1435	N/A	No
LANL-WR-SS-64	A (DUP-SS-1)	Vanadium	5.9		19.7	530	-14	-524.1	No
LANL-WR-SS-64	A (DUP-SS-1)	Zinc	28.7	J	60.2	23000	-32	-22971.3	No
LANL-WR-SS-16	B	Aluminum	3110	J	15400	74000	-12290	-70890.0	No
LANL-WR-SS-16	B	Arsenic	1.2		3.98	3.90	-3	-2.7	No
LANL-WR-SS-16	B	Barium	50.5		127	5200	-77	-5149.5	No
LANL-WR-SS-16	B	Beryllium	0.47		1.31	150	-1	-149.5	No
LANL-WR-SS-16	B	Cadmium	0.075	B	0.40	70	-0.325	-69.9	No
LANL-WR-SS-16	B	Calcium	1390		4400	NP	-3010.000	N/A	No
LANL-WR-SS-16	B	Chromium	2.90		10.5	100000	-8	-99997.1	No
LANL-WR-SS-16	B	Cobalt	2.00		4.73	4500	-3	-4498.0	No
LANL-WR-SS-16	B	Copper	3.80		11.2	2800	-7	-2796.2	No
LANL-WR-SS-16	B	Iron	7130		13800	23000	-6670	-15870.0	No
LANL-WR-SS-16	B	Lead	16.3		19.7	400	-3	-383.7	No
LANL-WR-SS-16	B	Magnesium	644		2370	NP	-1726	N/A	No
LANL-WR-SS-16	B	Manganese	321		543	7800	-222	-7479.0	No
LANL-WR-SS-16	B	Mercury	0.03	B	0.1	23	-0.075	-23.0	No
LANL-WR-SS-16	B	Nickel	3.10		9.4	1500	-6	-1496.9	No
LANL-WR-SS-16	B	Potassium	945		2690	NP	-1745	N/A	No
LANL-WR-SS-16	B	Selenium	0.19	B	0.3	380	-0.11	-379.8	No
LANL-WR-SS-16	B	Sodium	44.8	B	1470	NP	-1425	N/A	No
LANL-WR-SS-16	B	Vanadium	7.7		19.7	530	-12	-522.3	No
LANL-WR-SS-16	B	Zinc	31	J	60.2	23000	-29	-22969.0	No
LANL-WR-SS-17	B	Aluminum	1840	J	15400	74000	-13560	-72160.0	No
LANL-WR-SS-17	B	Barium	22.2		127	5200	-105	-5177.8	No
LANL-WR-SS-17	B	Beryllium	0.38		1.31	150	-1	-149.6	No
LANL-WR-SS-17	B	Cadmium	0.04	B	0.40	70	-0.360	-70.0	No
LANL-WR-SS-17	B	Calcium	505	B	4400	NP	-3895.000	N/A	No
LANL-WR-SS-17	B	Chromium	1.60		10.5	100000	-9	-99998.4	No
LANL-WR-SS-17	B	Cobalt	0.94	B	4.73	4500	-4	-4499.1	No
LANL-WR-SS-17	B	Copper	2.00		11.2	2800	-9	-2798.0	No
LANL-WR-SS-17	B	Iron	5140		13800	23000	-8660	-17860.0	No
LANL-WR-SS-17	B	Lead	15		19.7	400	-5	-385.0	No
LANL-WR-SS-17	B	Magnesium	335		2370	NP	-2035	N/A	No
LANL-WR-SS-17	B	Manganese	242		543	7800	-301	-7558.0	No
LANL-WR-SS-17	B	Nickel	1.80		9.4	1500	-8	-1498.2	No
LANL-WR-SS-17	B	Potassium	367	B	2690	NP	-2323	N/A	No
LANL-WR-SS-17	B	Sodium	76.1	B	1470	NP	-1394	N/A	No
LANL-WR-SS-17	B	Vanadium	3.6		19.7	530	-16	-526.4	No
LANL-WR-SS-17	B	Zinc	25.2	J	60.2	23000	-35	-22974.8	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-18	B	Aluminum	1870	J	15400	74000	-13530	-72130.0	No
LANL-WR-SS-18	B	Arsenic	0.22	B	3.98	3.90	-4	-3.7	No
LANL-WR-SS-18	B	Barium	23		127	5200	-104	-5177.0	No
LANL-WR-SS-18	B	Beryllium	0.38		1.31	150	-1	-149.6	No
LANL-WR-SS-18	B	Cadmium	0.055	B	0.40	70	-0.345	-69.9	No
LANL-WR-SS-18	B	Calcium	660		4400	NP	-3740.000	N/A	No
LANL-WR-SS-18	B	Chromium	1.90		10.5	100000	-9	-99998.1	No
LANL-WR-SS-18	B	Cobalt	1.20		4.73	4500	-4	-4498.8	No
LANL-WR-SS-18	B	Copper	2.10		11.2	2800	-9	-2797.9	No
LANL-WR-SS-18	B	Iron	5340		13800	23000	-8460	-17660.0	No
LANL-WR-SS-18	B	Lead	9.4		19.7	400	-10	-390.6	No
LANL-WR-SS-18	B	Magnesium	343		2370	NP	-2027	N/A	No
LANL-WR-SS-18	B	Manganese	224		543	7800	-319	-7576.0	No
LANL-WR-SS-18	B	Nickel	1.90		9.4	1500	-7	-1498.1	No
LANL-WR-SS-18	B	Potassium	688		2690	NP	-2002	N/A	No
LANL-WR-SS-18	B	Sodium	49.8	B	1470	NP	-1420	N/A	No
LANL-WR-SS-18	B	Vanadium	4.7		19.7	530	-15	-525.3	No
LANL-WR-SS-18	B	Zinc	30.4	J	60.2	23000	-30	-22969.6	No
LANL-WR-SS-19	B	Aluminum	1710	J	15400	74000	-13690	-72290.0	No
LANL-WR-SS-19	B	Barium	20.6		127	5200	-106	-5179.4	No
LANL-WR-SS-19	B	Beryllium	0.44		1.31	150	-1	-149.6	No
LANL-WR-SS-19	B	Cadmium	0.039	B	0.40	70	-0.361	-70.0	No
LANL-WR-SS-19	B	Calcium	555		4400	NP	-3845.000	N/A	No
LANL-WR-SS-19	B	Chromium	1.20		10.5	100000	-9	-99998.8	No
LANL-WR-SS-19	B	Cobalt	0.78	B	4.73	4500	-4	-4499.2	No
LANL-WR-SS-19	B	Copper	1.70		11.2	2800	-10	-2798.3	No
LANL-WR-SS-19	B	Iron	3270		13800	23000	-10530	-19730.0	No
LANL-WR-SS-19	B	Lead	36		19.7	400	16	-364.0	No
LANL-WR-SS-19	B	Magnesium	334		2370	NP	-2036	N/A	No
LANL-WR-SS-19	B	Manganese	257		543	7800	-286	-7543.0	No
LANL-WR-SS-19	B	Nickel	1.40		9.4	1500	-8	-1498.6	No
LANL-WR-SS-19	B	Potassium	372	B	2690	NP	-2318	N/A	No
LANL-WR-SS-19	B	Sodium	65.3	B	1470	NP	-1405	N/A	No
LANL-WR-SS-19	B	Vanadium	2.8		19.7	530	-17	-527.2	No
LANL-WR-SS-19	B	Zinc	32	J	60.2	23000	-28	-22968.0	No
LANL-WR-SS-20	B	Aluminum	1720	J	15400	74000	-13680	-72280.0	No
LANL-WR-SS-20	B	Arsenic	1.7		3.98	3.90	-2	-2.2	No
LANL-WR-SS-20	B	Barium	22.1		127	5200	-105	-5177.9	No
LANL-WR-SS-20	B	Beryllium	0.28		1.31	150	-1	-149.7	No
LANL-WR-SS-20	B	Cadmium	0.59		0.40	70	0.190	-69.4	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-20	B	Calcium	619		4400	NP	-3781.000	N/A	No
LANL-WR-SS-20	B	Chromium	2.60		10.5	100000	-8	-99997.4	No
LANL-WR-SS-20	B	Cobalt	2.30		4.73	4500	-2	-4497.7	No
LANL-WR-SS-20	B	Copper	8.00		11.2	2800	-3	-2792.0	No
LANL-WR-SS-20	B	Iron	18100		13800	23000	4300	-4900.0	No
LANL-WR-SS-20	B	Lead	9.7		19.7	400	-10	-390.3	No
LANL-WR-SS-20	B	Magnesium	311		2370	NP	-2059	N/A	No
LANL-WR-SS-20	B	Manganese	227		543	7800	-316	-7573.0	No
LANL-WR-SS-20	B	Nickel	5.20		9.4	1500	-4	-1494.8	No
LANL-WR-SS-20	B	Potassium	429	B	2690	NP	-2261	N/A	No
LANL-WR-SS-20	B	Sodium	39	B	1470	NP	-1431	N/A	No
LANL-WR-SS-20	B	Vanadium	4.1		19.7	530	-16	-525.9	No
LANL-WR-SS-20	B	Zinc	202	J	60.2	23000	142	-22798.0	No
LANL-WR-SS-21	B	Aluminum	2640	J	15400	74000	-12760	-71360.0	No
LANL-WR-SS-21	B	Arsenic	0.95		3.98	3.90	-3	-3.0	No
LANL-WR-SS-21	B	Barium	30.5		127	5200	-97	-5169.5	No
LANL-WR-SS-21	B	Beryllium	0.36		1.31	150	-1	-149.6	No
LANL-WR-SS-21	B	Cadmium	0.19		0.40	70	-0.210	-69.8	No
LANL-WR-SS-21	B	Calcium	1080		4400	NP	-3320.000	N/A	No
LANL-WR-SS-21	B	Chromium	2.30		10.5	100000	-8	-99997.7	No
LANL-WR-SS-21	B	Cobalt	1.40		4.73	4500	-3	-4498.6	No
LANL-WR-SS-21	B	Copper	3.30		11.2	2800	-8	-2796.7	No
LANL-WR-SS-21	B	Iron	5190		13800	23000	-8610	-17810.0	No
LANL-WR-SS-21	B	Lead	11.9		19.7	400	-8	-388.1	No
LANL-WR-SS-21	B	Magnesium	517	J	2370	NP	-1853	N/A	No
LANL-WR-SS-21	B	Manganese	241		543	7800	-302	-7559.0	No
LANL-WR-SS-21	B	Nickel	2.20		9.4	1500	-7	-1497.8	No
LANL-WR-SS-21	B	Potassium	666		2690	NP	-2024	N/A	No
LANL-WR-SS-21	B	Sodium	72.3	B	1470	NP	-1398	N/A	No
LANL-WR-SS-21	B	Thallium	0.28	B	0.73	6.1	-0.45	-5.8	No
LANL-WR-SS-21	B	Vanadium	35.4		19.7	530	16	-494.6	No
LANL-WR-SS-21	B	Zinc	62.5		60.2	23000	2	-22937.5	No
LANL-WR-SS-22	B	Aluminum	2990	J	15400	74000	-12410	-71010.0	No
LANL-WR-SS-22	B	Arsenic	1.2		3.98	3.90	-3	-2.7	No
LANL-WR-SS-22	B	Barium	68.4		127	5200	-59	-5131.6	No
LANL-WR-SS-22	B	Beryllium	0.5		1.31	150	-1	-149.5	No
LANL-WR-SS-22	B	Cadmium	0.19		0.40	70	-0.210	-69.8	No
LANL-WR-SS-22	B	Calcium	1880		4400	NP	-2520.000	N/A	No
LANL-WR-SS-22	B	Chromium	3.00		10.5	100000	-8	-99997.0	No
LANL-WR-SS-22	B	Cobalt	1.80		4.73	4500	-3	-4498.2	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-22	B	Copper	6.00		11.2	2800	-5	-2794.0	No
LANL-WR-SS-22	B	Iron	5830		13800	23000	-7970	-17170.0	No
LANL-WR-SS-22	B	Lead	18.2		19.7	400	-2	-381.8	No
LANL-WR-SS-22	B	Magnesium	777	J	2370	NP	-1593	N/A	No
LANL-WR-SS-22	B	Manganese	411		543	7800	-132	-7389.0	No
LANL-WR-SS-22	B	Mercury	0.06		0.1	23	-0.042	-22.9	No
LANL-WR-SS-22	B	Nickel	3.10		9.4	1500	-6	-1496.9	No
LANL-WR-SS-22	B	Potassium	731		2690	NP	-1959	N/A	No
LANL-WR-SS-22	B	Selenium	0.30	B	0.3	380	0	-379.7	No
LANL-WR-SS-22	B	Sodium	77.4	B	1470	NP	-1393	N/A	No
LANL-WR-SS-22	B	Vanadium	7.9		19.7	530	-12	-522.1	No
LANL-WR-SS-22	B	Zinc	48.3		60.2	23000	-12	-22951.7	No
LANL-WR-SS-23	B	Aluminum	2300	J	15400	74000	-13100	-71700.0	No
LANL-WR-SS-23	B	Arsenic	0.99		3.98	3.90	-3	-2.9	No
LANL-WR-SS-23	B	Barium	29.7		127	5200	-97	-5170.3	No
LANL-WR-SS-23	B	Beryllium	0.37		1.31	150	-1	-149.6	No
LANL-WR-SS-23	B	Cadmium	0.24		0.40	70	-0.160	-69.8	No
LANL-WR-SS-23	B	Calcium	1360		4400	NP	-3040.000	N/A	No
LANL-WR-SS-23	B	Chromium	2.90		10.5	100000	-8	-99997.1	No
LANL-WR-SS-23	B	Cobalt	1.30		4.73	4500	-3	-4498.7	No
LANL-WR-SS-23	B	Copper	3.50		11.2	2800	-8	-2796.5	No
LANL-WR-SS-23	B	Iron	4780		13800	23000	-9020	-18220.0	No
LANL-WR-SS-23	B	Lead	11.8		19.7	400	-8	-388.2	No
LANL-WR-SS-23	B	Magnesium	544	J	2370	NP	-1826	N/A	No
LANL-WR-SS-23	B	Manganese	249		543	7800	-294	-7551.0	No
LANL-WR-SS-23	B	Mercury	0.03	B	0.1	23	-0.070	-23.0	No
LANL-WR-SS-23	B	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-23	B	Potassium	731		2690	NP	-1959	N/A	No
LANL-WR-SS-23	B	Selenium	0.17	B	0.3	380	-0.13	-379.8	No
LANL-WR-SS-23	B	Sodium	70.2	B	1470	NP	-1400	N/A	No
LANL-WR-SS-23	B	Vanadium	6.5		19.7	530	-13	-523.5	No
LANL-WR-SS-23	B	Zinc	66.2		60.2	23000	6	-22933.8	No
LANL-WR-SS-24	B	Aluminum	1120	J	15400	74000	-14280	-72880.0	No
LANL-WR-SS-24	B	Arsenic	0.36	B	3.98	3.90	-4	-3.5	No
LANL-WR-SS-24	B	Barium	11.1		127	5200	-116	-5188.9	No
LANL-WR-SS-24	B	Beryllium	0.18		1.31	150	-1	-149.8	No
LANL-WR-SS-24	B	Cadmium	0.086	B	0.40	70	-0.314	-69.9	No
LANL-WR-SS-24	B	Calcium	639		4400	NP	-3761.000	N/A	No
LANL-WR-SS-24	B	Chromium	0.97	B	10.5	100000	-10	-99999.0	No
LANL-WR-SS-24	B	Cobalt	0.44	B	4.73	4500	-4	-4499.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-24	B	Copper	1.70		11.2	2800	-10	-2798.3	No
LANL-WR-SS-24	B	Iron	2900		13800	23000	-10900	-20100.0	No
LANL-WR-SS-24	B	Lead	7.1		19.7	400	-13	-392.9	No
LANL-WR-SS-24	B	Magnesium	202	J	2370	NP	-2168	N/A	No
LANL-WR-SS-24	B	Manganese	143		543	7800	-400	-7657.0	No
LANL-WR-SS-24	B	Nickel	1.00	B	9.4	1500	-8	-1499.0	No
LANL-WR-SS-24	B	Potassium	353	B	2690	NP	-2337	N/A	No
LANL-WR-SS-24	B	Sodium	60.8	B	1470	NP	-1409	N/A	No
LANL-WR-SS-24	B	Vanadium	3.3	B	19.7	530	-16	-526.7	No
LANL-WR-SS-24	B	Zinc	34.5		60.2	23000	-26	-22965.5	No
LANL-WR-SS-25	B	Aluminum	2000	J	15400	74000	-13400	-72000.0	No
LANL-WR-SS-25	B	Arsenic	0.94		3.98	3.90	-3	-3.0	No
LANL-WR-SS-25	B	Barium	31.3		127	5200	-96	-5168.7	No
LANL-WR-SS-25	B	Beryllium	0.37		1.31	150	-1	-149.6	No
LANL-WR-SS-25	B	Cadmium	0.59		0.40	70	0.190	-69.4	No
LANL-WR-SS-25	B	Calcium	1330		4400	NP	-3070.000	N/A	No
LANL-WR-SS-25	B	Chromium	2.2		10.5	100000	-8	-99997.8	No
LANL-WR-SS-25	B	Cobalt	1.60		4.73	4500	-3	-4498.4	No
LANL-WR-SS-25	B	Copper	3.40		11.2	2800	-8	-2796.6	No
LANL-WR-SS-25	B	Iron	5720		13800	23000	-8080	-17280.0	No
LANL-WR-SS-25	B	Lead	11.6		19.7	400	-8	-388.4	No
LANL-WR-SS-25	B	Magnesium	435	J	2370	NP	-1935	N/A	No
LANL-WR-SS-25	B	Manganese	199		543	7800	-344	-7601.0	No
LANL-WR-SS-25	B	Nickel	2.50		9.4	1500	-7	-1497.5	No
LANL-WR-SS-25	B	Potassium	508	B	2690	NP	-2182	N/A	No
LANL-WR-SS-25	B	Sodium	63.7	B	1470	NP	-1406	N/A	No
LANL-WR-SS-25	B	Vanadium	6.8		19.7	530	-13	-523.2	No
LANL-WR-SS-25	B	Zinc	200		60.2	23000	140	-22800.0	No
LANL-WR-SS-26	B	Aluminum	2880	J	15400	74000	-12520	-71120.0	No
LANL-WR-SS-26	B	Arsenic	0.95		3.98	3.90	-3	-3.0	No
LANL-WR-SS-26	B	Barium	43.5		127	5200	-84	-5156.5	No
LANL-WR-SS-26	B	Beryllium	0.52		1.31	150	-1	-149.5	No
LANL-WR-SS-26	B	Cadmium	0.23		0.40	70	-0.170	-69.8	No
LANL-WR-SS-26	B	Calcium	1180		4400	NP	-3220.000	N/A	No
LANL-WR-SS-26	B	Chromium	2.80		10.5	100000	-8	-99997.2	No
LANL-WR-SS-26	B	Cobalt	1.70		4.73	4500	-3	-4498.3	No
LANL-WR-SS-26	B	Copper	4.70		11.2	2800	-7	-2795.3	No
LANL-WR-SS-26	B	Iron	5240		13800	23000	-8560	-17760.0	No
LANL-WR-SS-26	B	Lead	14.2		19.7	400	-6	-385.8	No
LANL-WR-SS-26	B	Magnesium	602	J	2370	NP	-1768	N/A	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-26	B	Manganese	226		543	7800	-317	-7574.0	No
LANL-WR-SS-26	B	Nickel	2.80		9.4	1500	-7	-1497.2	No
LANL-WR-SS-26	B	Potassium	931		2690	NP	-1759	N/A	No
LANL-WR-SS-26	B	Selenium	0.23	B	0.3	380	-0.07	-379.8	No
LANL-WR-SS-26	B	Sodium	108	B	1470	NP	-1362	N/A	No
LANL-WR-SS-26	B	Vanadium	8.4		19.7	530	-11	-521.6	No
LANL-WR-SS-26	B	Zinc	72.9		60.2	23000	13	-22927.1	No
LANL-WR-SS-27	B	Aluminum	5040	J	15400	74000	-10360	-68960.0	No
LANL-WR-SS-27	B	Arsenic	3.1		3.98	3.90	-1	-0.8	No
LANL-WR-SS-27	B	Barium	92.8		127	5200	-34	-5107.2	No
LANL-WR-SS-27	B	Beryllium	0.84		1.31	150	0	-149.2	No
LANL-WR-SS-27	B	Cadmium	0.81		0.40	70	0.410	-69.2	No
LANL-WR-SS-27	B	Calcium	2600		4400	NP	-1800.000	N/A	No
LANL-WR-SS-27	B	Chromium	7.70		10.5	100000	-3	-99992.3	No
LANL-WR-SS-27	B	Cobalt	4.30		4.73	4500	-0.43	-4495.7	No
LANL-WR-SS-27	B	Copper	10.2		11.2	2800	-1	-2789.8	No
LANL-WR-SS-27	B	Iron	18700		13800	23000	4900	-4300.0	No
LANL-WR-SS-27	B	Lead	24.9		19.7	400	5	-375.1	No
LANL-WR-SS-27	B	Magnesium	1140	J	2370	NP	-1230	N/A	No
LANL-WR-SS-27	B	Manganese	445		543	7800	-98	-7355.0	No
LANL-WR-SS-27	B	Mercury	0.05		0.1	23	-0.052	-23.0	No
LANL-WR-SS-27	B	Nickel	6.70		9.4	1500	-3	-1493.3	No
LANL-WR-SS-27	B	Potassium	969		2690	NP	-1721	N/A	No
LANL-WR-SS-27	B	Sodium	79.2	B	1470	NP	-1391	N/A	No
LANL-WR-SS-27	B	Vanadium	14.1		19.7	530	-6	-515.9	No
LANL-WR-SS-27	B	Zinc	296		60.2	23000	236	-22704.0	No
LANL-WR-SS-28	B	Aluminum	1540	J	15400	74000	-13860	-72460.0	No
LANL-WR-SS-28	B	Arsenic	0.96		3.98	3.90	-3	-2.9	No
LANL-WR-SS-28	B	Barium	24.3		127	5200	-103	-5175.7	No
LANL-WR-SS-28	B	Beryllium	0.47		1.31	150	-1	-149.5	No
LANL-WR-SS-28	B	Cadmium	0.13		0.40	70	-0.270	-69.9	No
LANL-WR-SS-28	B	Calcium	1390		4400	NP	-3010.000	N/A	No
LANL-WR-SS-28	B	Chromium	1.50		10.5	100000	-9	-99998.5	No
LANL-WR-SS-28	B	Cobalt	0.67	B	4.73	4500	-4	-4499.3	No
LANL-WR-SS-28	B	Copper	3.60		11.2	2800	-8	-2796.4	No
LANL-WR-SS-28	B	Iron	5300		13800	23000	-8500	-17700.0	No
LANL-WR-SS-28	B	Lead	16.3		19.7	400	-3	-383.7	No
LANL-WR-SS-28	B	Magnesium	365	J	2370	NP	-2005	N/A	No
LANL-WR-SS-28	B	Manganese	285		543	7800	-258	-7515.0	No
LANL-WR-SS-28	B	Mercury	0.04	B	0.1	23	-0.064	-23.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-28	B	Nickel	1.70		9.4	1500	-8	-1498.3	No
LANL-WR-SS-28	B	Potassium	385	B	2690	NP	-2305	N/A	No
LANL-WR-SS-28	B	Selenium	0.33	B	0.3	380	0.03	-379.7	No
LANL-WR-SS-28	B	Sodium	135	B	1470	NP	-1335	N/A	No
LANL-WR-SS-28	B	Vanadium	4.8	B	19.7	530	-15	-525.2	No
LANL-WR-SS-28	B	Zinc	55.2		60.2	23000	-5	-22944.8	No
LANL-WR-SS-29	B	Aluminum	4130	J	15400	74000	-11270	-69870.0	No
LANL-WR-SS-29	B	Arsenic	1.8		3.98	3.90	-2	-2.1	No
LANL-WR-SS-29	B	Barium	74.3		127	5200	-53	-5125.7	No
LANL-WR-SS-29	B	Beryllium	0.65		1.31	150	-1	-149.4	No
LANL-WR-SS-29	B	Cadmium	0.78		0.40	70	0.380	-69.2	No
LANL-WR-SS-29	B	Calcium	3620		4400	NP	-780.000	N/A	No
LANL-WR-SS-29	B	Chromium	5.40		10.5	100000	-5	-99994.6	No
LANL-WR-SS-29	B	Cobalt	3.10		4.73	4500	-2	-4496.9	No
LANL-WR-SS-29	B	Copper	10.8		11.2	2800	-0.40	-2789.2	No
LANL-WR-SS-29	B	Iron	13700		13800	23000	-100	-9300.0	No
LANL-WR-SS-29	B	Lead	22.7		19.7	400	3	-377.3	No
LANL-WR-SS-29	B	Magnesium	1040	J	2370	NP	-1330	N/A	No
LANL-WR-SS-29	B	Manganese	324		543	7800	-219	-7476.0	No
LANL-WR-SS-29	B	Mercury	0.07		0.1	23	-0.030	-22.9	No
LANL-WR-SS-29	B	Nickel	7.60		9.4	1500	-2	-1492.4	No
LANL-WR-SS-29	B	Potassium	1060		2690	NP	-1630	N/A	No
LANL-WR-SS-29	B	Selenium	0.33	B	0.3	380	0.03	-379.7	No
LANL-WR-SS-29	B	Sodium	176	B	1470	NP	-1294	N/A	No
LANL-WR-SS-29	B	Vanadium	11.5		19.7	530	-8	-518.5	No
LANL-WR-SS-29	B	Zinc	227		60.2	23000	167	-22773.0	No
LANL-WR-SS-30	B	Aluminum	5110	J	15400	74000	-10290	-68890.0	No
LANL-WR-SS-30	B	Arsenic	2.6		3.98	3.90	-1	-1.3	No
LANL-WR-SS-30	B	Barium	74.3		127	5200	-53	-5125.7	No
LANL-WR-SS-30	B	Beryllium	1.0		1.31	150	-0.31	-149.0	No
LANL-WR-SS-30	B	Cadmium	0.39		0.40	70	-0.010	-69.6	No
LANL-WR-SS-30	B	Calcium	2570		4400	NP	-1830.000	N/A	No
LANL-WR-SS-30	B	Chromium	3.90		10.5	100000	-7	-99996.1	No
LANL-WR-SS-30	B	Cobalt	2.30		4.73	4500	-2	-4497.7	No
LANL-WR-SS-30	B	Copper	6.60		11.2	2800	-5	-2793.4	No
LANL-WR-SS-30	B	Iron	6930		13800	23000	-6870	-16070.0	No
LANL-WR-SS-30	B	Lead	28.9		19.7	400	9	-371.1	No
LANL-WR-SS-30	B	Magnesium	914	J	2370	NP	-1456	N/A	No
LANL-WR-SS-30	B	Manganese	401		543	7800	-142	-7399.0	No
LANL-WR-SS-30	B	Mercury	0.02	B	0.1	23	-0.079	-23.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-30	B	Nickel	4.00		9.4	1500	-5	-1496.0	No
LANL-WR-SS-30	B	Potassium	1200		2690	NP	-1490	N/A	No
LANL-WR-SS-30	B	Selenium	0.37	B	0.3	380	0.07	-379.6	No
LANL-WR-SS-30	B	Sodium	211	B	1470	NP	-1259	N/A	No
LANL-WR-SS-30	B	Vanadium	10.7		19.7	530	-9	-519.3	No
LANL-WR-SS-30	B	Zinc	118		60.2	23000	58	-22882.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Aluminum	1910	J	15400	74000	-13490	-72090.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Arsenic	0.63		3.98	3.90	-3	-3.3	No
LANL-WR-SS-63	B (DUP-SS-17)	Barium	19.5		127	5200	-108	-5180.5	No
LANL-WR-SS-63	B (DUP-SS-17)	Beryllium	0.41		1.31	150	-1	-149.6	No
LANL-WR-SS-63	B (DUP-SS-17)	Cadmium	0.048	B	0.40	70	-0.352	-70.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Calcium	651		4400	NP	-3749.000	N/A	No
LANL-WR-SS-63	B (DUP-SS-17)	Chromium	1.20	J	10.5	100000	-9	-99998.8	No
LANL-WR-SS-63	B (DUP-SS-17)	Cobalt	0.93	B	4.73	4500	-4	-4499.1	No
LANL-WR-SS-63	B (DUP-SS-17)	Copper	2.00		11.2	2800	-9	-2798.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Iron	3620		13800	23000	-10180	-19380.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Lead	7.3	J	19.7	400	-12	-392.7	No
LANL-WR-SS-63	B (DUP-SS-17)	Magnesium	349	J	2370	NP	-2021	N/A	No
LANL-WR-SS-63	B (DUP-SS-17)	Manganese	183		543	7800	-360	-7617.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Nickel	1.70	J	9.4	1500	-8	-1498.3	No
LANL-WR-SS-63	B (DUP-SS-17)	Potassium	355	B	2690	NP	-2335	N/A	No
LANL-WR-SS-63	B (DUP-SS-17)	Selenium	0.37	B	0.3	380	0.07	-379.6	No
LANL-WR-SS-63	B (DUP-SS-17)	Silver	0.023	B	1.0	380	-0.98	-380.0	No
LANL-WR-SS-63	B (DUP-SS-17)	Sodium	77.2	B	1470	NP	-1393	N/A	No
LANL-WR-SS-63	B (DUP-SS-17)	Vanadium	3.3		19.7	530	-16	-526.7	No
LANL-WR-SS-63	B (DUP-SS-17)	Zinc	21.1	J	60.2	23000	-39	-22978.9	No
LANL-WR-SS-46	C	Aluminum	6000	J	15400	74000	-9400	-68000.0	No
LANL-WR-SS-46	C	Arsenic	2.2		3.98	3.90	-2	-1.7	No
LANL-WR-SS-46	C	Barium	79.8		127	5200	-47	-5120.2	No
LANL-WR-SS-46	C	Beryllium	0.68		1.31	150	-1	-149.3	No
LANL-WR-SS-46	C	Cadmium	0.1	B	0.40	70	-0.300	-69.9	No
LANL-WR-SS-46	C	Calcium	2250		4400	NP	-2150.000	N/A	No
LANL-WR-SS-46	C	Chromium	5.70		10.5	100000	-5	-99994.3	No
LANL-WR-SS-46	C	Cobalt	4.10		4.73	4500	-1	-4495.9	No
LANL-WR-SS-46	C	Copper	5.50		11.2	2800	-6	-2794.5	No
LANL-WR-SS-46	C	Iron	9130		13800	23000	-4670	-13870.0	No
LANL-WR-SS-46	C	Lead	19.5		19.7	400	-0.20	-380.5	No
LANL-WR-SS-46	C	Magnesium	1340	J	2370	NP	-1030	N/A	No
LANL-WR-SS-46	C	Manganese	427		543	7800	-116	-7373.0	No
LANL-WR-SS-46	C	Mercury	0.04		0.1	23	-0.060	-23.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-46	C	Nickel	5.10		9.4	1500	-4	-1494.9	No
LANL-WR-SS-46	C	Potassium	1130		2690	NP	-1560	N/A	No
LANL-WR-SS-46	C	Sodium	67.7	B	1470	NP	-1402	N/A	No
LANL-WR-SS-46	C	Vanadium	14.3		19.7	530	-5	-515.7	No
LANL-WR-SS-46	C	Zinc	29.7		60.2	23000	-31	-22970.3	No
LANL-WR-SS-47	C	Aluminum	4500	J	15400	74000	-10900	-69500.0	No
LANL-WR-SS-47	C	Arsenic	2.0		3.98	3.90	-2	-1.9	No
LANL-WR-SS-47	C	Barium	59.9		127	5200	-67	-5140.1	No
LANL-WR-SS-47	C	Beryllium	0.62		1.31	150	-1	-149.4	No
LANL-WR-SS-47	C	Cadmium	0.094	B	0.40	70	-0.306	-69.9	No
LANL-WR-SS-47	C	Calcium	2340		4400	NP	-2060.000	N/A	No
LANL-WR-SS-47	C	Chromium	4.20		10.5	100000	-6	-99995.8	No
LANL-WR-SS-47	C	Cobalt	2.30		4.73	4500	-2	-4497.7	No
LANL-WR-SS-47	C	Copper	5.60		11.2	2800	-6	-2794.4	No
LANL-WR-SS-47	C	Iron	7910		13800	23000	-5890	-15090.0	No
LANL-WR-SS-47	C	Lead	25.3		19.7	400	6	-374.7	No
LANL-WR-SS-47	C	Magnesium	989	J	2370	NP	-1381	N/A	No
LANL-WR-SS-47	C	Manganese	365		543	7800	-178	-7435.0	No
LANL-WR-SS-47	C	Mercury	0.06		0.1	23	-0.043	-22.9	No
LANL-WR-SS-47	C	Nickel	3.80		9.4	1500	-6	-1496.2	No
LANL-WR-SS-47	C	Potassium	851		2690	NP	-1839	N/A	No
LANL-WR-SS-47	C	Selenium	0.40	B	0.3	380	0.10	-379.6	No
LANL-WR-SS-47	C	Sodium	65.2	B	1470	NP	-1405	N/A	No
LANL-WR-SS-47	C	Vanadium	10.2		19.7	530	-10	-519.8	No
LANL-WR-SS-47	C	Zinc	39.9		60.2	23000	-20	-22960.1	No
LANL-WR-SS-48	C	Aluminum	3190	J	15400	74000	-12210	-70810.0	No
LANL-WR-SS-48	C	Arsenic	1.3		3.98	3.90	-3	-2.6	No
LANL-WR-SS-48	C	Barium	46.1		127	5200	-81	-5153.9	No
LANL-WR-SS-48	C	Beryllium	0.56		1.31	150	-1	-149.4	No
LANL-WR-SS-48	C	Cadmium	0.073	B	0.40	70	-0.327	-69.9	No
LANL-WR-SS-48	C	Calcium	1080		4400	NP	-3320.000	N/A	No
LANL-WR-SS-48	C	Chromium	3.10		10.5	100000	-7	-99996.9	No
LANL-WR-SS-48	C	Cobalt	2.00		4.73	4500	-3	-4498.0	No
LANL-WR-SS-48	C	Copper	3.50		11.2	2800	-8	-2796.5	No
LANL-WR-SS-48	C	Iron	5700		13800	23000	-8100	-17300.0	No
LANL-WR-SS-48	C	Lead	9.5		19.7	400	-10	-390.5	No
LANL-WR-SS-48	C	Magnesium	714	J	2370	NP	-1656	N/A	No
LANL-WR-SS-48	C	Manganese	287		543	7800	-256	-7513.0	No
LANL-WR-SS-48	C	Mercury	0.02	B	0.1	23	-0.081	-23.0	No
LANL-WR-SS-48	C	Nickel	3.20		9.4	1500	-6	-1496.8	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-48	C	Potassium	689		2690	NP	-2001	N/A	No
LANL-WR-SS-48	C	Sodium	58.5	B	1470	NP	-1412	N/A	No
LANL-WR-SS-48	C	Vanadium	8.2		19.7	530	-12	-521.8	No
LANL-WR-SS-48	C	Zinc	23.6		60.2	23000	-37	-22976.4	No
LANL-WR-SS-49	C	Aluminum	2960	J	15400	74000	-12440	-71040.0	No
LANL-WR-SS-49	C	Arsenic	0.74		3.98	3.90	-3	-3.2	No
LANL-WR-SS-49	C	Barium	38.5		127	5200	-89	-5161.5	No
LANL-WR-SS-49	C	Beryllium	0.57		1.31	150	-1	-149.4	No
LANL-WR-SS-49	C	Cadmium	0.095	B	0.40	70	-0.305	-69.9	No
LANL-WR-SS-49	C	Calcium	1250		4400	NP	-3150.000	N/A	No
LANL-WR-SS-49	C	Chromium	2.00		10.5	100000	-9	-99998.0	No
LANL-WR-SS-49	C	Cobalt	1.00	B	4.73	4500	-4	-4499.0	No
LANL-WR-SS-49	C	Copper	2.90		11.2	2800	-8	-2797.1	No
LANL-WR-SS-49	C	Iron	4160		13800	23000	-9640	-18840.0	No
LANL-WR-SS-49	C	Lead	13.9		19.7	400	-6	-386.1	No
LANL-WR-SS-49	C	Magnesium	589	J	2370	NP	-1781	N/A	No
LANL-WR-SS-49	C	Manganese	208		543	7800	-335	-7592.0	No
LANL-WR-SS-49	C	Mercury	0.02	B	0.1	23	-0.078	-23.0	No
LANL-WR-SS-49	C	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-49	C	Potassium	1060		2690	NP	-1630	N/A	No
LANL-WR-SS-49	C	Selenium	0.14	B	0.3	380	-0.16	-379.9	No
LANL-WR-SS-49	C	Sodium	87.7	B	1470	NP	-1382	N/A	No
LANL-WR-SS-49	C	Vanadium	5.3	B	19.7	530	-14	-524.7	No
LANL-WR-SS-49	C	Zinc	20.9		60.2	23000	-39	-22979.1	No
LANL-WR-SS-50	C	Aluminum	1620	J	15400	74000	-13780	-72380.0	No
LANL-WR-SS-50	C	Arsenic	0.47	B	3.98	3.90	-4	-3.4	No
LANL-WR-SS-50	C	Barium	22.1		127	5200	-105	-5177.9	No
LANL-WR-SS-50	C	Beryllium	0.31		1.31	150	-1	-149.7	No
LANL-WR-SS-50	C	Cadmium	0.066	B	0.40	70	-0.334	-69.9	No
LANL-WR-SS-50	C	Calcium	1050		4400	NP	-3350.000	N/A	No
LANL-WR-SS-50	C	Chromium	1.60		10.5	100000	-9	-99998.4	No
LANL-WR-SS-50	C	Cobalt	1.30		4.73	4500	-3	-4498.7	No
LANL-WR-SS-50	C	Copper	2.40		11.2	2800	-9	-2797.6	No
LANL-WR-SS-50	C	Iron	3490		13800	23000	-10310	-19510.0	No
LANL-WR-SS-50	C	Lead	8.3		19.7	400	-11	-391.7	No
LANL-WR-SS-50	C	Magnesium	352	J	2370	NP	-2018	N/A	No
LANL-WR-SS-50	C	Manganese	178		543	7800	-365	-7622.0	No
LANL-WR-SS-50	C	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-50	C	Potassium	182	B	2690	NP	-2508	N/A	No
LANL-WR-SS-50	C	Selenium	0.16	B	0.3	380	-0.14	-379.8	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-50	C	Sodium	43.3	B	1470	NP	-1427	N/A	No
LANL-WR-SS-50	C	Vanadium	4.5	B	19.7	530	-15	-525.5	No
LANL-WR-SS-50	C	Zinc	25		60.2	23000	-35	-22975.0	No
LANL-WR-SS-51	C	Aluminum	2710	J	15400	74000	-12690	-71290.0	No
LANL-WR-SS-51	C	Arsenic	1.3		3.98	3.90	-3	-2.6	No
LANL-WR-SS-51	C	Barium	49.1		127	5200	-78	-5150.9	No
LANL-WR-SS-51	C	Beryllium	0.55		1.31	150	-1	-149.5	No
LANL-WR-SS-51	C	Cadmium	0.38		0.40	70	-0.020	-69.6	No
LANL-WR-SS-51	C	Calcium	2410		4400	NP	-1990.000	N/A	No
LANL-WR-SS-51	C	Chromium	2.80		10.5	100000	-8	-99997.2	No
LANL-WR-SS-51	C	Cobalt	1.30		4.73	4500	-3	-4498.7	No
LANL-WR-SS-51	C	Copper	4.50		11.2	2800	-7	-2795.5	No
LANL-WR-SS-51	C	Iron	5920		13800	23000	-7880	-17080.0	No
LANL-WR-SS-51	C	Lead	16.7		19.7	400	-3	-383.3	No
LANL-WR-SS-51	C	Magnesium	648	J	2370	NP	-1722	N/A	No
LANL-WR-SS-51	C	Manganese	312		543	7800	-231	-7488.0	No
LANL-WR-SS-51	C	Mercury	0.04	B	0.1	23	-0.056	-23.0	No
LANL-WR-SS-51	C	Nickel	3.00		9.4	1500	-6	-1497.0	No
LANL-WR-SS-51	C	Potassium	260	B	2690	NP	-2430	N/A	No
LANL-WR-SS-51	C	Selenium	0.28	B	0.3	380	-0.02	-379.7	No
LANL-WR-SS-51	C	Sodium	235	B	1470	NP	-1235	N/A	No
LANL-WR-SS-51	C	Vanadium	7.3		19.7	530	-12	-522.7	No
LANL-WR-SS-51	C	Zinc	165		60.2	23000	105	-22835.0	No
LANL-WR-SS-52	C	Aluminum	2090	J	15400	74000	-13310	-71910.0	No
LANL-WR-SS-52	C	Arsenic	0.56	B	3.98	3.90	-3	-3.3	No
LANL-WR-SS-52	C	Barium	28.3		127	5200	-99	-5171.7	No
LANL-WR-SS-52	C	Beryllium	0.50		1.31	150	-1	-149.5	No
LANL-WR-SS-52	C	Cadmium	0.11	B	0.40	70	-0.290	-69.9	No
LANL-WR-SS-52	C	Calcium	1710		4400	NP	-2690.000	N/A	No
LANL-WR-SS-52	C	Chromium	1.50		10.5	100000	-9	-99998.5	No
LANL-WR-SS-52	C	Cobalt	0.68	B	4.73	4500	-4	-4499.3	No
LANL-WR-SS-52	C	Copper	2.40		11.2	2800	-9	-2797.6	No
LANL-WR-SS-52	C	Iron	4290		13800	23000	-9510	-18710.0	No
LANL-WR-SS-52	C	Lead	8.1		19.7	400	-12	-391.9	No
LANL-WR-SS-52	C	Magnesium	385	J	2370	NP	-1985	N/A	No
LANL-WR-SS-52	C	Manganese	277		543	7800	-266	-7523.0	No
LANL-WR-SS-52	C	Nickel	1.60		9.4	1500	-8	-1498.4	No
LANL-WR-SS-52	C	Potassium	211	B	2690	NP	-2479	N/A	No
LANL-WR-SS-52	C	Sodium	76	B	1470	NP	-1394	N/A	No
LANL-WR-SS-52	C	Vanadium	3.4	B	19.7	530	-16	-526.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-52	C	Zinc	30.2		60.2	23000	-30	-22969.8	No
LANL-WR-SS-53	C	Aluminum	2480	J	15400	74000	-12920	-71520.0	No
LANL-WR-SS-53	C	Arsenic	0.65		3.98	3.90	-3	-3.3	No
LANL-WR-SS-53	C	Barium	39		127	5200	-88	-5161.0	No
LANL-WR-SS-53	C	Beryllium	0.48		1.31	150	-1	-149.5	No
LANL-WR-SS-53	C	Cadmium	0.17		0.40	70	-0.230	-69.8	No
LANL-WR-SS-53	C	Calcium	1590		4400	NP	-2810.000	N/A	No
LANL-WR-SS-53	C	Chromium	2.60		10.5	100000	-8	-99997.4	No
LANL-WR-SS-53	C	Cobalt	1.20	B	4.73	4500	-4	-4498.8	No
LANL-WR-SS-53	C	Copper	4.40		11.2	2800	-7	-2795.6	No
LANL-WR-SS-53	C	Iron	5600		13800	23000	-8200	-17400.0	No
LANL-WR-SS-53	C	Lead	14.8		19.7	400	-5	-385.2	No
LANL-WR-SS-53	C	Magnesium	609	J	2370	NP	-1761	N/A	No
LANL-WR-SS-53	C	Manganese	290		543	7800	-253	-7510.0	No
LANL-WR-SS-53	C	Mercury	0.05		0.1	23	-0.055	-23.0	No
LANL-WR-SS-53	C	Nickel	2.40		9.4	1500	-7	-1497.6	No
LANL-WR-SS-53	C	Potassium	437	B	2690	NP	-2253	N/A	No
LANL-WR-SS-53	C	Sodium	157	B	1470	NP	-1313	N/A	No
LANL-WR-SS-53	C	Vanadium	6.1	B	19.7	530	-14	-523.9	No
LANL-WR-SS-53	C	Zinc	42.4		60.2	23000	-18	-22957.6	No
LANL-WR-SS-54	C	Aluminum	2010	J	15400	74000	-13390	-71990.0	No
LANL-WR-SS-54	C	Arsenic	0.52	B	3.98	3.90	-3	-3.4	No
LANL-WR-SS-54	C	Barium	33.4		127	5200	-94	-5166.6	No
LANL-WR-SS-54	C	Beryllium	0.54		1.31	150	-1	-149.5	No
LANL-WR-SS-54	C	Cadmium	0.11	B	0.40	70	-0.290	-69.9	No
LANL-WR-SS-54	C	Calcium	1440		4400	NP	-2960.000	N/A	No
LANL-WR-SS-54	C	Chromium	2.00		10.5	100000	-9	-99998.0	No
LANL-WR-SS-54	C	Cobalt	0.93	B	4.73	4500	-4	-4499.1	No
LANL-WR-SS-54	C	Copper	3.40		11.2	2800	-8	-2796.6	No
LANL-WR-SS-54	C	Iron	4950		13800	23000	-8850	-18050.0	No
LANL-WR-SS-54	C	Lead	10.7		19.7	400	-9	-389.3	No
LANL-WR-SS-54	C	Magnesium	435	J	2370	NP	-1935	N/A	No
LANL-WR-SS-54	C	Manganese	266		543	7800	-277	-7534.0	No
LANL-WR-SS-54	C	Nickel	2.10		9.4	1500	-7	-1497.9	No
LANL-WR-SS-54	C	Potassium	207	B	2690	NP	-2483	N/A	No
LANL-WR-SS-54	C	Selenium	0.15	B	0.3	380	-0.15	-379.9	No
LANL-WR-SS-54	C	Sodium	63.7	B	1470	NP	-1406	N/A	No
LANL-WR-SS-54	C	Vanadium	4.9	B	19.7	530	-15	-525.1	No
LANL-WR-SS-54	C	Zinc	36.5		60.2	23000	-24	-22963.5	No
LANL-WR-SS-55	C	Aluminum	2110	J	15400	74000	-13290	-71890.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-55	C	Arsenic	0.66		3.98	3.90	-3	-3.2	No
LANL-WR-SS-55	C	Barium	26.6		127	5200	-100	-5173.4	No
LANL-WR-SS-55	C	Beryllium	0.44		1.31	150	-1	-149.6	No
LANL-WR-SS-55	C	Cadmium	0.095	B	0.40	70	-0.305	-69.9	No
LANL-WR-SS-55	C	Calcium	1110		4400	NP	-3290.000	N/A	No
LANL-WR-SS-55	C	Chromium	2.20		10.5	100000	-8	-99997.8	No
LANL-WR-SS-55	C	Cobalt	0.90	B	4.73	4500	-4	-4499.1	No
LANL-WR-SS-55	C	Copper	3.20		11.2	2800	-8	-2796.8	No
LANL-WR-SS-55	C	Iron	6040		13800	23000	-7760	-16960.0	No
LANL-WR-SS-55	C	Lead	14.3		19.7	400	-5	-385.7	No
LANL-WR-SS-55	C	Magnesium	458	J	2370	NP	-1912	N/A	No
LANL-WR-SS-55	C	Manganese	247		543	7800	-296	-7553.0	No
LANL-WR-SS-55	C	Mercury	0.05		0.1	23	-0.055	-23.0	No
LANL-WR-SS-55	C	Nickel	2.00		9.4	1500	-7	-1498.0	No
LANL-WR-SS-55	C	Potassium	394	B	2690	NP	-2296	N/A	No
LANL-WR-SS-55	C	Sodium	216	B	1470	NP	-1254	N/A	No
LANL-WR-SS-55	C	Vanadium	5.5	B	19.7	530	-14	-524.5	No
LANL-WR-SS-55	C	Zinc	40.7		60.2	23000	-20	-22959.3	No
LANL-WR-SS-56	C	Aluminum	1780	J	15400	74000	-13620	-72220.0	No
LANL-WR-SS-56	C	Arsenic	0.57		3.98	3.90	-3	-3.3	No
LANL-WR-SS-56	C	Barium	21.3		127	5200	-106	-5178.7	No
LANL-WR-SS-56	C	Beryllium	0.39		1.31	150	-1	-149.6	No
LANL-WR-SS-56	C	Cadmium	0.067	B	0.40	70	-0.333	-69.9	No
LANL-WR-SS-56	C	Calcium	977		4400	NP	-3423.000	N/A	No
LANL-WR-SS-56	C	Chromium	1.60		10.5	100000	-9	-99998.4	No
LANL-WR-SS-56	C	Cobalt	0.71	B	4.73	4500	-4	-4499.3	No
LANL-WR-SS-56	C	Copper	2.50		11.2	2800	-9	-2797.5	No
LANL-WR-SS-56	C	Iron	5220		13800	23000	-8580	-17780.0	No
LANL-WR-SS-56	C	Lead	9		19.7	400	-11	-391.0	No
LANL-WR-SS-56	C	Magnesium	355	J	2370	NP	-2015	N/A	No
LANL-WR-SS-56	C	Manganese	266		543	7800	-277	-7534.0	No
LANL-WR-SS-56	C	Nickel	1.90		9.4	1500	-7	-1498.1	No
LANL-WR-SS-56	C	Potassium	269	B	2690	NP	-2421	N/A	No
LANL-WR-SS-56	C	Sodium	54.2	B	1470	NP	-1416	N/A	No
LANL-WR-SS-56	C	Vanadium	4.2	B	19.7	530	-16	-525.8	No
LANL-WR-SS-56	C	Zinc	32.5		60.2	23000	-28	-22967.5	No
LANL-WR-SS-57	C	Aluminum	2110	J	15400	74000	-13290	-71890.0	No
LANL-WR-SS-57	C	Arsenic	1.3		3.98	3.90	-3	-2.6	No
LANL-WR-SS-57	C	Barium	73.4		127	5200	-54	-5126.6	No
LANL-WR-SS-57	C	Beryllium	0.51		1.31	150	-1	-149.5	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-57	C	Cadmium	0.16		0.40	70	-0.240	-69.8	No
LANL-WR-SS-57	C	Calcium	1620		4400	NP	-2780.000	N/A	No
LANL-WR-SS-57	C	Chromium	2.20		10.5	100000	-8	-99997.8	No
LANL-WR-SS-57	C	Cobalt	1.10	B	4.73	4500	-4	-4498.9	No
LANL-WR-SS-57	C	Copper	4.00		11.2	2800	-7	-2796.0	No
LANL-WR-SS-57	C	Iron	6060		13800	23000	-7740	-16940.0	No
LANL-WR-SS-57	C	Lead	15.9		19.7	400	-4	-384.1	No
LANL-WR-SS-57	C	Magnesium	477	J	2370	NP	-1893	N/A	No
LANL-WR-SS-57	C	Manganese	346		543	7800	-197	-7454.0	No
LANL-WR-SS-57	C	Mercury	0.02	B	0.1	23	-0.078	-23.0	No
LANL-WR-SS-57	C	Nickel	2.20		9.4	1500	-7	-1497.8	No
LANL-WR-SS-57	C	Potassium	479	B	2690	NP	-2211	N/A	No
LANL-WR-SS-57	C	Selenium	0.19	B	0.3	380	-0.11	-379.8	No
LANL-WR-SS-57	C	Sodium	77.1	B	1470	NP	-1393	N/A	No
LANL-WR-SS-57	C	Vanadium	5.4	B	19.7	530	-14	-524.6	No
LANL-WR-SS-57	C	Zinc	49		60.2	23000	-11	-22951.0	No
LANL-WR-SS-58	C	Aluminum	1480	J	15400	74000	-13920	-72520.0	No
LANL-WR-SS-58	C	Arsenic	0.45	B	3.98	3.90	-4	-3.5	No
LANL-WR-SS-58	C	Barium	18.2		127	5200	-109	-5181.8	No
LANL-WR-SS-58	C	Beryllium	0.30		1.31	150	-1	-149.7	No
LANL-WR-SS-58	C	Cadmium	0.063	B	0.40	70	-0.337	-69.9	No
LANL-WR-SS-58	C	Calcium	973		4400	NP	-3427.000	N/A	No
LANL-WR-SS-58	C	Chromium	1.50		10.5	100000	-9	-99998.5	No
LANL-WR-SS-58	C	Cobalt	0.59	B	4.73	4500	-4	-4499.4	No
LANL-WR-SS-58	C	Copper	2.70		11.2	2800	-9	-2797.3	No
LANL-WR-SS-58	C	Iron	5820		13800	23000	-7980	-17180.0	No
LANL-WR-SS-58	C	Lead	9.4		19.7	400	-10	-390.6	No
LANL-WR-SS-58	C	Magnesium	364	J	2370	NP	-2006	N/A	No
LANL-WR-SS-58	C	Manganese	254		543	7800	-289	-7546.0	No
LANL-WR-SS-58	C	Nickel	1.50		9.4	1500	-8	-1498.5	No
LANL-WR-SS-58	C	Potassium	381	B	2690	NP	-2309	N/A	No
LANL-WR-SS-58	C	Selenium	0.32	B	0.3	380	0.02	-379.7	No
LANL-WR-SS-58	C	Sodium	66.2	B	1470	NP	-1404	N/A	No
LANL-WR-SS-58	C	Vanadium	4.2	B	19.7	530	-16	-525.8	No
LANL-WR-SS-58	C	Zinc	42.4		60.2	23000	-18	-22957.6	No
LANL-WR-SS-59	C	Aluminum	1420	J	15400	74000	-13980	-72580.0	No
LANL-WR-SS-59	C	Arsenic	0.67		3.98	3.90	-3	-3.2	No
LANL-WR-SS-59	C	Barium	18.9		127	5200	-108	-5181.1	No
LANL-WR-SS-59	C	Beryllium	0.41		1.31	150	-1	-149.6	No
LANL-WR-SS-59	C	Cadmium	0.1	B	0.40	70	-0.300	-69.9	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-59	C	Calcium	1310		4400	NP	-3090.000	N/A	No
LANL-WR-SS-59	C	Chromium	1.50		10.5	100000	-9	-99998.5	No
LANL-WR-SS-59	C	Cobalt	0.65	B	4.73	4500	-4	-4499.4	No
LANL-WR-SS-59	C	Copper	3.10		11.2	2800	-8	-2796.9	No
LANL-WR-SS-59	C	Iron	6500		13800	23000	-7300	-16500.0	No
LANL-WR-SS-59	C	Lead	14.2		19.7	400	-6	-385.8	No
LANL-WR-SS-59	C	Magnesium	310	J	2370	NP	-2060	N/A	No
LANL-WR-SS-59	C	Manganese	346		543	7800	-197	-7454.0	No
LANL-WR-SS-59	C	Mercury	0.03	B	0.1	23	-0.070	-23.0	No
LANL-WR-SS-59	C	Nickel	1.50		9.4	1500	-8	-1498.5	No
LANL-WR-SS-59	C	Potassium	290	B	2690	NP	-2400	N/A	No
LANL-WR-SS-59	C	Sodium	71.7	B	1470	NP	-1398	N/A	No
LANL-WR-SS-59	C	Vanadium	4.4	B	19.7	530	-15	-525.6	No
LANL-WR-SS-59	C	Zinc	46.9		60.2	23000	-13	-22953.1	No
LANL-WR-SS-60	C	Aluminum	1760	J	15400	74000	-13640	-72240.0	No
LANL-WR-SS-60	C	Arsenic	0.86		3.98	3.90	-3	-3.0	No
LANL-WR-SS-60	C	Barium	17.2		127	5200	-110	-5182.8	No
LANL-WR-SS-60	C	Beryllium	0.56		1.31	150	-1	-149.4	No
LANL-WR-SS-60	C	Cadmium	0.11	B	0.40	70	-0.290	-69.9	No
LANL-WR-SS-60	C	Calcium	1630		4400	NP	-2770.000	N/A	No
LANL-WR-SS-60	C	Chromium	1.60		10.5	100000	-9	-99998.4	No
LANL-WR-SS-60	C	Cobalt	0.60	B	4.73	4500	-4	-4499.4	No
LANL-WR-SS-60	C	Copper	3.20		11.2	2800	-8	-2796.8	No
LANL-WR-SS-60	C	Iron	5730		13800	23000	-8070	-17270.0	No
LANL-WR-SS-60	C	Lead	10.1		19.7	400	-10	-389.9	No
LANL-WR-SS-60	C	Magnesium	379	J	2370	NP	-1991	N/A	No
LANL-WR-SS-60	C	Manganese	322		543	7800	-221	-7478.0	No
LANL-WR-SS-60	C	Mercury	0.04	B	0.1	23	-0.063	-23.0	No
LANL-WR-SS-60	C	Nickel	1.60		9.4	1500	-8	-1498.4	No
LANL-WR-SS-60	C	Potassium	364	B	2690	NP	-2326	N/A	No
LANL-WR-SS-60	C	Sodium	74.8	B	1470	NP	-1395	N/A	No
LANL-WR-SS-60	C	Vanadium	4.1	B	19.7	530	-16	-525.9	No
LANL-WR-SS-60	C	Zinc	46.2		60.2	23000	-14	-22953.8	No
LANL-WR-SS-62	C (DUP-SS-47)	Aluminum	2990	J	15400	74000	-12410	-71010.0	No
LANL-WR-SS-62	C (DUP-SS-47)	Arsenic	1.4		3.98	3.90	-3	-2.5	No
LANL-WR-SS-62	C (DUP-SS-47)	Barium	39.2		127	5200	-88	-5160.8	No
LANL-WR-SS-62	C (DUP-SS-47)	Beryllium	0.38		1.31	150	-1	-149.6	No
LANL-WR-SS-62	C (DUP-SS-47)	Cadmium	0.11	B	0.40	70	-0.290	-69.9	No
LANL-WR-SS-62	C (DUP-SS-47)	Calcium	1400		4400	NP	-3000.000	N/A	No
LANL-WR-SS-62	C (DUP-SS-47)	Chromium	2.40	J	10.5	100000	-8	-99997.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-62	C (DUP-SS-47)	Cobalt	1.70		4.73	4500	-3	-4498.3	No
LANL-WR-SS-62	C (DUP-SS-47)	Copper	4.20		11.2	2800	-7	-2795.8	No
LANL-WR-SS-62	C (DUP-SS-47)	Iron	5500		13800	23000	-8300	-17500.0	No
LANL-WR-SS-62	C (DUP-SS-47)	Lead	16	J	19.7	400	-4	-384.0	No
LANL-WR-SS-62	C (DUP-SS-47)	Magnesium	611	J	2370	NP	-1759	N/A	No
LANL-WR-SS-62	C (DUP-SS-47)	Manganese	235		543	7800	-308	-7565.0	No
LANL-WR-SS-62	C (DUP-SS-47)	Mercury	0.03	B	0.1	23	-0.073	-23.0	No
LANL-WR-SS-62	C (DUP-SS-47)	Nickel	2.60	J	9.4	1500	-7	-1497.4	No
LANL-WR-SS-62	C (DUP-SS-47)	Potassium	525	B	2690	NP	-2165	N/A	No
LANL-WR-SS-62	C (DUP-SS-47)	Selenium	0.33	B	0.3	380	0.03	-379.7	No
LANL-WR-SS-62	C (DUP-SS-47)	Silver	0.071	B	1.0	380	-0.93	-379.9	No
LANL-WR-SS-62	C (DUP-SS-47)	Sodium	45.3	B	1470	NP	-1425	N/A	No
LANL-WR-SS-62	C (DUP-SS-47)	Vanadium	6.5		19.7	530	-13	-523.5	No
LANL-WR-SS-62	C (DUP-SS-47)	Zinc	29.9	J	60.2	23000	-30	-22970.1	No
LANL-WR-SS-31	D2	Aluminum	4500	J	15400	74000	-10900	-69500.0	No
LANL-WR-SS-31	D2	Arsenic	1.6		3.98	3.90	-2	-2.3	No
LANL-WR-SS-31	D2	Barium	117		127	5200	-10	-5083.0	No
LANL-WR-SS-31	D2	Beryllium	0.67		1.31	150	-1	-149.3	No
LANL-WR-SS-31	D2	Cadmium	0.078	B	0.40	70	-0.322	-69.9	No
LANL-WR-SS-31	D2	Calcium	1550		4400	NP	-2850.000	N/A	No
LANL-WR-SS-31	D2	Chromium	3.70		10.5	100000	-7	-99996.3	No
LANL-WR-SS-31	D2	Cobalt	3.00		4.73	4500	-2	-4497.0	No
LANL-WR-SS-31	D2	Copper	3.40		11.2	2800	-8	-2796.6	No
LANL-WR-SS-31	D2	Iron	6470		13800	23000	-7330	-16530.0	No
LANL-WR-SS-31	D2	Lead	13.3		19.7	400	-6	-386.7	No
LANL-WR-SS-31	D2	Magnesium	752	J	2370	NP	-1618	N/A	No
LANL-WR-SS-31	D2	Manganese	466		543	7800	-77	-7334.0	No
LANL-WR-SS-31	D2	Nickel	3.50		9.4	1500	-6	-1496.5	No
LANL-WR-SS-31	D2	Potassium	914		2690	NP	-1776	N/A	No
LANL-WR-SS-31	D2	Selenium	0.16	B	0.3	380	-0.14	-379.8	No
LANL-WR-SS-31	D2	Sodium	69.7	B	1470	NP	-1400	N/A	No
LANL-WR-SS-31	D2	Vanadium	11		19.7	530	-9	-519.0	No
LANL-WR-SS-31	D2	Zinc	21		60.2	23000	-39	-22979.0	No
LANL-WR-SS-32	D2	Aluminum	1170	J	15400	74000	-14230	-72830.0	No
LANL-WR-SS-32	D2	Arsenic	0.49	B	3.98	3.90	-3	-3.4	No
LANL-WR-SS-32	D2	Barium	17.9		127	5200	-109	-5182.1	No
LANL-WR-SS-32	D2	Beryllium	0.21		1.31	150	-1	-149.8	No
LANL-WR-SS-32	D2	Cadmium	0.2		0.40	70	-0.200	-69.8	No
LANL-WR-SS-32	D2	Calcium	822		4400	NP	-3578.000	N/A	No
LANL-WR-SS-32	D2	Chromium	7.30		10.5	100000	-3	-99992.7	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-32	D2	Cobalt	1.20		4.73	4500	-4	-4498.8	No
LANL-WR-SS-32	D2	Copper	8.20		11.2	2800	-3	-2791.8	No
LANL-WR-SS-32	D2	Iron	4400		13800	23000	-9400	-18600.0	No
LANL-WR-SS-32	D2	Lead	17.9		19.7	400	-2	-382.1	No
LANL-WR-SS-32	D2	Magnesium	275	J	2370	NP	-2095	N/A	No
LANL-WR-SS-32	D2	Manganese	137		543	7800	-406	-7663.0	No
LANL-WR-SS-32	D2	Mercury	0.02	B	0.1	23	-0.081	-23.0	No
LANL-WR-SS-32	D2	Nickel	4.20		9.4	1500	-5	-1495.8	No
LANL-WR-SS-32	D2	Selenium	0.18	B	0.3	380	-0.12	-379.8	No
LANL-WR-SS-32	D2	Sodium	80.3	B	1470	NP	-1390	N/A	No
LANL-WR-SS-32	D2	Vanadium	9.1		19.7	530	-11	-520.9	No
LANL-WR-SS-32	D2	Zinc	43.8		60.2	23000	-16	-22956.2	No
LANL-WR-SS-33	D2	Aluminum	3940	J	15400	74000	-11460	-70060.0	No
LANL-WR-SS-33	D2	Arsenic	1.7		3.98	3.90	-2	-2.2	No
LANL-WR-SS-33	D2	Barium	63.5		127	5200	-64	-5136.5	No
LANL-WR-SS-33	D2	Beryllium	0.67		1.31	150	-1	-149.3	No
LANL-WR-SS-33	D2	Cadmium	0.084	B	0.40	70	-0.316	-69.9	No
LANL-WR-SS-33	D2	Calcium	2010		4400	NP	-2390.000	N/A	No
LANL-WR-SS-33	D2	Chromium	4.50		10.5	100000	-6	-99995.5	No
LANL-WR-SS-33	D2	Cobalt	2.50		4.73	4500	-2	-4497.5	No
LANL-WR-SS-33	D2	Copper	4.30		11.2	2800	-7	-2795.7	No
LANL-WR-SS-33	D2	Iron	5640		13800	23000	-8160	-17360.0	No
LANL-WR-SS-33	D2	Lead	19.3		19.7	400	-0.40	-380.7	No
LANL-WR-SS-33	D2	Magnesium	897	J	2370	NP	-1473	N/A	No
LANL-WR-SS-33	D2	Manganese	254		543	7800	-289	-7546.0	No
LANL-WR-SS-33	D2	Mercury	0.03	B	0.1	23	-0.072	-23.0	No
LANL-WR-SS-33	D2	Nickel	3.80		9.4	1500	-6	-1496.2	No
LANL-WR-SS-33	D2	Potassium	1130		2690	NP	-1560	N/A	No
LANL-WR-SS-33	D2	Selenium	0.15	B	0.3	380	-0.15	-379.9	No
LANL-WR-SS-33	D2	Sodium	72.9	B	1470	NP	-1397	N/A	No
LANL-WR-SS-33	D2	Vanadium	9.4		19.7	530	-10	-520.6	No
LANL-WR-SS-33	D2	Zinc	32.9		60.2	23000	-27	-22967.1	No
LANL-WR-SS-34	D2	Aluminum	658	J	15400	74000	-14742	-73342.0	No
LANL-WR-SS-34	D2	Arsenic	0.56		3.98	3.90	-3	-3.3	No
LANL-WR-SS-34	D2	Barium	11.2		127	5200	-116	-5188.8	No
LANL-WR-SS-34	D2	Beryllium	0.14		1.31	150	-1	-149.9	No
LANL-WR-SS-34	D2	Cadmium	0.091	B	0.40	70	-0.309	-69.9	No
LANL-WR-SS-34	D2	Calcium	456	B	4400	NP	-3944.000	N/A	No
LANL-WR-SS-34	D2	Chromium	2.10		10.5	100000	-8	-99997.9	No
LANL-WR-SS-34	D2	Cobalt	0.59	B	4.73	4500	-4	-4499.4	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-34	D2	Copper	4.70		11.2	2800	-7	-2795.3	No
LANL-WR-SS-34	D2	Iron	2650		13800	23000	-11150	-20350.0	No
LANL-WR-SS-34	D2	Lead	11.6		19.7	400	-8	-388.4	No
LANL-WR-SS-34	D2	Magnesium	207	J	2370	NP	-2163	N/A	No
LANL-WR-SS-34	D2	Manganese	83.8		543	7800	-459	-7716.2	No
LANL-WR-SS-34	D2	Mercury	0.02	B	0.1	23	-0.078	-23.0	No
LANL-WR-SS-34	D2	Nickel	1.70		9.4	1500	-8	-1498.3	No
LANL-WR-SS-34	D2	Sodium	50.7	B	1470	NP	-1419	N/A	No
LANL-WR-SS-34	D2	Vanadium	5.5		19.7	530	-14	-524.5	No
LANL-WR-SS-34	D2	Zinc	29.1		60.2	23000	-31	-22970.9	No
LANL-WR-SS-35	D2	Aluminum	4180	J	15400	74000	-11220	-69820.0	No
LANL-WR-SS-35	D2	Antimony	1.1	BJ	0.83	30	0.27	-28.9	No
LANL-WR-SS-35	D2	Arsenic	3.5		3.98	3.90	-0.48	-0.4	No
LANL-WR-SS-35	D2	Barium	102		127	5200	-25	-5098.0	No
LANL-WR-SS-35	D2	Beryllium	0.7		1.31	150	-1	-149.3	No
LANL-WR-SS-35	D2	Cadmium	0.99		0.40	70	0.590	-69.0	No
LANL-WR-SS-35	D2	Calcium	2350		4400	NP	-2050.000	N/A	No
LANL-WR-SS-35	D2	Chromium	9.70		10.5	100000	-1	-99990.3	No
LANL-WR-SS-35	D2	Cobalt	4.40		4.73	4500	-0.33	-4495.6	No
LANL-WR-SS-35	D2	Copper	39.3		11.2	2800	28	-2760.7	No
LANL-WR-SS-35	D2	Iron	12500		13800	23000	-1300	-10500.0	No
LANL-WR-SS-35	D2	Lead	84.6		19.7	400	65	-315.4	No
LANL-WR-SS-35	D2	Magnesium	937	J	2370	NP	-1433	N/A	No
LANL-WR-SS-35	D2	Manganese	333		543	7800	-210	-7467.0	No
LANL-WR-SS-35	D2	Mercury	0.20		0.1	23	0.100	-22.8	No
LANL-WR-SS-35	D2	Nickel	9.20		9.4	1500	-0.180	-1490.8	No
LANL-WR-SS-35	D2	Potassium	758		2690	NP	-1932	N/A	No
LANL-WR-SS-35	D2	Selenium	0.23	B	0.3	380	-0.07	-379.8	No
LANL-WR-SS-35	D2	Sodium	95.9	B	1470	NP	-1374	N/A	No
LANL-WR-SS-35	D2	Vanadium	25		19.7	530	5	-505.0	No
LANL-WR-SS-35	D2	Zinc	137		60.2	23000	77	-22863.0	No
LANL-WR-SS-36	D2	Aluminum	1130	J	15400	74000	-14270	-72870.0	No
LANL-WR-SS-36	D2	Arsenic	0.46	B	3.98	3.90	-4	-3.4	No
LANL-WR-SS-36	D2	Barium	21.8		127	5200	-105	-5178.2	No
LANL-WR-SS-36	D2	Beryllium	0.24		1.31	150	-1	-149.8	No
LANL-WR-SS-36	D2	Cadmium	0.18		0.40	70	-0.220	-69.8	No
LANL-WR-SS-36	D2	Calcium	592		4400	NP	-3808.000	N/A	No
LANL-WR-SS-36	D2	Chromium	3.20		10.5	100000	-7	-99996.8	No
LANL-WR-SS-36	D2	Cobalt	1.10		4.73	4500	-4	-4498.9	No
LANL-WR-SS-36	D2	Copper	8.40		11.2	2800	-3	-2791.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-36	D2	Iron	4560		13800	23000	-9240	-18440.0	No
LANL-WR-SS-36	D2	Lead	20.1		19.7	400	0.40	-379.9	No
LANL-WR-SS-36	D2	Magnesium	283	J	2370	NP	-2087	N/A	No
LANL-WR-SS-36	D2	Manganese	152		543	7800	-391	-7648.0	No
LANL-WR-SS-36	D2	Nickel	2.90		9.4	1500	-6	-1497.1	No
LANL-WR-SS-36	D2	Sodium	59.2	B	1470	NP	-1411	N/A	No
LANL-WR-SS-36	D2	Vanadium	9.2		19.7	530	-11	-520.8	No
LANL-WR-SS-36	D2	Zinc	47.8		60.2	23000	-12	-22952.2	No
LANL-WR-SS-37	D2	Aluminum	977	J	15400	74000	-14423	-73023.0	No
LANL-WR-SS-37	D2	Arsenic	0.33	B	3.98	3.90	-4	-3.6	No
LANL-WR-SS-37	D2	Barium	18.6		127	5200	-108	-5181.4	No
LANL-WR-SS-37	D2	Beryllium	0.24		1.31	150	-1	-149.8	No
LANL-WR-SS-37	D2	Cadmium	0.12		0.40	70	-0.280	-69.9	No
LANL-WR-SS-37	D2	Calcium	654		4400	NP	-3746.000	N/A	No
LANL-WR-SS-37	D2	Chromium	4.90		10.5	100000	-6	-99995.1	No
LANL-WR-SS-37	D2	Cobalt	1.40		4.73	4500	-3	-4498.6	No
LANL-WR-SS-37	D2	Copper	8.50		11.2	2800	-3	-2791.5	No
LANL-WR-SS-37	D2	Iron	6210		13800	23000	-7590	-16790.0	No
LANL-WR-SS-37	D2	Lead	76.5		19.7	400	57	-323.5	No
LANL-WR-SS-37	D2	Magnesium	268	J	2370	NP	-2102	N/A	No
LANL-WR-SS-37	D2	Manganese	153		543	7800	-390	-7647.0	No
LANL-WR-SS-37	D2	Mercury	0.03	B	0.1	23	-0.074	-23.0	No
LANL-WR-SS-37	D2	Nickel	3.60		9.4	1500	-6	-1496.4	No
LANL-WR-SS-37	D2	Sodium	60	B	1470	NP	-1410	N/A	No
LANL-WR-SS-37	D2	Vanadium	14.4		19.7	530	-5	-515.6	No
LANL-WR-SS-37	D2	Zinc	45.6		60.2	23000	-15	-22954.4	No
LANL-WR-SS-38	D2	Aluminum	690	J	15400	74000	-14710	-73310.0	No
LANL-WR-SS-38	D2	Arsenic	0.45	B	3.98	3.90	-4	-3.5	No
LANL-WR-SS-38	D2	Barium	15.3		127	5200	-112	-5184.7	No
LANL-WR-SS-38	D2	Beryllium	0.23		1.31	150	-1	-149.8	No
LANL-WR-SS-38	D2	Cadmium	0.069	B	0.40	70	-0.331	-69.9	No
LANL-WR-SS-38	D2	Calcium	2410		4400	NP	-1990.000	N/A	No
LANL-WR-SS-38	D2	Chromium	1.40		10.5	100000	-9	-99998.6	No
LANL-WR-SS-38	D2	Cobalt	0.57	B	4.73	4500	-4	-4499.4	No
LANL-WR-SS-38	D2	Copper	4.80		11.2	2800	-6	-2795.2	No
LANL-WR-SS-38	D2	Iron	3170		13800	23000	-10630	-19830.0	No
LANL-WR-SS-38	D2	Lead	9.2		19.7	400	-11	-390.8	No
LANL-WR-SS-38	D2	Magnesium	233	J	2370	NP	-2137	N/A	No
LANL-WR-SS-38	D2	Manganese	169		543	7800	-374	-7631.0	No
LANL-WR-SS-38	D2	Nickel	1.70		9.4	1500	-8	-1498.3	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-38	D2	Selenium	0.20	B	0.3	380	-0.10	-379.8	No
LANL-WR-SS-38	D2	Sodium	61.8	B	1470	NP	-1408	N/A	No
LANL-WR-SS-38	D2	Vanadium	4.6	B	19.7	530	-15	-525.4	No
LANL-WR-SS-38	D2	Zinc	36.9		60.2	23000	-23	-22963.1	No
LANL-WR-SS-39	D2	Aluminum	708	J	15400	74000	-14692	-73292.0	No
LANL-WR-SS-39	D2	Antimony	0.28	BJ	0.83	30	-0.55	-29.7	No
LANL-WR-SS-39	D2	Arsenic	0.52	B	3.98	3.90	-3	-3.4	No
LANL-WR-SS-39	D2	Barium	17		127	5200	-110	-5183.0	No
LANL-WR-SS-39	D2	Beryllium	0.15		1.31	150	-1	-149.9	No
LANL-WR-SS-39	D2	Cadmium	0.13		0.40	70	-0.270	-69.9	No
LANL-WR-SS-39	D2	Calcium	469	B	4400	NP	-3931.000	N/A	No
LANL-WR-SS-39	D2	Chromium	7.00		10.5	100000	-4	-99993.0	No
LANL-WR-SS-39	D2	Cobalt	1.60		4.73	4500	-3	-4498.4	No
LANL-WR-SS-39	D2	Copper	10.5		11.2	2800	-1	-2789.5	No
LANL-WR-SS-39	D2	Iron	4410		13800	23000	-9390	-18590.0	No
LANL-WR-SS-39	D2	Lead	12.5		19.7	400	-7	-387.5	No
LANL-WR-SS-39	D2	Magnesium	233	J	2370	NP	-2137	N/A	No
LANL-WR-SS-39	D2	Manganese	131		543	7800	-412	-7669.0	No
LANL-WR-SS-39	D2	Nickel	4.20		9.4	1500	-5	-1495.8	No
LANL-WR-SS-39	D2	Sodium	47.1	B	1470	NP	-1423	N/A	No
LANL-WR-SS-39	D2	Vanadium	14.3		19.7	530	-5	-515.7	No
LANL-WR-SS-39	D2	Zinc	39.1		60.2	23000	-21	-22960.9	No
LANL-WR-SS-40	D2	Aluminum	866	J	15400	74000	-14534	-73134.0	No
LANL-WR-SS-40	D2	Arsenic	0.61		3.98	3.90	-3	-3.3	No
LANL-WR-SS-40	D2	Barium	18.8		127	5200	-108	-5181.2	No
LANL-WR-SS-40	D2	Beryllium	0.22		1.31	150	-1	-149.8	No
LANL-WR-SS-40	D2	Cadmium	0.2		0.40	70	-0.200	-69.8	No
LANL-WR-SS-40	D2	Calcium	684		4400	NP	-3716.000	N/A	No
LANL-WR-SS-40	D2	Chromium	2.60		10.5	100000	-8	-99997.4	No
LANL-WR-SS-40	D2	Cobalt	0.94	B	4.73	4500	-4	-4499.1	No
LANL-WR-SS-40	D2	Copper	9.70		11.2	2800	-2	-2790.3	No
LANL-WR-SS-40	D2	Iron	5120		13800	23000	-8680	-17880.0	No
LANL-WR-SS-40	D2	Lead	15.4		19.7	400	-4	-384.6	No
LANL-WR-SS-40	D2	Magnesium	262	J	2370	NP	-2108	N/A	No
LANL-WR-SS-40	D2	Manganese	140		543	7800	-403	-7660.0	No
LANL-WR-SS-40	D2	Mercury	0.02	B	0.1	23	-0.080	-23.0	No
LANL-WR-SS-40	D2	Nickel	2.80		9.4	1500	-7	-1497.2	No
LANL-WR-SS-40	D2	Sodium	53.5	B	1470	NP	-1417	N/A	No
LANL-WR-SS-40	D2	Vanadium	7.2		19.7	530	-13	-522.8	No
LANL-WR-SS-40	D2	Zinc	40		60.2	23000	-20	-22960.0	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-41	D2	Aluminum	1920	J	15400	74000	-13480	-72080.0	No
LANL-WR-SS-41	D2	Arsenic	0.64		3.98	3.90	-3	-3.3	No
LANL-WR-SS-41	D2	Barium	28.1		127	5200	-99	-5171.9	No
LANL-WR-SS-41	D2	Beryllium	0.42		1.31	150	-1	-149.6	No
LANL-WR-SS-41	D2	Cadmium	0.12		0.40	70	-0.280	-69.9	No
LANL-WR-SS-41	D2	Calcium	1520		4400	NP	-2880.000	N/A	No
LANL-WR-SS-41	D2	Chromium	1.60		10.5	100000	-9	-99998.4	No
LANL-WR-SS-41	D2	Cobalt	0.73	B	4.73	4500	-4	-4499.3	No
LANL-WR-SS-41	D2	Copper	3.60		11.2	2800	-8	-2796.4	No
LANL-WR-SS-41	D2	Iron	3970		13800	23000	-9830	-19030.0	No
LANL-WR-SS-41	D2	Lead	11.3		19.7	400	-8	-388.7	No
LANL-WR-SS-41	D2	Magnesium	511	J	2370	NP	-1859	N/A	No
LANL-WR-SS-41	D2	Manganese	191		543	7800	-352	-7609.0	No
LANL-WR-SS-41	D2	Nickel	1.90		9.4	1500	-7	-1498.1	No
LANL-WR-SS-41	D2	Potassium	362	B	2690	NP	-2328	N/A	No
LANL-WR-SS-41	D2	Selenium	0.18	B	0.3	380	-0.12	-379.8	No
LANL-WR-SS-41	D2	Sodium	94.9	B	1470	NP	-1375	N/A	No
LANL-WR-SS-41	D2	Vanadium	32.5		19.7	530	13	-497.5	No
LANL-WR-SS-41	D2	Zinc	33.6		60.2	23000	-27	-22966.4	No
LANL-WR-SS-42	D2	Aluminum	1420	J	15400	74000	-13980	-72580.0	No
LANL-WR-SS-42	D2	Arsenic	1.0		3.98	3.90	-3	-2.9	No
LANL-WR-SS-42	D2	Barium	30.5		127	5200	-97	-5169.5	No
LANL-WR-SS-42	D2	Beryllium	0.30		1.31	150	-1	-149.7	No
LANL-WR-SS-42	D2	Cadmium	0.16		0.40	70	-0.240	-69.8	No
LANL-WR-SS-42	D2	Calcium	2110		4400	NP	-2290.000	N/A	No
LANL-WR-SS-42	D2	Chromium	5.50		10.5	100000	-5	-99994.5	No
LANL-WR-SS-42	D2	Cobalt	1.70		4.73	4500	-3	-4498.3	No
LANL-WR-SS-42	D2	Copper	8.50		11.2	2800	-3	-2791.5	No
LANL-WR-SS-42	D2	Iron	6680		13800	23000	-7120	-16320.0	No
LANL-WR-SS-42	D2	Lead	22.3		19.7	400	3	-377.7	No
LANL-WR-SS-42	D2	Magnesium	402	J	2370	NP	-1968	N/A	No
LANL-WR-SS-42	D2	Manganese	190		543	7800	-353	-7610.0	No
LANL-WR-SS-42	D2	Nickel	5.00		9.4	1500	-4	-1495.0	No
LANL-WR-SS-42	D2	Potassium	272	B	2690	NP	-2418	N/A	No
LANL-WR-SS-42	D2	Selenium	0.20	B	0.3	380	-0.10	-379.8	No
LANL-WR-SS-42	D2	Sodium	132	B	1470	NP	-1338	N/A	No
LANL-WR-SS-42	D2	Vanadium	14		19.7	530	-6	-516.0	No
LANL-WR-SS-42	D2	Zinc	63		60.2	23000	3	-22937.0	No
LANL-WR-SS-43	D2	Aluminum	2630	J	15400	74000	-12770	-71370.0	No
LANL-WR-SS-43	D2	Arsenic	1.3		3.98	3.90	-3	-2.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-43	D2	Barium	45.2		127	5200	-82	-5154.8	No
LANL-WR-SS-43	D2	Beryllium	0.47		1.31	150	-1	-149.5	No
LANL-WR-SS-43	D2	Cadmium	0.58		0.40	70	0.180	-69.4	No
LANL-WR-SS-43	D2	Calcium	2150		4400	NP	-2250.000	N/A	No
LANL-WR-SS-43	D2	Chromium	3.60		10.5	100000	-7	-99996.4	No
LANL-WR-SS-43	D2	Cobalt	1.60		4.73	4500	-3	-4498.4	No
LANL-WR-SS-43	D2	Copper	18.9		11.2	2800	8	-2781.1	No
LANL-WR-SS-43	D2	Iron	6140		13800	23000	-7660	-16860.0	No
LANL-WR-SS-43	D2	Lead	33		19.7	400	13	-367.0	No
LANL-WR-SS-43	D2	Magnesium	647	J	2370	NP	-1723	N/A	No
LANL-WR-SS-43	D2	Manganese	221		543	7800	-322	-7579.0	No
LANL-WR-SS-43	D2	Mercury	0.10		0.1	23	0.0	-22.9	No
LANL-WR-SS-43	D2	Nickel	4.20		9.4	1500	-5	-1495.8	No
LANL-WR-SS-43	D2	Potassium	340	B	2690	NP	-2350	N/A	No
LANL-WR-SS-43	D2	Selenium	0.19	B	0.3	380	-0.11	-379.8	No
LANL-WR-SS-43	D2	Sodium	90.2	B	1470	NP	-1380	N/A	No
LANL-WR-SS-43	D2	Vanadium	8.2		19.7	530	-12	-521.8	No
LANL-WR-SS-43	D2	Zinc	161		60.2	23000	101	-22839.0	No
LANL-WR-SS-44	D2	Aluminum	1480	J	15400	74000	-13920	-72520.0	No
LANL-WR-SS-44	D2	Antimony	0.96	B	0.83	30	0.13	-29.0	No
LANL-WR-SS-44	D2	Arsenic	0.43	B	3.98	3.90	-4	-3.5	No
LANL-WR-SS-44	D2	Barium	27.5		127	5200	-100	-5172.5	No
LANL-WR-SS-44	D2	Beryllium	0.30		1.31	150	-1	-149.7	No
LANL-WR-SS-44	D2	Cadmium	0.21		0.40	70	-0.190	-69.8	No
LANL-WR-SS-44	D2	Calcium	1310		4400	NP	-3090.000	N/A	No
LANL-WR-SS-44	D2	Chromium	3.00		10.5	100000	-8	-99997.0	No
LANL-WR-SS-44	D2	Cobalt	0.96	B	4.73	4500	-4	-4499.0	No
LANL-WR-SS-44	D2	Copper	8.70		11.2	2800	-3	-2791.3	No
LANL-WR-SS-44	D2	Iron	5550		13800	23000	-8250	-17450.0	No
LANL-WR-SS-44	D2	Lead	24.2		19.7	400	5	-375.8	No
LANL-WR-SS-44	D2	Magnesium	432	J	2370	NP	-1938	N/A	No
LANL-WR-SS-44	D2	Manganese	153		543	7800	-390	-7647.0	No
LANL-WR-SS-44	D2	Nickel	4.10		9.4	1500	-5	-1495.9	No
LANL-WR-SS-44	D2	Potassium	208	B	2690	NP	-2482	N/A	No
LANL-WR-SS-44	D2	Sodium	82.7	B	1470	NP	-1387	N/A	No
LANL-WR-SS-44	D2	Vanadium	6.5		19.7	530	-13	-523.5	No
LANL-WR-SS-44	D2	Zinc	83.9		60.2	23000	24	-22916.1	No
LANL-WR-SS-45	D2	Aluminum	3300	J	15400	74000	-12100	-70700.0	No
LANL-WR-SS-45	D2	Antimony	0.45	B	0.83	30	-0.38	-29.6	No
LANL-WR-SS-45	D2	Arsenic	1.3		3.98	3.90	-3	-2.6	No

Table 12. Analytical Data Summary

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL	CoPC (Y/N):
LANL-WR-SS-45	D2	Barium	76.8		127	5200	-50	-5123.2	No
LANL-WR-SS-45	D2	Beryllium	0.58		1.31	150	-1	-149.4	No
LANL-WR-SS-45	D2	Cadmium	3.1		0.40	70	2.700	-66.9	No
LANL-WR-SS-45	D2	Calcium	2340		4400	NP	-2060.000	N/A	No
LANL-WR-SS-45	D2	Chromium	5.40		10.5	100000	-5	-99994.6	No
LANL-WR-SS-45	D2	Cobalt	2.00		4.73	4500	-3	-4498.0	No
LANL-WR-SS-45	D2	Copper	26.0		11.2	2800	15	-2774.0	No
LANL-WR-SS-45	D2	Iron	6390		13800	23000	-7410	-16610.0	No
LANL-WR-SS-45	D2	Lead	63.5		19.7	400	44	-336.5	No
LANL-WR-SS-45	D2	Magnesium	801	J	2370	NP	-1569	N/A	No
LANL-WR-SS-45	D2	Manganese	253		543	7800	-290	-7547.0	No
LANL-WR-SS-45	D2	Mercury	0.24		0.1	23	0.140	-22.8	No
LANL-WR-SS-45	D2	Nickel	5.70		9.4	1500	-4	-1494.3	No
LANL-WR-SS-45	D2	Potassium	599		2690	NP	-2091	N/A	No
LANL-WR-SS-45	D2	Selenium	0.52	B	0.3	380	0.22	-379.5	No
LANL-WR-SS-45	D2	Silver	0.55	B	1.0	380	-0.45	-379.5	No
LANL-WR-SS-45	D2	Sodium	98.7	B	1470	NP	-1371	N/A	No
LANL-WR-SS-45	D2	Vanadium	9.3		19.7	530	-10	-520.7	No
LANL-WR-SS-45	D2	Zinc	197		60.2	23000	137	-22803.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Aluminum	1100	J	15400	74000	-14300	-72900.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Antimony	0.89	BJ	0.83	30	0.06	-29.1	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Arsenic	0.65		3.98	3.90	-3	-3.3	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Barium	18.6		127	5200	-108	-5181.4	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Beryllium	0.20		1.31	150	-1	-149.8	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Cadmium	0.21		0.40	70	-0.190	-69.8	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Calcium	536		4400	NP	-3864.000	N/A	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Chromium	5.30	J	10.5	100000	-5	-99994.7	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Cobalt	1.30		4.73	4500	-3	-4498.7	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Copper	8.40		11.2	2800	-3	-2791.6	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Iron	6120		13800	23000	-7680	-16880.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Lead	34.6	J	19.7	400	15	-365.4	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Magnesium	242	J	2370	NP	-2128	N/A	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Manganese	170		543	7800	-373	-7630.0	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Nickel	7.10	J	9.4	1500	-2	-1492.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Silver	0.059	B	1.0	380	-0.94	-379.9	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Sodium	31.3	B	1470	NP	-1439	N/A	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Vanadium	10.3		19.7	530	-9	-519.7	No
LANL-WR-SS-61	D2 (DUP-SS-32)	Zinc	55.4	J	60.2	23000	-5	-22944.6	No

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-1	1,2,4-Trichlorobenzene	350	U	ug/kg	LANL-WR-SS-64	1,2,4-Trichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	1,2-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-64	1,2-Dichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	1,3-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-64	1,3-Dichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	1,4-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-64	1,4-Dichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	2,2'-oxybis(1-Chloropropane)	350	U	ug/kg	LANL-WR-SS-64	2,2'-oxybis(1-Chloropropane)	350	U	ug/kg	ND
LANL-WR-SS-1	2,4,5-Trichlorophenol	350	U	ug/kg	LANL-WR-SS-64	2,4,5-Trichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-1	2,4,6-Trichlorophenol	350	U	ug/kg	LANL-WR-SS-64	2,4,6-Trichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-1	2,4-Dichlorophenol	350	U	ug/kg	LANL-WR-SS-64	2,4-Dichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-1	2,4-Dimethylphenol	350	U	ug/kg	LANL-WR-SS-64	2,4-Dimethylphenol	350	U	ug/kg	ND
LANL-WR-SS-1	2,4-Dinitrophenol	1700	U	ug/kg	LANL-WR-SS-64	2,4-Dinitrophenol	1700	U	ug/kg	ND
LANL-WR-SS-1	2,4-Dinitrotoluene	350	U	ug/kg	LANL-WR-SS-64	2,4-Dinitrotoluene	350	U	ug/kg	ND
LANL-WR-SS-1	2,6-Dinitrotoluene	350	U	ug/kg	LANL-WR-SS-64	2,6-Dinitrotoluene	350	U	ug/kg	ND
LANL-WR-SS-1	2-Chloronaphthalene	350	U	ug/kg	LANL-WR-SS-64	2-Chloronaphthalene	350	U	ug/kg	ND
LANL-WR-SS-1	2-Chlorophenol	350	U	ug/kg	LANL-WR-SS-64	2-Chlorophenol	350	U	ug/kg	ND
LANL-WR-SS-1	2-Methylnaphthalene	120	U	ug/kg	LANL-WR-SS-64	2-Methylnaphthalene	120	U	ug/kg	ND
LANL-WR-SS-1	2-Methylphenol	350	U	ug/kg	LANL-WR-SS-64	2-Methylphenol	350	U	ug/kg	ND
LANL-WR-SS-1	2-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-64	2-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-1	2-Nitrophenol	350	U	ug/kg	LANL-WR-SS-64	2-Nitrophenol	350	U	ug/kg	ND
LANL-WR-SS-1	3,3'-Dichlorobenzidine	1700	U	ug/kg	LANL-WR-SS-64	3,3'-Dichlorobenzidine	1700	U	ug/kg	ND
LANL-WR-SS-1	3-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-64	3-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-1	4,4'-DDD	1.8	U	ug/kg	LANL-WR-SS-64	4,4'-DDD	1.8	U	ug/kg	ND
LANL-WR-SS-1	4,4'-DDE	1.8	U	ug/kg	LANL-WR-SS-64	4,4'-DDE	1.8	U	ug/kg	ND
LANL-WR-SS-1	4,4'-DDT	1.8	U	ug/kg	LANL-WR-SS-64	4,4'-DDT	1.8	U	ug/kg	ND
LANL-WR-SS-1	4,6-Dinitro-2-methylphenol	1700	U	ug/kg	LANL-WR-SS-64	4,6-Dinitro-2-methylphenol	1700	U	ug/kg	ND
LANL-WR-SS-1	4-Bromophenyl phenyl ether	350	U	ug/kg	LANL-WR-SS-64	4-Bromophenyl phenyl ether	350	U	ug/kg	ND
LANL-WR-SS-1	4-Chloro-3-methylphenol	350	U	ug/kg	LANL-WR-SS-64	4-Chloro-3-methylphenol	350	U	ug/kg	ND
LANL-WR-SS-1	4-Chloroaniline	350	U	ug/kg	LANL-WR-SS-64	4-Chloroaniline	350	U	ug/kg	ND
LANL-WR-SS-1	4-Chlorophenyl phenyl ether	350	U	ug/kg	LANL-WR-SS-64	4-Chlorophenyl phenyl ether	350	U	ug/kg	ND
LANL-WR-SS-1	4-Methylphenol	700	U	ug/kg	LANL-WR-SS-64	4-Methylphenol	710	U	ug/kg	ND
LANL-WR-SS-1	4-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-64	4-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-1	4-Nitrophenol	1700	U	ug/kg	LANL-WR-SS-64	4-Nitrophenol	1700	U	ug/kg	ND
LANL-WR-SS-1	Acenaphthene	350	U	ug/kg	LANL-WR-SS-64	Acenaphthene	350	U	ug/kg	ND
LANL-WR-SS-1	Acenaphthylene	350	U	ug/kg	LANL-WR-SS-64	Acenaphthylene	350	U	ug/kg	ND
LANL-WR-SS-1	Aldrin	1.8	U	ug/kg	LANL-WR-SS-64	Aldrin	1.8	U	ug/kg	ND
LANL-WR-SS-1	alpha-BHC	1.8	U	ug/kg	LANL-WR-SS-64	alpha-BHC	1.8	U	ug/kg	ND
LANL-WR-SS-1	alpha-Chlordane	1.8	U	ug/kg	LANL-WR-SS-64	alpha-Chlordane	1.8	U	ug/kg	ND
LANL-WR-SS-1	Aluminum	21.4	J	mg/kg	LANL-WR-SS-64	Aluminum	21.4	J	mg/kg	0.0
LANL-WR-SS-1	Anthracene	350	U	ug/kg	LANL-WR-SS-64	Anthracene	350	U	ug/kg	ND
LANL-WR-SS-1	Antimony	1.1	UJ	mg/kg	LANL-WR-SS-64	Antimony	1.1	UJ	mg/kg	ND
LANL-WR-SS-1	Aroclor 1016	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1016	35	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-1	Aroclor 1221	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1221	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1232	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1232	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1242	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1242	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1248	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1248	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1254	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1254	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1260	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1260	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1262	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1262	35	U	ug/kg	ND
LANL-WR-SS-1	Aroclor 1268	35	U	ug/kg	LANL-WR-SS-64	Aroclor 1268	35	U	ug/kg	ND
LANL-WR-SS-1	Arsenic	0.53		mg/kg	LANL-WR-SS-64	Arsenic	0.54		mg/kg	< 2x RL
LANL-WR-SS-1	Barium	2.1		mg/kg	LANL-WR-SS-64	Barium	2.1		mg/kg	0.0
LANL-WR-SS-1	Benzo(a)anthracene	120	U	ug/kg	LANL-WR-SS-64	Benzo(a)anthracene	120	U	ug/kg	ND
LANL-WR-SS-1	Benzo(a)pyrene	120	U	ug/kg	LANL-WR-SS-64	Benzo(a)pyrene	120	U	ug/kg	ND
LANL-WR-SS-1	Benzo(b)fluoranthene	120	U	ug/kg	LANL-WR-SS-64	Benzo(b)fluoranthene	120	U	ug/kg	ND
LANL-WR-SS-1	Benzo(ghi)perylene	120	U	ug/kg	LANL-WR-SS-64	Benzo(ghi)perylene	120	U	ug/kg	ND
LANL-WR-SS-1	Benzo(k)fluoranthene	120	U	ug/kg	LANL-WR-SS-64	Benzo(k)fluoranthene	120	U	ug/kg	ND
LANL-WR-SS-1	Beryllium	0.11		mg/kg	LANL-WR-SS-64	Beryllium	0.11		mg/kg	< 2x RL
LANL-WR-SS-1	beta-BHC	1.8	U	ug/kg	LANL-WR-SS-64	beta-BHC	1.8	U	ug/kg	0
LANL-WR-SS-1	bis(2-Chloroethoxy)methane	350	U	ug/kg	LANL-WR-SS-64	bis(2-Chloroethoxy)methane	350	U	ug/kg	0
LANL-WR-SS-1	bis(2-Chloroethyl) ether	350	U	ug/kg	LANL-WR-SS-64	bis(2-Chloroethyl) ether	350	U	ug/kg	0
LANL-WR-SS-1	bis(2-Ethylhexyl) phthalate	350	U	ug/kg	LANL-WR-SS-64	bis(2-Ethylhexyl) phthalate	350	U	ug/kg	0
LANL-WR-SS-1	Butyl benzyl phthalate	350	U	ug/kg	LANL-WR-SS-64	Butyl benzyl phthalate	350	U	ug/kg	0
LANL-WR-SS-1	Cadmium	0.11		mg/kg	LANL-WR-SS-64	Cadmium	0.11	B	mg/kg	< 2x RL
LANL-WR-SS-1	Calcium	534	B	mg/kg	LANL-WR-SS-64	Calcium	536	B	mg/kg	< 2x RL
LANL-WR-SS-1	Carbazole	350	U	ug/kg	LANL-WR-SS-64	Carbazole	350	U	ug/kg	ND
LANL-WR-SS-1	Chromium	1.1		mg/kg	LANL-WR-SS-64	Chromium	1.1	J	mg/kg	< 2x RL
LANL-WR-SS-1	Chrysene	120	U	ug/kg	LANL-WR-SS-64	Chrysene	120	U	ug/kg	0
LANL-WR-SS-1	Cobalt	1.1		mg/kg	LANL-WR-SS-64	Cobalt	1.1		mg/kg	< 2x RL
LANL-WR-SS-1	Copper	1.1		mg/kg	LANL-WR-SS-64	Copper	1.1		mg/kg	< 2x RL
LANL-WR-SS-1	delta-BHC	1.8	U	ug/kg	LANL-WR-SS-64	delta-BHC	1.8	U	ug/kg	ND
LANL-WR-SS-1	Dibenz(a,h)anthracene	120	U	ug/kg	LANL-WR-SS-64	Dibenz(a,h)anthracene	120	U	ug/kg	ND
LANL-WR-SS-1	Dibenzofuran	1.8	U	ug/kg	LANL-WR-SS-64	Dibenzofuran	120	U	ug/kg	ND
LANL-WR-SS-1	Dieldrin	1.8	U	ug/kg	LANL-WR-SS-64	Dieldrin	1.8	U	ug/kg	ND
LANL-WR-SS-1	Diethyl phthalate	350	U	ug/kg	LANL-WR-SS-64	Diethyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-1	Dimethyl phthalate	350	U	ug/kg	LANL-WR-SS-64	Dimethyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-1	Di-n-butyl phthalate	350	U	ug/kg	LANL-WR-SS-64	Di-n-butyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-1	Di-n-octyl phthalate	350	U	ug/kg	LANL-WR-SS-64	Di-n-octyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-1	Endosulfan I	1.8	U	ug/kg	LANL-WR-SS-64	Endosulfan I	1.8	UJ	ug/kg	ND
LANL-WR-SS-1	Endosulfan II	1.8	U	ug/kg	LANL-WR-SS-64	Endosulfan II	1.8	UJ	ug/kg	ND
LANL-WR-SS-1	Endosulfan sulfate	1.8	UJ	ug/kg	LANL-WR-SS-64	Endosulfan sulfate	1.8	UJ	ug/kg	ND
LANL-WR-SS-1	Endrin	1.8	U	ug/kg	LANL-WR-SS-64	Endrin	1.8	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-1	Endrin aldehyde	1.8	UJ	ug/kg	LANL-WR-SS-64	Endrin aldehyde	1.8	UJ	ug/kg	ND
LANL-WR-SS-1	Endrin ketone	1.8	UJ	ug/kg	LANL-WR-SS-64	Endrin ketone	1.8	UJ	ug/kg	ND
LANL-WR-SS-1	Fluoranthene	120	U	ug/kg	LANL-WR-SS-64	Fluoranthene	120	U	ug/kg	ND
LANL-WR-SS-1	Fluorene	120	U	ug/kg	LANL-WR-SS-64	Fluorene	120	U	ug/kg	ND
LANL-WR-SS-1	gamma-BHC (Lindane)	1.8	U	ug/kg	LANL-WR-SS-64	gamma-BHC (Lindane)	1.8	U	ug/kg	ND
LANL-WR-SS-1	gamma-Chlordane	1.8	U	ug/kg	LANL-WR-SS-64	gamma-Chlordane	1.8	U	ug/kg	ND
LANL-WR-SS-1	Heptachlor	1.8	U	ug/kg	LANL-WR-SS-64	Heptachlor	1.8	U	ug/kg	ND
LANL-WR-SS-1	Heptachlor epoxide	1.8	U	ug/kg	LANL-WR-SS-64	Heptachlor epoxide	1.8	U	ug/kg	ND
LANL-WR-SS-1	Hexachlorobenzene	350	U	ug/kg	LANL-WR-SS-64	Hexachlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	Hexachlorobutadiene	350	U	ug/kg	LANL-WR-SS-64	Hexachlorobutadiene	350	U	ug/kg	ND
LANL-WR-SS-1	Hexachlorocyclopentadiene	1700	U	ug/kg	LANL-WR-SS-64	Hexachlorocyclopentadiene	1700	U	ug/kg	ND
LANL-WR-SS-1	Hexachloroethane	350	U	ug/kg	LANL-WR-SS-64	Hexachloroethane	350	U	ug/kg	ND
LANL-WR-SS-1	Indeno(1,2,3-cd)pyrene	120	U	ug/kg	LANL-WR-SS-64	Indeno(1,2,3-cd)pyrene	120	U	ug/kg	ND
LANL-WR-SS-1	Iron	10.7		mg/kg	LANL-WR-SS-64	Iron	10.7		mg/kg	0.0
LANL-WR-SS-1	Isophorone	350	U	ug/kg	LANL-WR-SS-64	Isophorone	350	U	ug/kg	ND
LANL-WR-SS-1	Lead	0.32		mg/kg	LANL-WR-SS-64	Lead	0.32	J	mg/kg	0.0
LANL-WR-SS-1	Magnesium	53.4		mg/kg	LANL-WR-SS-64	Magnesium	53.6	J	mg/kg	-0.4
LANL-WR-SS-1	Manganese	1.6		mg/kg	LANL-WR-SS-64	Manganese	1.6		mg/kg	0.0
LANL-WR-SS-1	Mercury	0.036	U	mg/kg	LANL-WR-SS-64	Mercury	0.036	B	mg/kg	< 2x RL
LANL-WR-SS-1	Methoxychlor	3.5	U	ug/kg	LANL-WR-SS-64	Methoxychlor	3.5	U	ug/kg	ND
LANL-WR-SS-1	Naphthalene	120	U	ug/kg	LANL-WR-SS-64	Naphthalene	120	U	ug/kg	ND
LANL-WR-SS-1	Nickel	1.1		mg/kg	LANL-WR-SS-64	Nickel	1.1	J	mg/kg	< 2x RL
LANL-WR-SS-1	Nitrobenzene	350	U	ug/kg	LANL-WR-SS-64	Nitrobenzene	350	U	ug/kg	ND
LANL-WR-SS-1	N-Nitrosodi-n-propylamine	350	U	ug/kg	LANL-WR-SS-64	N-Nitrosodi-n-propylamine	350	U	ug/kg	ND
LANL-WR-SS-1	N-Nitrosodiphenylamine	350	U	ug/kg	LANL-WR-SS-64	N-Nitrosodiphenylamine	350	U	ug/kg	ND
LANL-WR-SS-1	Pentachlorophenol	1700	U	ug/kg	LANL-WR-SS-64	Pentachlorophenol	1700	U	ug/kg	ND
LANL-WR-SS-1	Perchlorate	42.7	U	ug/kg	LANL-WR-SS-64	Perchlorate	42.8	U	ug/kg	ND
LANL-WR-SS-1	Phenanthrene	350	U	ug/kg	LANL-WR-SS-64	Phenanthrene	350	U	ug/kg	ND
LANL-WR-SS-1	Phenol	350	U	ug/kg	LANL-WR-SS-64	Phenol	350	U	ug/kg	ND
LANL-WR-SS-1	Potassium	534	B	mg/kg	LANL-WR-SS-64	Potassium	536	B	mg/kg	< 2x RL
LANL-WR-SS-1	Pyrene	120	U	ug/kg	LANL-WR-SS-64	Pyrene	120	U	ug/kg	0
LANL-WR-SS-1	Selenium	0.53	U	mg/kg	LANL-WR-SS-64	Selenium	0.54	B	mg/kg	< 2x RL
LANL-WR-SS-1	Silver	1.1	U	mg/kg	LANL-WR-SS-64	Silver	1.1	B	mg/kg	< 2x RL
LANL-WR-SS-1	Sodium	534	B	mg/kg	LANL-WR-SS-64	Sodium	536	B	mg/kg	< 2x RL
LANL-WR-SS-1	Thallium	1.1	U	mg/kg	LANL-WR-SS-64	Thallium	1.1	U	mg/kg	ND
LANL-WR-SS-1	Toxaphene	72	U	ug/kg	LANL-WR-SS-64	Toxaphene	72	U	ug/kg	ND
LANL-WR-SS-1	Vanadium	2.1		mg/kg	LANL-WR-SS-64	Vanadium	2.1		mg/kg	0.0
LANL-WR-SS-1	Zinc	2.1	J	mg/kg	LANL-WR-SS-64	Zinc	2.1	J	mg/kg	0.0
LANL-WR-SS-17	1,2,4-Trichlorobenzene	380	U	ug/kg	LANL-WR-SS-63	1,2,4-Trichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-17	1,2-Dichlorobenzene	380	U	ug/kg	LANL-WR-SS-63	1,2-Dichlorobenzene	380	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-17	1,3-Dichlorobenzene	380	U	ug/kg	LANL-WR-SS-63	1,3-Dichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-17	1,4-Dichlorobenzene	380	U	ug/kg	LANL-WR-SS-63	1,4-Dichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-17	2,2'-oxybis(1-Chloropropane)	380	U	ug/kg	LANL-WR-SS-63	2,2'-oxybis(1-Chloropropane)	380	U	ug/kg	ND
LANL-WR-SS-17	2,4,5-Trichlorophenol	380	U	ug/kg	LANL-WR-SS-63	2,4,5-Trichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-17	2,4,6-Trichlorophenol	380	U	ug/kg	LANL-WR-SS-63	2,4,6-Trichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-17	2,4-Dichlorophenol	380	U	ug/kg	LANL-WR-SS-63	2,4-Dichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-17	2,4-Dimethylphenol	380	U	ug/kg	LANL-WR-SS-63	2,4-Dimethylphenol	380	U	ug/kg	ND
LANL-WR-SS-17	2,4-Dinitrophenol	1900	U	ug/kg	LANL-WR-SS-63	2,4-Dinitrophenol	1800	U	ug/kg	ND
LANL-WR-SS-17	2,4-Dinitrotoluene	380	U	ug/kg	LANL-WR-SS-63	2,4-Dinitrotoluene	380	U	ug/kg	ND
LANL-WR-SS-17	2,6-Dinitrotoluene	380	U	ug/kg	LANL-WR-SS-63	2,6-Dinitrotoluene	380	U	ug/kg	ND
LANL-WR-SS-17	2-Chloronaphthalene	380	U	ug/kg	LANL-WR-SS-63	2-Chloronaphthalene	380	U	ug/kg	ND
LANL-WR-SS-17	2-Chlorophenol	380	U	ug/kg	LANL-WR-SS-63	2-Chlorophenol	380	U	ug/kg	ND
LANL-WR-SS-17	2-Methylnaphthalene	130	U	ug/kg	LANL-WR-SS-63	2-Methylnaphthalene	130	U	ug/kg	ND
LANL-WR-SS-17	2-Methylphenol	380	U	ug/kg	LANL-WR-SS-63	2-Methylphenol	380	U	ug/kg	ND
LANL-WR-SS-17	2-Nitroaniline	1900	U	ug/kg	LANL-WR-SS-63	2-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-17	2-Nitrophenol	380	U	ug/kg	LANL-WR-SS-63	2-Nitrophenol	380	U	ug/kg	ND
LANL-WR-SS-17	3,3'-Dichlorobenzidine	1900	U	ug/kg	LANL-WR-SS-63	3,3'-Dichlorobenzidine	1800	U	ug/kg	ND
LANL-WR-SS-17	3-Nitroaniline	1900	U	ug/kg	LANL-WR-SS-63	3-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-17	4,4'-DDD	2	U	ug/kg	LANL-WR-SS-63	4,4'-DDD	1.9	U	ug/kg	ND
LANL-WR-SS-17	4,4'-DDE	2	U	ug/kg	LANL-WR-SS-63	4,4'-DDE	1.9	U	ug/kg	ND
LANL-WR-SS-17	4,4'-DDT	2	U	ug/kg	LANL-WR-SS-63	4,4'-DDT	1.9	U	ug/kg	ND
LANL-WR-SS-17	4,6-Dinitro-2-methylphenol	1900	U	ug/kg	LANL-WR-SS-63	4,6-Dinitro-2-methylphenol	1800	U	ug/kg	ND
LANL-WR-SS-17	4-Bromophenyl phenyl ether	380	U	ug/kg	LANL-WR-SS-63	4-Bromophenyl phenyl ether	380	U	ug/kg	ND
LANL-WR-SS-17	4-Chloro-3-methylphenol	380	U	ug/kg	LANL-WR-SS-63	4-Chloro-3-methylphenol	380	U	ug/kg	ND
LANL-WR-SS-17	4-Chloroaniline	380	U	ug/kg	LANL-WR-SS-63	4-Chloroaniline	380	U	ug/kg	ND
LANL-WR-SS-17	4-Chlorophenyl phenyl ether	380	U	ug/kg	LANL-WR-SS-63	4-Chlorophenyl phenyl ether	380	U	ug/kg	ND
LANL-WR-SS-17	4-Methylphenol	770	U	ug/kg	LANL-WR-SS-63	4-Methylphenol	750	U	ug/kg	ND
LANL-WR-SS-17	4-Nitroaniline	1900	U	ug/kg	LANL-WR-SS-63	4-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-17	4-Nitrophenol	1900	U	ug/kg	LANL-WR-SS-63	4-Nitrophenol	1800	U	ug/kg	ND
LANL-WR-SS-17	Acenaphthene	380	U	ug/kg	LANL-WR-SS-63	Acenaphthene	380	U	ug/kg	ND
LANL-WR-SS-17	Acenaphthylene	380	U	ug/kg	LANL-WR-SS-63	Acenaphthylene	380	U	ug/kg	ND
LANL-WR-SS-17	Aldrin	2	U	ug/kg	LANL-WR-SS-63	Aldrin	1.9	U	ug/kg	ND
LANL-WR-SS-17	alpha-BHC	2	U	ug/kg	LANL-WR-SS-63	alpha-BHC	1.9	U	ug/kg	ND
LANL-WR-SS-17	alpha-Chlordane	2	U	ug/kg	LANL-WR-SS-63	alpha-Chlordane	1.9	U	ug/kg	ND
LANL-WR-SS-17	Aluminum	23.2	J	mg/kg	LANL-WR-SS-63	Aluminum	22.8	J	mg/kg	1.7
LANL-WR-SS-17	Anthracene	380	U	ug/kg	LANL-WR-SS-63	Anthracene	380	U	ug/kg	ND
LANL-WR-SS-17	Antimony	1.2	UJ	mg/kg	LANL-WR-SS-63	Antimony	1.1	UJ	mg/kg	ND
LANL-WR-SS-17	Aroclor 1016	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1016	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1221	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1221	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1232	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1232	38	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-17	Aroclor 1242	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1242	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1248	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1248	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1254	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1254	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1260	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1260	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1262	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1262	38	U	ug/kg	ND
LANL-WR-SS-17	Aroclor 1268	38	U	ug/kg	LANL-WR-SS-63	Aroclor 1268	38	U	ug/kg	ND
LANL-WR-SS-17	Arsenic	0.58	U	mg/kg	LANL-WR-SS-63	Arsenic	0.57		mg/kg	< 2x RL
LANL-WR-SS-17	Barium	2.3		mg/kg	LANL-WR-SS-63	Barium	2.3		mg/kg	0.0
LANL-WR-SS-17	Benzo(a)anthracene	130	U	ug/kg	LANL-WR-SS-63	Benzo(a)anthracene	130	U	ug/kg	ND
LANL-WR-SS-17	Benzo(a)pyrene	130	U	ug/kg	LANL-WR-SS-63	Benzo(a)pyrene	130	U	ug/kg	ND
LANL-WR-SS-17	Benzo(b)fluoranthene	130	U	ug/kg	LANL-WR-SS-63	Benzo(b)fluoranthene	130	U	ug/kg	ND
LANL-WR-SS-17	Benzo(ghi)perylene	130	U	ug/kg	LANL-WR-SS-63	Benzo(ghi)perylene	130	U	ug/kg	ND
LANL-WR-SS-17	Benzo(k)fluoranthene	130	U	ug/kg	LANL-WR-SS-63	Benzo(k)fluoranthene	130	U	ug/kg	ND
LANL-WR-SS-17	Beryllium	0.12		mg/kg	LANL-WR-SS-63	Beryllium	0.11		mg/kg	8.7
LANL-WR-SS-17	beta-BHC	2	U	ug/kg	LANL-WR-SS-63	beta-BHC	1.9	U	ug/kg	ND
LANL-WR-SS-17	bis(2-Chloroethoxy)methane	380	U	ug/kg	LANL-WR-SS-63	bis(2-Chloroethoxy)methane	380	U	ug/kg	ND
LANL-WR-SS-17	bis(2-Chloroethyl) ether	380	U	ug/kg	LANL-WR-SS-63	bis(2-Chloroethyl) ether	380	U	ug/kg	ND
LANL-WR-SS-17	bis(2-Ethylhexyl) phthalate	380	U	ug/kg	LANL-WR-SS-63	bis(2-Ethylhexyl) phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Butyl benzyl phthalate	380	U	ug/kg	LANL-WR-SS-63	Butyl benzyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Cadmium	0.12	B	mg/kg	LANL-WR-SS-63	Cadmium	0.11	B	mg/kg	8.7
LANL-WR-SS-17	Calcium	580	B	mg/kg	LANL-WR-SS-63	Calcium	571		mg/kg	1.6
LANL-WR-SS-17	Carbazole	380	U	ug/kg	LANL-WR-SS-63	Carbazole	380	U	ug/kg	ND
LANL-WR-SS-17	Chromium	1.2		mg/kg	LANL-WR-SS-63	Chromium	1.1	J	mg/kg	8.7
LANL-WR-SS-17	Chrysene	130	U	ug/kg	LANL-WR-SS-63	Chrysene	130	U	ug/kg	ND
LANL-WR-SS-17	Cobalt	1.2	B	mg/kg	LANL-WR-SS-63	Cobalt	1.1	B	mg/kg	8.7
LANL-WR-SS-17	Copper	1.2		mg/kg	LANL-WR-SS-63	Copper	1.1		mg/kg	< 2x RL
LANL-WR-SS-17	delta-BHC	2	U	ug/kg	LANL-WR-SS-63	delta-BHC	1.9	U	ug/kg	ND
LANL-WR-SS-17	Dibenz(a,h)anthracene	130	U	ug/kg	LANL-WR-SS-63	Dibenz(a,h)anthracene	130	U	ug/kg	ND
LANL-WR-SS-17	Dibenzofuran	130	U	ug/kg	LANL-WR-SS-63	Dibenzofuran	130	U	ug/kg	ND
LANL-WR-SS-17	Dieldrin	2	U	ug/kg	LANL-WR-SS-63	Dieldrin	1.9	U	ug/kg	ND
LANL-WR-SS-17	Diethyl phthalate	380	U	ug/kg	LANL-WR-SS-63	Diethyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Dimethyl phthalate	380	U	ug/kg	LANL-WR-SS-63	Dimethyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Di-n-butyl phthalate	380	U	ug/kg	LANL-WR-SS-63	Di-n-butyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Di-n-octyl phthalate	380	U	ug/kg	LANL-WR-SS-63	Di-n-octyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-17	Endosulfan I	2	U	ug/kg	LANL-WR-SS-63	Endosulfan I	1.9	UJ	ug/kg	ND
LANL-WR-SS-17	Endosulfan II	2	U	ug/kg	LANL-WR-SS-63	Endosulfan II	1.9	UJ	ug/kg	ND
LANL-WR-SS-17	Endosulfan sulfate	2	UJ	ug/kg	LANL-WR-SS-63	Endosulfan sulfate	1.9	UJ	ug/kg	ND
LANL-WR-SS-17	Endrin	2	U	ug/kg	LANL-WR-SS-63	Endrin	1.9	U	ug/kg	ND
LANL-WR-SS-17	Endrin aldehyde	2	UJ	ug/kg	LANL-WR-SS-63	Endrin aldehyde	1.9	UJ	ug/kg	ND
LANL-WR-SS-17	Endrin ketone	2	UJ	ug/kg	LANL-WR-SS-63	Endrin ketone	1.9	UJ	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-17	Fluoranthene	130	U	ug/kg	LANL-WR-SS-63	Fluoranthene	130	J	ug/kg	< 2x RL
LANL-WR-SS-17	Fluorene	130	U	ug/kg	LANL-WR-SS-63	Fluorene	130	U	ug/kg	ND
LANL-WR-SS-17	gamma-BHC (Lindane)	2	U	ug/kg	LANL-WR-SS-63	gamma-BHC (Lindane)	1.9	U	ug/kg	ND
LANL-WR-SS-17	gamma-Chlordane	2	U	ug/kg	LANL-WR-SS-63	gamma-Chlordane	1.9	U	ug/kg	ND
LANL-WR-SS-17	Heptachlor	2	U	ug/kg	LANL-WR-SS-63	Heptachlor	1.9	U	ug/kg	ND
LANL-WR-SS-17	Heptachlor epoxide	2	U	ug/kg	LANL-WR-SS-63	Heptachlor epoxide	1.9	U	ug/kg	ND
LANL-WR-SS-17	Hexachlorobenzene	380	U	ug/kg	LANL-WR-SS-63	Hexachlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-17	Hexachlorobutadiene	380	U	ug/kg	LANL-WR-SS-63	Hexachlorobutadiene	380	U	ug/kg	ND
LANL-WR-SS-17	Hexachlorocyclopentadiene	1900	U	ug/kg	LANL-WR-SS-63	Hexachlorocyclopentadiene	1800	U	ug/kg	ND
LANL-WR-SS-17	Hexachloroethane	380	U	ug/kg	LANL-WR-SS-63	Hexachloroethane	380	U	ug/kg	ND
LANL-WR-SS-17	Indeno(1,2,3-cd)pyrene	130	U	ug/kg	LANL-WR-SS-63	Indeno(1,2,3-cd)pyrene	130	U	ug/kg	ND
LANL-WR-SS-17	Iron	11.6		mg/kg	LANL-WR-SS-63	Iron	11.4		mg/kg	1.7
LANL-WR-SS-17	Isophorone	380	U	ug/kg	LANL-WR-SS-63	Isophorone	380	U	ug/kg	ND
LANL-WR-SS-17	Lead	0.35		mg/kg	LANL-WR-SS-63	Lead	0.34	J	mg/kg	2.9
LANL-WR-SS-17	Magnesium	58		mg/kg	LANL-WR-SS-63	Magnesium	57.1	J	mg/kg	1.6
LANL-WR-SS-17	Manganese	1.7		mg/kg	LANL-WR-SS-63	Manganese	1.7		mg/kg	0.0
LANL-WR-SS-17	Mercury	0.039	U	mg/kg	LANL-WR-SS-63	Mercury	0.038	U	mg/kg	ND
LANL-WR-SS-17	Methoxychlor	3.8	U	ug/kg	LANL-WR-SS-63	Methoxychlor	3.8	U	ug/kg	ND
LANL-WR-SS-17	Naphthalene	130	U	ug/kg	LANL-WR-SS-63	Naphthalene	130	U	ug/kg	ND
LANL-WR-SS-17	Nickel	1.2		mg/kg	LANL-WR-SS-63	Nickel	1.1	J	mg/kg	8.7
LANL-WR-SS-17	Nitrobenzene	380	U	ug/kg	LANL-WR-SS-63	Nitrobenzene	380	U	ug/kg	ND
LANL-WR-SS-17	N-Nitrosodi-n-propylamine	380	U	ug/kg	LANL-WR-SS-63	N-Nitrosodi-n-propylamine	380	U	ug/kg	ND
LANL-WR-SS-17	N-Nitrosodiphenylamine	380	U	ug/kg	LANL-WR-SS-63	N-Nitrosodiphenylamine	380	U	ug/kg	ND
LANL-WR-SS-17	Pentachlorophenol	1900	U	ug/kg	LANL-WR-SS-63	Pentachlorophenol	1800	U	ug/kg	ND
LANL-WR-SS-17	Perchlorate	46.4	U	ug/kg	LANL-WR-SS-63	Perchlorate	45.7	U	ug/kg	ND
LANL-WR-SS-17	Phenanthrene	380	U	ug/kg	LANL-WR-SS-63	Phenanthrene	380	U	ug/kg	ND
LANL-WR-SS-17	Phenol	380	U	ug/kg	LANL-WR-SS-63	Phenol	380	U	ug/kg	ND
LANL-WR-SS-17	Potassium	580	B	mg/kg	LANL-WR-SS-63	Potassium	571	B	mg/kg	1.6
LANL-WR-SS-17	Pyrene	130	U	ug/kg	LANL-WR-SS-63	Pyrene	130	J	ug/kg	< 2x RL
LANL-WR-SS-17	Selenium	0.58	U	mg/kg	LANL-WR-SS-63	Selenium	0.57	B	mg/kg	< 2x RL
LANL-WR-SS-17	Silver	1.2	U	mg/kg	LANL-WR-SS-63	Silver	1.1	B	mg/kg	< 2x RL
LANL-WR-SS-17	Sodium	580	B	mg/kg	LANL-WR-SS-63	Sodium	571	B	mg/kg	1.6
LANL-WR-SS-17	Thallium	1.2	U	mg/kg	LANL-WR-SS-63	Thallium	1.1	U	mg/kg	ND
LANL-WR-SS-17	Toxaphene	78	U	ug/kg	LANL-WR-SS-63	Toxaphene	77	U	ug/kg	ND
LANL-WR-SS-17	Vanadium	2.3		mg/kg	LANL-WR-SS-63	Vanadium	2.3		mg/kg	0.0
LANL-WR-SS-17	Zinc	2.3	J	mg/kg	LANL-WR-SS-63	Zinc	2.3	J	mg/kg	0.0
LANL-WR-SS-32	1,2,4-Trichlorobenzene	350	U	ug/kg	LANL-WR-SS-61	1,2,4-Trichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-32	1,2-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-61	1,2-Dichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-32	1,3-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-61	1,3-Dichlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-32	1,4-Dichlorobenzene	350	U	ug/kg	LANL-WR-SS-61	1,4-Dichlorobenzene	350	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-32	2,2'-oxybis(1-Chloropropane)	350	U	ug/kg	LANL-WR-SS-61	2,2'-oxybis(1-Chloropropane)	350	U	ug/kg	ND
LANL-WR-SS-32	2,4,5-Trichlorophenol	350	U	ug/kg	LANL-WR-SS-61	2,4,5-Trichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-32	2,4,6-Trichlorophenol	350	U	ug/kg	LANL-WR-SS-61	2,4,6-Trichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-32	2,4-Dichlorophenol	350	U	ug/kg	LANL-WR-SS-61	2,4-Dichlorophenol	350	U	ug/kg	ND
LANL-WR-SS-32	2,4-Dimethylphenol	350	U	ug/kg	LANL-WR-SS-61	2,4-Dimethylphenol	350	U	ug/kg	ND
LANL-WR-SS-32	2,4-Dinitrophenol	1700	U	ug/kg	LANL-WR-SS-61	2,4-Dinitrophenol	1700	U	ug/kg	ND
LANL-WR-SS-32	2,4-Dinitrotoluene	350	U	ug/kg	LANL-WR-SS-61	2,4-Dinitrotoluene	350	U	ug/kg	ND
LANL-WR-SS-32	2,6-Dinitrotoluene	350	U	ug/kg	LANL-WR-SS-61	2,6-Dinitrotoluene	350	U	ug/kg	ND
LANL-WR-SS-32	2-Chloronaphthalene	350	U	ug/kg	LANL-WR-SS-61	2-Chloronaphthalene	350	U	ug/kg	ND
LANL-WR-SS-32	2-Chlorophenol	350	U	ug/kg	LANL-WR-SS-61	2-Chlorophenol	350	U	ug/kg	ND
LANL-WR-SS-32	2-Methylnaphthalene	120	U	ug/kg	LANL-WR-SS-61	2-Methylnaphthalene	120	U	ug/kg	ND
LANL-WR-SS-32	2-Methylphenol	350	U	ug/kg	LANL-WR-SS-61	2-Methylphenol	350	U	ug/kg	ND
LANL-WR-SS-32	2-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-61	2-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-32	2-Nitrophenol	350	U	ug/kg	LANL-WR-SS-61	2-Nitrophenol	350	U	ug/kg	ND
LANL-WR-SS-32	3,3'-Dichlorobenzidine	1700	U	ug/kg	LANL-WR-SS-61	3,3'-Dichlorobenzidine	1700	U	ug/kg	ND
LANL-WR-SS-32	3-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-61	3-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-32	4,4'-DDD	1.8	U	ug/kg	LANL-WR-SS-61	4,4'-DDD	1.8	U	ug/kg	ND
LANL-WR-SS-32	4,4'-DDE	1.8	PJ	ug/kg	LANL-WR-SS-61	4,4'-DDE	1.8	p	ug/kg	< 2x RL
LANL-WR-SS-32	4,4'-DDT	1.8	PJ	ug/kg	LANL-WR-SS-61	4,4'-DDT	1.8	U	ug/kg	0.0
LANL-WR-SS-32	4,6-Dinitro-2-methylphenol	1700	U	ug/kg	LANL-WR-SS-61	4,6-Dinitro-2-methylphenol	1700	U	ug/kg	ND
LANL-WR-SS-32	4-Bromophenyl phenyl ether	350	U	ug/kg	LANL-WR-SS-61	4-Bromophenyl phenyl ether	350	U	ug/kg	ND
LANL-WR-SS-32	4-Chloro-3-methylphenol	350	U	ug/kg	LANL-WR-SS-61	4-Chloro-3-methylphenol	350	U	ug/kg	ND
LANL-WR-SS-32	4-Chloroaniline	350	U	ug/kg	LANL-WR-SS-61	4-Chloroaniline	350	U	ug/kg	ND
LANL-WR-SS-32	4-Chlorophenyl phenyl ether	350	U	ug/kg	LANL-WR-SS-61	4-Chlorophenyl phenyl ether	350	U	ug/kg	ND
LANL-WR-SS-32	4-Methylphenol	710	U	ug/kg	LANL-WR-SS-61	4-Methylphenol	700	U	ug/kg	ND
LANL-WR-SS-32	4-Nitroaniline	1700	U	ug/kg	LANL-WR-SS-61	4-Nitroaniline	1700	U	ug/kg	ND
LANL-WR-SS-32	4-Nitrophenol	1700	U	ug/kg	LANL-WR-SS-61	4-Nitrophenol	1700	U	ug/kg	ND
LANL-WR-SS-32	Acenaphthene	350	J	ug/kg	LANL-WR-SS-61	Acenaphthene	350	U	ug/kg	< 2x RL
LANL-WR-SS-32	Acenaphthylene	350	U	ug/kg	LANL-WR-SS-61	Acenaphthylene	350	U	ug/kg	ND
LANL-WR-SS-32	Aldrin	1.8	U	ug/kg	LANL-WR-SS-61	Aldrin	1.8	U	ug/kg	ND
LANL-WR-SS-32	alpha-BHC	1.8	U	ug/kg	LANL-WR-SS-61	alpha-BHC	1.8	U	ug/kg	ND
LANL-WR-SS-32	alpha-Chlordane	1.8	PJ	ug/kg	LANL-WR-SS-61	alpha-Chlordane	1.8	U	ug/kg	< 2x RL
LANL-WR-SS-32	Aluminum	21.4	J	mg/kg	LANL-WR-SS-61	Aluminum	21.1		mg/kg	1.4
LANL-WR-SS-32	Anthracene	1400	J D	ug/kg	LANL-WR-SS-61	Anthracene	350	U	ug/kg	< 2x RL
LANL-WR-SS-32	Antimony	1.1	UJ	mg/kg	LANL-WR-SS-61	Antimony	1.1	B	mg/kg	< 2x RL
LANL-WR-SS-32	Aroclor 1016	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1016	35	U	ug/kg	ND
LANL-WR-SS-32	Aroclor 1221	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1221	35	U	ug/kg	ND
LANL-WR-SS-32	Aroclor 1232	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1232	35	U	ug/kg	ND
LANL-WR-SS-32	Aroclor 1242	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1242	35	U	ug/kg	ND
LANL-WR-SS-32	Aroclor 1248	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1248	35	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-32	Aroclor 1254	35		ug/kg	LANL-WR-SS-61	Aroclor 1254	35		ug/kg	0.0
LANL-WR-SS-32	Aroclor 1260	35		ug/kg	LANL-WR-SS-61	Aroclor 1260	35		ug/kg	0.0
LANL-WR-SS-32	Aroclor 1262	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1262	35	U	ug/kg	ND
LANL-WR-SS-32	Aroclor 1268	35	U	ug/kg	LANL-WR-SS-61	Aroclor 1268	35	U	ug/kg	ND
LANL-WR-SS-32	Arsenic	0.53	B	mg/kg	LANL-WR-SS-61	Arsenic	0.53		mg/kg	0.0
LANL-WR-SS-32	Barium	2.1		mg/kg	LANL-WR-SS-61	Barium	2.1		mg/kg	0.0
LANL-WR-SS-32	Benzo(a)anthracene	470	D	ug/kg	LANL-WR-SS-61	Benzo(a)anthracene	120		ug/kg	118.6
LANL-WR-SS-32	Benzo(a)pyrene	470	D	ug/kg	LANL-WR-SS-61	Benzo(a)pyrene	120		ug/kg	118.6
LANL-WR-SS-32	Benzo(b)fluoranthene	470	D	ug/kg	LANL-WR-SS-61	Benzo(b)fluoranthene	120	J	ug/kg	118.6
LANL-WR-SS-32	Benzo(ghi)perylene	470	D	ug/kg	LANL-WR-SS-61	Benzo(ghi)perylene	120	J	ug/kg	118.6
LANL-WR-SS-32	Benzo(k)fluoranthene	470	D	ug/kg	LANL-WR-SS-61	Benzo(k)fluoranthene	120		ug/kg	118.6
LANL-WR-SS-32	Beryllium	0.11		mg/kg	LANL-WR-SS-61	Beryllium	0.11		mg/kg	0.0
LANL-WR-SS-32	beta-BHC	1.8	UJ	ug/kg	LANL-WR-SS-61	beta-BHC	1.8	U	ug/kg	ND
LANL-WR-SS-32	bis(2-Chloroethoxy)methane	350	U	ug/kg	LANL-WR-SS-61	bis(2-Chloroethoxy)methane	350	U	ug/kg	ND
LANL-WR-SS-32	bis(2-Chloroethyl) ether	350	U	ug/kg	LANL-WR-SS-61	bis(2-Chloroethyl) ether	350	U	ug/kg	ND
LANL-WR-SS-32	bis(2-Ethylhexyl) phthalate	350	U	ug/kg	LANL-WR-SS-61	bis(2-Ethylhexyl) phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Butyl benzyl phthalate	350	U	ug/kg	LANL-WR-SS-61	Butyl benzyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Cadmium	0.11		mg/kg	LANL-WR-SS-61	Cadmium	0.11		mg/kg	0.0
LANL-WR-SS-32	Calcium	535		mg/kg	LANL-WR-SS-61	Calcium	527		mg/kg	ND
LANL-WR-SS-32	Carbazole	350	J	ug/kg	LANL-WR-SS-61	Carbazole	350	U	ug/kg	ND
LANL-WR-SS-32	Chromium	1.1		mg/kg	LANL-WR-SS-61	Chromium	1.1		mg/kg	ND
LANL-WR-SS-32	Chrysene	470	D	ug/kg	LANL-WR-SS-61	Chrysene	120		ug/kg	118.6
LANL-WR-SS-32	Cobalt	1.1		mg/kg	LANL-WR-SS-61	Cobalt	1.1		mg/kg	0.0
LANL-WR-SS-32	Copper	1.1		mg/kg	LANL-WR-SS-61	Copper	1.1		mg/kg	0.0
LANL-WR-SS-32	delta-BHC	1.8	U	ug/kg	LANL-WR-SS-61	delta-BHC	1.8	U	ug/kg	ND
LANL-WR-SS-32	Dibenz(a,h)anthracene	470	D	ug/kg	LANL-WR-SS-61	Dibenzo(a,h)anthracene	120	U	ug/kg	ND
LANL-WR-SS-32	Dibenzofuran	120	U	ug/kg	LANL-WR-SS-61	Dibenzofuran	120	U	ug/kg	ND
LANL-WR-SS-32	Dieldrin	1.8	U	ug/kg	LANL-WR-SS-61	Dieldrin	1.8	U	ug/kg	ND
LANL-WR-SS-32	Diethyl phthalate	350	U	ug/kg	LANL-WR-SS-61	Diethyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Dimethyl phthalate	350	U	ug/kg	LANL-WR-SS-61	Dimethyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Di-n-butyl phthalate	350	U	ug/kg	LANL-WR-SS-61	Di-n-butyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Di-n-octyl phthalate	350	U	ug/kg	LANL-WR-SS-61	Di-n-octyl phthalate	350	U	ug/kg	ND
LANL-WR-SS-32	Endosulfan I	1.8	UJ	ug/kg	LANL-WR-SS-61	Endosulfan I	1.8	U	ug/kg	ND
LANL-WR-SS-32	Endosulfan II	1.8	U	ug/kg	LANL-WR-SS-61	Endosulfan II	1.8	U	ug/kg	ND
LANL-WR-SS-32	Endosulfan sulfate	1.8	UJ	ug/kg	LANL-WR-SS-61	Endosulfan sulfate	1.8	U	ug/kg	ND
LANL-WR-SS-32	Endrin	1.8	U	ug/kg	LANL-WR-SS-61	Endrin	1.8	U	ug/kg	ND
LANL-WR-SS-32	Endrin aldehyde	1.8	UJ	ug/kg	LANL-WR-SS-61	Endrin aldehyde	1.8	U	ug/kg	ND
LANL-WR-SS-32	Endrin ketone	1.8	PJ	ug/kg	LANL-WR-SS-61	Endrin ketone	1.8	p	ug/kg	0.0
LANL-WR-SS-32	Fluoranthene	470	D	ug/kg	LANL-WR-SS-61	Fluoranthene	120		ug/kg	118.6
LANL-WR-SS-32	Fluorene	470	U	ug/kg	LANL-WR-SS-61	Fluorene	120	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-32	gamma-BHC (Lindane)	1.8	U	ug/kg	LANL-WR-SS-61	gamma-BHC (Lindane)	1.8	U	ug/kg	ND
LANL-WR-SS-32	gamma-Chlordane	1.8	PJ	ug/kg	LANL-WR-SS-61	gamma-Chlordane	1.8	p	ug/kg	0.0
LANL-WR-SS-32	Heptachlor	1.8	U	ug/kg	LANL-WR-SS-61	Heptachlor	1.8	U	ug/kg	ND
LANL-WR-SS-32	Heptachlor epoxide	1.8	U	ug/kg	LANL-WR-SS-61	Heptachlor epoxide	1.8	U	ug/kg	ND
LANL-WR-SS-32	Hexachlorobenzene	350	U	ug/kg	LANL-WR-SS-61	Hexachlorobenzene	350	U	ug/kg	ND
LANL-WR-SS-32	Hexachlorobutadiene	350	U	ug/kg	LANL-WR-SS-61	Hexachlorobutadiene	350	U	ug/kg	ND
LANL-WR-SS-32	Hexachlorocyclopentadiene	1700	U	ug/kg	LANL-WR-SS-61	Hexachlorocyclopentadiene	1700	U	ug/kg	ND
LANL-WR-SS-32	Hexachloroethane	350	U	ug/kg	LANL-WR-SS-61	Hexachloroethane	350	U	ug/kg	ND
LANL-WR-SS-32	Indeno(1,2,3-cd)pyrene	470	D	ug/kg	LANL-WR-SS-61	Indeno(1,2,3-cd)pyrene	120	J	ug/kg	118.6
LANL-WR-SS-32	Iron	10.7		mg/kg	LANL-WR-SS-61	Iron	10.5		mg/kg	1.9
LANL-WR-SS-32	Isophorone	350	U	ug/kg	LANL-WR-SS-61	Isophorone	350	U	ug/kg	ND
LANL-WR-SS-32	Lead	0.32		mg/kg	LANL-WR-SS-61	Lead	0.32		mg/kg	0.0
LANL-WR-SS-32	Magnesium	53.5	J	mg/kg	LANL-WR-SS-61	Magnesium	52.7		mg/kg	1.5
LANL-WR-SS-32	Manganese	1.6		mg/kg	LANL-WR-SS-61	Manganese	1.6		mg/kg	0.0
LANL-WR-SS-32	Mercury	0.036	B	mg/kg	LANL-WR-SS-61	Mercury	0.035	U	mg/kg	ND
LANL-WR-SS-32	Methoxychlor	3.5	U	ug/kg	LANL-WR-SS-61	Methoxychlor	3.5	U	ug/kg	ND
LANL-WR-SS-32	Naphthalene	120	U	ug/kg	LANL-WR-SS-61	Naphthalene	120	U	ug/kg	ND
LANL-WR-SS-32	Nickel	1.1		mg/kg	LANL-WR-SS-61	Nickel	1.1		mg/kg	ND
LANL-WR-SS-32	Nitrobenzene	350	U	ug/kg	LANL-WR-SS-61	Nitrobenzene	350	U	ug/kg	ND
LANL-WR-SS-32	N-Nitrosodi-n-propylamine	350	U	ug/kg	LANL-WR-SS-61	N-Nitrosodi-n-propylamine	350	U	ug/kg	ND
LANL-WR-SS-32	N-Nitrosodiphenylamine	350	U	ug/kg	LANL-WR-SS-61	N-Nitrosodiphenylamine	350	U	ug/kg	ND
LANL-WR-SS-32	Pentachlorophenol	1700	U	ug/kg	LANL-WR-SS-61	Pentachlorophenol	1700	U	ug/kg	ND
LANL-WR-SS-32	Perchlorate	42.8	U	ug/kg	LANL-WR-SS-61	Perchlorate	42.2	U	ug/kg	ND
LANL-WR-SS-32	Phenanthrene	1400	D	ug/kg	LANL-WR-SS-61	Phenanthrene	350	J	ug/kg	120.0
LANL-WR-SS-32	Phenol	350	U	ug/kg	LANL-WR-SS-61	Phenol	350	U	ug/kg	ND
LANL-WR-SS-32	Potassium	535	U	mg/kg	LANL-WR-SS-61	Potassium	527	U	mg/kg	ND
LANL-WR-SS-32	Pyrene	470	D	ug/kg	LANL-WR-SS-61	Pyrene	120		ug/kg	118.6
LANL-WR-SS-32	Selenium	0.53	B	mg/kg	LANL-WR-SS-61	Selenium	0.53	U	mg/kg	ND
LANL-WR-SS-32	Silver	1.1	U	mg/kg	LANL-WR-SS-61	Silver	1.1	B	mg/kg	< 2x RL
LANL-WR-SS-32	Sodium	535	B	mg/kg	LANL-WR-SS-61	Sodium	527	B	mg/kg	1.5
LANL-WR-SS-32	Thallium	1.1	U	mg/kg	LANL-WR-SS-61	Thallium	1.1	U	mg/kg	ND
LANL-WR-SS-32	Toxaphene	72	U	ug/kg	LANL-WR-SS-61	Toxaphene	71	U	ug/kg	ND
LANL-WR-SS-32	TPH (as Diesel)	53	U	mg/kg	LANL-WR-SS-61	TPH (as Diesel)	110	U	mg/kg	ND
LANL-WR-SS-32	TPH (as Motor Oil)	53	U	mg/kg	LANL-WR-SS-61	TPH (as Motor Oil)	110	U	mg/kg	ND
LANL-WR-SS-32	Vanadium	5.3		mg/kg	LANL-WR-SS-61	Vanadium	2.1		mg/kg	86.5
LANL-WR-SS-32	Zinc	2.1		mg/kg	LANL-WR-SS-61	Zinc	2.1		mg/kg	0.0
LANL-WR-SS-47	1,2,4-Trichlorobenzene	410	U	ug/kg	LANL-WR-SS-62	1,2,4-Trichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-47	1,2-Dichlorobenzene	410	U	ug/kg	LANL-WR-SS-62	1,2-Dichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-47	1,3-Dichlorobenzene	410	U	ug/kg	LANL-WR-SS-62	1,3-Dichlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-47	1,4-Dichlorobenzene	410	U	ug/kg	LANL-WR-SS-62	1,4-Dichlorobenzene	380	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-47	2,2'-oxybis(1-Chloropropane)	410	U	ug/kg	LANL-WR-SS-62	2,2'-oxybis(1-Chloropropane)	380	U	ug/kg	ND
LANL-WR-SS-47	2,4,5-Trichlorophenol	410	U	ug/kg	LANL-WR-SS-62	2,4,5-Trichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-47	2,4,6-Trichlorophenol	410	U	ug/kg	LANL-WR-SS-62	2,4,6-Trichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-47	2,4-Dichlorophenol	410	U	ug/kg	LANL-WR-SS-62	2,4-Dichlorophenol	380	U	ug/kg	ND
LANL-WR-SS-47	2,4-Dimethylphenol	410	U	ug/kg	LANL-WR-SS-62	2,4-Dimethylphenol	380	U	ug/kg	ND
LANL-WR-SS-47	2,4-Dinitrophenol	2000	UJ	ug/kg	LANL-WR-SS-62	2,4-Dinitrophenol	1800	U	ug/kg	ND
LANL-WR-SS-47	2,4-Dinitrotoluene	410	U	ug/kg	LANL-WR-SS-62	2,4-Dinitrotoluene	380	U	ug/kg	ND
LANL-WR-SS-47	2,6-Dinitrotoluene	410	U	ug/kg	LANL-WR-SS-62	2,6-Dinitrotoluene	380	U	ug/kg	ND
LANL-WR-SS-47	2-Chloronaphthalene	410	U	ug/kg	LANL-WR-SS-62	2-Chloronaphthalene	380	U	ug/kg	ND
LANL-WR-SS-47	2-Chlorophenol	410	U	ug/kg	LANL-WR-SS-62	2-Chlorophenol	380	U	ug/kg	ND
LANL-WR-SS-47	2-Methylnaphthalene	140	U	ug/kg	LANL-WR-SS-62	2-Methylnaphthalene	130	U	ug/kg	ND
LANL-WR-SS-47	2-Methylphenol	410	U	ug/kg	LANL-WR-SS-62	2-Methylphenol	380	U	ug/kg	ND
LANL-WR-SS-47	2-Nitroaniline	2000	U	ug/kg	LANL-WR-SS-62	2-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-47	2-Nitrophenol	410	U	ug/kg	LANL-WR-SS-62	2-Nitrophenol	380	U	ug/kg	ND
LANL-WR-SS-47	3,3'-Dichlorobenzidine	2000	U	ug/kg	LANL-WR-SS-62	3,3'-Dichlorobenzidine	1800	U	ug/kg	ND
LANL-WR-SS-47	3-Nitroaniline	2000	U	ug/kg	LANL-WR-SS-62	3-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-47	4,4'-DDD	2.1	U	ug/kg	LANL-WR-SS-62	4,4'-DDD	2	U	ug/kg	ND
LANL-WR-SS-47	4,4'-DDE	2.1		ug/kg	LANL-WR-SS-62	4,4'-DDE	2	PJ	ug/kg	4.9
LANL-WR-SS-47	4,4'-DDT	2.1	PJ	ug/kg	LANL-WR-SS-62	4,4'-DDT	2		ug/kg	< 2x RL
LANL-WR-SS-47	4,6-Dinitro-2-methylphenol	2000	U	ug/kg	LANL-WR-SS-62	4,6-Dinitro-2-methylphenol	1800	U	ug/kg	ND
LANL-WR-SS-47	4-Bromophenyl phenyl ether	410	U	ug/kg	LANL-WR-SS-62	4-Bromophenyl phenyl ether	380	U	ug/kg	ND
LANL-WR-SS-47	4-Chloro-3-methylphenol	410	U	ug/kg	LANL-WR-SS-62	4-Chloro-3-methylphenol	380	U	ug/kg	ND
LANL-WR-SS-47	4-Chloroaniline	410	U	ug/kg	LANL-WR-SS-62	4-Chloroaniline	380	U	ug/kg	ND
LANL-WR-SS-47	4-Chlorophenyl phenyl ether	410	U	ug/kg	LANL-WR-SS-62	4-Chlorophenyl phenyl ether	380	U	ug/kg	ND
LANL-WR-SS-47	4-Methylphenol	810	U	ug/kg	LANL-WR-SS-62	4-Methylphenol	760	U	ug/kg	ND
LANL-WR-SS-47	4-Nitroaniline	2000	U	ug/kg	LANL-WR-SS-62	4-Nitroaniline	1800	U	ug/kg	ND
LANL-WR-SS-47	4-Nitrophenol	2000	U	ug/kg	LANL-WR-SS-62	4-Nitrophenol	1800	U	ug/kg	ND
LANL-WR-SS-47	Acenaphthene	410	U	ug/kg	LANL-WR-SS-62	Acenaphthene	380	U	ug/kg	ND
LANL-WR-SS-47	Acenaphthylene	410	U	ug/kg	LANL-WR-SS-62	Acenaphthylene	380	U	ug/kg	ND
LANL-WR-SS-47	Aldrin	2.1	U	ug/kg	LANL-WR-SS-62	Aldrin	2	U	ug/kg	ND
LANL-WR-SS-47	alpha-BHC	2.1	U	ug/kg	LANL-WR-SS-62	alpha-BHC	2	U	ug/kg	ND
LANL-WR-SS-47	alpha-Chlordane	2.1	U	ug/kg	LANL-WR-SS-62	alpha-Chlordane	2	U	ug/kg	ND
LANL-WR-SS-47	Aluminum	24.6	J	mg/kg	LANL-WR-SS-62	Aluminum	23	J	mg/kg	6.7
LANL-WR-SS-47	Anthracene	410	U	ug/kg	LANL-WR-SS-62	Anthracene	380	U	ug/kg	ND
LANL-WR-SS-47	Antimony	1.2	U	mg/kg	LANL-WR-SS-62	Antimony	1.2	UJ	mg/kg	ND
LANL-WR-SS-47	Aroclor 1016	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1016	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1221	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1221	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1232	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1232	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1242	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1242	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1248	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1248	38	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-47	Aroclor 1254	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1254	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1260	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1260	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1262	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1262	38	U	ug/kg	ND
LANL-WR-SS-47	Aroclor 1268	41	U	ug/kg	LANL-WR-SS-62	Aroclor 1268	38	U	ug/kg	ND
LANL-WR-SS-47	Arsenic	0.61		mg/kg	LANL-WR-SS-62	Arsenic	0.58		mg/kg	5.0
LANL-WR-SS-47	Barium	2.5		mg/kg	LANL-WR-SS-62	Barium	2.3		mg/kg	8.3
LANL-WR-SS-47	Benzo(a)anthracene	140	U	ug/kg	LANL-WR-SS-62	Benzo(a)anthracene	130	U	ug/kg	ND
LANL-WR-SS-47	Benzo(a)pyrene	140	U	ug/kg	LANL-WR-SS-62	Benzo(a)pyrene	130	U	ug/kg	ND
LANL-WR-SS-47	Benzo(b)fluoranthene	140	U	ug/kg	LANL-WR-SS-62	Benzo(b)fluoranthene	130	U	ug/kg	ND
LANL-WR-SS-47	Benzo(ghi)perylene	140	U	ug/kg	LANL-WR-SS-62	Benzo(ghi)perylene	130	U	ug/kg	ND
LANL-WR-SS-47	Benzo(k)fluoranthene	140	U	ug/kg	LANL-WR-SS-62	Benzo(k)fluoranthene	130	U	ug/kg	ND
LANL-WR-SS-47	Beryllium	0.12		mg/kg	LANL-WR-SS-62	Beryllium	0.12		mg/kg	< CRDL
LANL-WR-SS-47	beta-BHC	2.1	U	ug/kg	LANL-WR-SS-62	beta-BHC	2	U	ug/kg	ND
LANL-WR-SS-47	bis(2-Chloroethoxy)methane	410	U	ug/kg	LANL-WR-SS-62	bis(2-Chloroethoxy)methane	380	U	ug/kg	ND
LANL-WR-SS-47	bis(2-Chloroethyl) ether	410	U	ug/kg	LANL-WR-SS-62	bis(2-Chloroethyl) ether	380	U	ug/kg	ND
LANL-WR-SS-47	bis(2-Ethylhexyl) phthalate	410	U	ug/kg	LANL-WR-SS-62	bis(2-Ethylhexyl) phthalate	380	U	ug/kg	ND
LANL-WR-SS-47	Butyl benzyl phthalate	410	J	ug/kg	LANL-WR-SS-62	Butyl benzyl phthalate	380	U	ug/kg	< 2x RL
LANL-WR-SS-47	Cadmium	0.12	B	mg/kg	LANL-WR-SS-62	Cadmium	0.12	B	mg/kg	0.0
LANL-WR-SS-47	Calcium	614		mg/kg	LANL-WR-SS-62	Calcium	575		mg/kg	6.6
LANL-WR-SS-47	Carbazole	410	U	ug/kg	LANL-WR-SS-62	Carbazole	380	U	ug/kg	ND
LANL-WR-SS-47	Chromium	1.2		mg/kg	LANL-WR-SS-62	Chromium	1.2	J	mg/kg	< 2x RL
LANL-WR-SS-47	Chrysene	140	U	ug/kg	LANL-WR-SS-62	Chrysene	130	U	ug/kg	ND
LANL-WR-SS-47	Cobalt	1.2		mg/kg	LANL-WR-SS-62	Cobalt	1.2		mg/kg	< 2x RL
LANL-WR-SS-47	Copper	1.2		mg/kg	LANL-WR-SS-62	Copper	1.2		mg/kg	0.0
LANL-WR-SS-47	delta-BHC	2.1	U	ug/kg	LANL-WR-SS-62	delta-BHC	2	U	ug/kg	ND
LANL-WR-SS-47	Dibenz(a,h)anthracene	140	U	ug/kg	LANL-WR-SS-62	Dibenz(a,h)anthracene	130	U	ug/kg	ND
LANL-WR-SS-47	Dibenzofuran	140	U	ug/kg	LANL-WR-SS-62	Dibenzofuran	130	U	ug/kg	ND
LANL-WR-SS-47	Dieldrin	2.1	U	ug/kg	LANL-WR-SS-62	Dieldrin	2	U	ug/kg	ND
LANL-WR-SS-47	Diethyl phthalate	410	U	ug/kg	LANL-WR-SS-62	Diethyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-47	Dimethyl phthalate	410	U	ug/kg	LANL-WR-SS-62	Dimethyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-47	Di-n-butyl phthalate	410	U	ug/kg	LANL-WR-SS-62	Di-n-butyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-47	Di-n-octyl phthalate	410	U	ug/kg	LANL-WR-SS-62	Di-n-octyl phthalate	380	U	ug/kg	ND
LANL-WR-SS-47	Endosulfan I	2.1	UJ	ug/kg	LANL-WR-SS-62	Endosulfan I	2	UJ	ug/kg	ND
LANL-WR-SS-47	Endosulfan II	2.1	U	ug/kg	LANL-WR-SS-62	Endosulfan II	2	UJ	ug/kg	ND
LANL-WR-SS-47	Endosulfan sulfate	2.1	UJ	ug/kg	LANL-WR-SS-62	Endosulfan sulfate	2	UJ	ug/kg	ND
LANL-WR-SS-47	Endrin	2.1	U	ug/kg	LANL-WR-SS-62	Endrin	2	U	ug/kg	ND
LANL-WR-SS-47	Endrin aldehyde	2.1	UJ	ug/kg	LANL-WR-SS-62	Endrin aldehyde	2	UJ	ug/kg	ND
LANL-WR-SS-47	Endrin ketone	2.1	U	ug/kg	LANL-WR-SS-62	Endrin ketone	2	UJ	ug/kg	ND
LANL-WR-SS-47	Fluoranthene	140	U	ug/kg	LANL-WR-SS-62	Fluoranthene	130	U	ug/kg	ND
LANL-WR-SS-47	Fluorene	140	U	ug/kg	LANL-WR-SS-62	Fluorene	130	U	ug/kg	ND

Table 13.
Field Duplicate Variability Determination

Sample Id#:	Target Analyte / Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	Sample Id#:	Target Analyte/ Target Compound:	Concentration (mg/kg) or Activity (pCi/g)	Laboratory/ Validation Flag(s)	Units:	RPD:
LANL-WR-SS-47	gamma-BHC (Lindane)	2.1	U	ug/kg	LANL-WR-SS-62	gamma-BHC (Lindane)	2	U	ug/kg	ND
LANL-WR-SS-47	gamma-Chlordane	2.1	U	ug/kg	LANL-WR-SS-62	gamma-Chlordane	2	U	ug/kg	ND
LANL-WR-SS-47	Heptachlor	2.1	U	ug/kg	LANL-WR-SS-62	Heptachlor	2	U	ug/kg	ND
LANL-WR-SS-47	Heptachlor epoxide	2.1	U	ug/kg	LANL-WR-SS-62	Heptachlor epoxide	2	U	ug/kg	ND
LANL-WR-SS-47	Hexachlorobenzene	410	U	ug/kg	LANL-WR-SS-62	Hexachlorobenzene	380	U	ug/kg	ND
LANL-WR-SS-47	Hexachlorobutadiene	410	U	ug/kg	LANL-WR-SS-62	Hexachlorobutadiene	380	U	ug/kg	ND
LANL-WR-SS-47	Hexachlorocyclopentadiene	2000	U	ug/kg	LANL-WR-SS-62	Hexachlorocyclopentadiene	1800	U	ug/kg	ND
LANL-WR-SS-47	Hexachloroethane	410	U	ug/kg	LANL-WR-SS-62	Hexachloroethane	380	U	ug/kg	ND
LANL-WR-SS-47	Indeno(1,2,3-cd)pyrene	140	U	ug/kg	LANL-WR-SS-62	Indeno(1,2,3-cd)pyrene	130	U	ug/kg	ND
LANL-WR-SS-47	Iron	12.3		mg/kg	LANL-WR-SS-62	Iron	11.5		mg/kg	6.7
LANL-WR-SS-47	Isophorone	410	U	ug/kg	LANL-WR-SS-62	Isophorone	380	U	ug/kg	ND
LANL-WR-SS-47	Lead	0.37		mg/kg	LANL-WR-SS-62	Lead	0.35	J	mg/kg	5.6
LANL-WR-SS-47	Magnesium	61.4	J	mg/kg	LANL-WR-SS-62	Magnesium	57.5	J	mg/kg	6.6
LANL-WR-SS-47	Manganese	1.8		mg/kg	LANL-WR-SS-62	Manganese	1.7		mg/kg	5.7
LANL-WR-SS-47	Mercury	0.041		mg/kg	LANL-WR-SS-62	Mercury	0.038	B	mg/kg	< 2x RL
LANL-WR-SS-47	Methoxychlor	4.1	U	ug/kg	LANL-WR-SS-62	Methoxychlor	3.8	U	ug/kg	ND
LANL-WR-SS-47	Naphthalene	140	U	ug/kg	LANL-WR-SS-62	Naphthalene	130	U	ug/kg	ND
LANL-WR-SS-47	Nickel	1.2		mg/kg	LANL-WR-SS-62	Nickel	1.2	J	mg/kg	0.0
LANL-WR-SS-47	Nitrobenzene	410	U	ug/kg	LANL-WR-SS-62	Nitrobenzene	380	U	ug/kg	ND
LANL-WR-SS-47	N-Nitrosodi-n-propylamine	410	U	ug/kg	LANL-WR-SS-62	N-Nitrosodi-n-propylamine	380	U	ug/kg	ND
LANL-WR-SS-47	N-Nitrosodiphenylamine	410	U	ug/kg	LANL-WR-SS-62	N-Nitrosodiphenylamine	380	U	ug/kg	ND
LANL-WR-SS-47	Pentachlorophenol	2000	U	ug/kg	LANL-WR-SS-62	Pentachlorophenol	1800	U	ug/kg	ND
LANL-WR-SS-47	Perchlorate	49.1	U	ug/kg	LANL-WR-SS-62	Perchlorate	46	U	ug/kg	ND
LANL-WR-SS-47	Phenanthrene	410	U	ug/kg	LANL-WR-SS-62	Phenanthrene	380	U	ug/kg	ND
LANL-WR-SS-47	Phenol	410	U	ug/kg	LANL-WR-SS-62	Phenol	380	U	ug/kg	ND
LANL-WR-SS-47	Potassium	614		mg/kg	LANL-WR-SS-62	Potassium	575	B	mg/kg	6.6
LANL-WR-SS-47	Pyrene	140	U	ug/kg	LANL-WR-SS-62	Pyrene	130	U	ug/kg	ND
LANL-WR-SS-47	Selenium	0.61	B	mg/kg	LANL-WR-SS-62	Selenium	0.58	B	mg/kg	< 2x RL
LANL-WR-SS-47	Silver	1.2	U	mg/kg	LANL-WR-SS-62	Silver	1.2	B	mg/kg	< 2x RL
LANL-WR-SS-47	Sodium	614	B	mg/kg	LANL-WR-SS-62	Sodium	575	B	mg/kg	< 2x RL
LANL-WR-SS-47	Thallium	1.2	U	mg/kg	LANL-WR-SS-62	Thallium	1.2	U	mg/kg	ND
LANL-WR-SS-47	Toxaphene	82	U	ug/kg	LANL-WR-SS-62	Toxaphene	77	U	ug/kg	ND
LANL-WR-SS-47	TPH (as Diesel)	6.1	UJ	mg/kg	LANL-WR-SS-62	TPH (as Diesel)	5.7	UJ	mg/kg	ND
LANL-WR-SS-47	TPH (as Motor Oil)	6.1	J	mg/kg	LANL-WR-SS-62	TPH (as Motor Oil)	5.7	J	mg/kg	6.8
LANL-WR-SS-47	Vanadium	6.1		mg/kg	LANL-WR-SS-62	Vanadium	2.3		mg/kg	< 2x RL
LANL-WR-SS-47	Zinc	2.5		mg/kg	LANL-WR-SS-62	Zinc	2.3	J	mg/kg	8.3

Table 14.
Comparison of Polynuclear Aromatic Hydrocarbons Compounds by Molecular Weight

Grouping	Molecular Weight Range	Compounds
Low molecular weight compounds	152–178 g/mol	Acenaphthene, Acenaphthylene, anthracene, Fluorene, Phenanthrene
Medium molecular weight compounds	202 g/mol	Fluoranthene, pyrene
High molecular weight compounds	228–278 g/mol	Benz[a]anthracene Benzo[b]fluoranthene, Benzo[j]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Benzo[a]pyrene, Benzo[e]pyrene, chrysene, Dibenz[a,h]anthracene, and Indeno[1,2,3-c,d]pyrene

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Table 15.
Summary of Inorganic Constituents Exceeding Background Value and / or Soil Screening Level

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL
LANL-WR-SS-10	A	Antimony	3.4	J	0.83	30	2.57	-26.6
LANL-WR-SS-14	A	Antimony	2.3	J	0.83	30	1.47	-27.7
LANL-WR-SS-15	A	Antimony	26.8	J	0.83	30	26	-3.2
LANL-WR-SS-35	D2	Antimony	1.1	BJ	0.83	30	0.27	-28.9
LANL-WR-SS-44	D2	Antimony	0.96	B	0.83	30	0.13	-29.0
LANL-WR-SS-61	D2 (DUP-SS-32)	Antimony	0.89	BJ	0.83	30	0.06	-29.1
LANL-WR-SS-8	A	Antimony	1.2	J	0.83	30	0.37	-28.8
LANL-WR-SS-15	A	Arsenic	4.0		3.98	3.90	0.020	0.1
LANL-WR-SS-15	A	Barium	127		127	5200	0	-5073.0
LANL-WR-SS-10	A	Cadmium	0.53		0.40	70	0.130	-69.5
LANL-WR-SS-14	A	Cadmium	0.61		0.40	70	0.210	-69.4
LANL-WR-SS-15	A	Cadmium	49.3		0.40	70	48.900	-20.7
LANL-WR-SS-20	B	Cadmium	0.59		0.40	70	0.190	-69.4
LANL-WR-SS-25	B	Cadmium	0.59		0.40	70	0.190	-69.4
LANL-WR-SS-27	B	Cadmium	0.81		0.40	70	0.410	-69.2
LANL-WR-SS-29	B	Cadmium	0.78		0.40	70	0.380	-69.2
LANL-WR-SS-35	D2	Cadmium	0.99		0.40	70	0.590	-69.0
LANL-WR-SS-43	D2	Cadmium	0.58		0.40	70	0.180	-69.4
LANL-WR-SS-45	D2	Cadmium	3.1		0.40	70	2.700	-66.9
LANL-WR-SS-8	A	Cadmium	0.53		0.40	70	0.130	-69.5
LANL-WR-SS-15	A	Calcium	5160		4400	NP	760.000	N/A
LANL-WR-SS-15	A	Cobalt	5.70		4.73	4500	1	-4494.3
LANL-WR-SS-15	A	Copper	35.6		11.2	2800	24	-2764.4
LANL-WR-SS-35	D2	Copper	39.3		11.2	2800	28	-2760.7
LANL-WR-SS-43	D2	Copper	18.9		11.2	2800	8	-2781.1
LANL-WR-SS-45	D2	Copper	26.0		11.2	2800	15	-2774.0
LANL-WR-SS-15	A	Iron	26900		13800	23000	13100	3900.0
LANL-WR-SS-20	B	Iron	18100		13800	23000	4300	-4900.0
LANL-WR-SS-27	B	Iron	18700		13800	23000	4900	-4300.0
LANL-WR-SS-10	A	Lead	27		19.7	400	7	-373.0
LANL-WR-SS-14	A	Lead	33.9		19.7	400	14	-366.1
LANL-WR-SS-15	A	Lead	114		19.7	400	94	-286.0

Table 15.
Summary of Inorganic Constituents Exceeding Background Value and / or Soil Screening Level

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL
LANL-WR-SS-19	B	Lead	36		19.7	400	16	-364.0
LANL-WR-SS-27	B	Lead	24.9		19.7	400	5	-375.1
LANL-WR-SS-29	B	Lead	22.7		19.7	400	3	-377.3
LANL-WR-SS-30	B	Lead	28.9		19.7	400	9	-371.1
LANL-WR-SS-35	D2	Lead	84.6		19.7	400	65	-315.4
LANL-WR-SS-36	D2	Lead	20.1		19.7	400	0.40	-379.9
LANL-WR-SS-37	D2	Lead	76.5		19.7	400	57	-323.5
LANL-WR-SS-42	D2	Lead	22.3		19.7	400	3	-377.7
LANL-WR-SS-43	D2	Lead	33		19.7	400	13	-367.0
LANL-WR-SS-44	D2	Lead	24.2		19.7	400	5	-375.8
LANL-WR-SS-45	D2	Lead	63.5		19.7	400	44	-336.5
LANL-WR-SS-47	C	Lead	25.3		19.7	400	6	-374.7
LANL-WR-SS-6	A	Lead	28.3		19.7	400	9	-371.7
LANL-WR-SS-61	D2 (DUP-SS-32)	Lead	34.6	J	19.7	400	15	-365.4
LANL-WR-SS-8	A	Lead	48		19.7	400	28	-352.0
LANL-WR-SS-15	A	Mercury	0.21		0.1	23	0.110	-22.8
LANL-WR-SS-35	D2	Mercury	0.20		0.1	23	0.100	-22.8
LANL-WR-SS-43	D2	Mercury	0.10		0.1	23	0.0	-22.9
LANL-WR-SS-45	D2	Mercury	0.24		0.1	23	0.140	-22.8
LANL-WR-SS-15	A	Nickel	14.7		9.4	1500	5	-1485.3
LANL-WR-SS-10	A	Selenium	0.48	B	0.3	380	0.18	-379.5
LANL-WR-SS-12	A	Selenium	0.31	B	0.3	380	0.01	-379.7
LANL-WR-SS-22	B	Selenium	0.30	B	0.3	380	0	-379.7
LANL-WR-SS-28	B	Selenium	0.33	B	0.3	380	0.03	-379.7
LANL-WR-SS-29	B	Selenium	0.33	B	0.3	380	0.03	-379.7
LANL-WR-SS-30	B	Selenium	0.37	B	0.3	380	0.07	-379.6
LANL-WR-SS-45	D2	Selenium	0.52	B	0.3	380	0.22	-379.5
LANL-WR-SS-47	C	Selenium	0.40	B	0.3	380	0.10	-379.6
LANL-WR-SS-58	C	Selenium	0.32	B	0.3	380	0.02	-379.7
LANL-WR-SS-62	C (DUP-SS-47)	Selenium	0.33	B	0.3	380	0.03	-379.7
LANL-WR-SS-63	B (DUP-SS-17)	Selenium	0.37	B	0.3	380	0.07	-379.6
LANL-WR-SS-7	A	Selenium	0.37	B	0.3	380	0.07	-379.6

Table 15.
Summary of Inorganic Constituents Exceeding Background Value and / or Soil Screening Level

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Concentration: (mg/kg)	Laboratory & Validation Flags	Background Value (mg/kg)	Soil Screening Level (mg/kg)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL
LANL-WR-SS-9	A	Selenium	0.47	B	0.3	380	0.17	-379.5
LANL-WR-SS-15	A	Vanadium	23.7		19.7	530	4	-506.3
LANL-WR-SS-21	B	Vanadium	35.4		19.7	530	16	-494.6
LANL-WR-SS-35	D2	Vanadium	25		19.7	530	5	-505.0
LANL-WR-SS-41	D2	Vanadium	32.5		19.7	530	13	-497.5
LANL-WR-SS-10	A	Zinc	130	J	60.2	23000	70	-22870.0
LANL-WR-SS-11	A	Zinc	62.7	J	60.2	23000	3	-22937.3
LANL-WR-SS-13	A	Zinc	65	J	60.2	23000	5	-22935.0
LANL-WR-SS-14	A	Zinc	111	J	60.2	23000	51	-22889.0
LANL-WR-SS-15	A	Zinc	2030	J	60.2	23000	1970	-20970.0
LANL-WR-SS-20	B	Zinc	202	J	60.2	23000	142	-22798.0
LANL-WR-SS-21	B	Zinc	62.5		60.2	23000	2	-22937.5
LANL-WR-SS-23	B	Zinc	66.2		60.2	23000	6	-22933.8
LANL-WR-SS-25	B	Zinc	200		60.2	23000	140	-22800.0
LANL-WR-SS-26	B	Zinc	72.9		60.2	23000	13	-22927.1
LANL-WR-SS-27	B	Zinc	296		60.2	23000	236	-22704.0
LANL-WR-SS-29	B	Zinc	227		60.2	23000	167	-22773.0
LANL-WR-SS-30	B	Zinc	118		60.2	23000	58	-22882.0
LANL-WR-SS-35	D2	Zinc	137		60.2	23000	77	-22863.0
LANL-WR-SS-42	D2	Zinc	63		60.2	23000	3	-22937.0
LANL-WR-SS-43	D2	Zinc	161		60.2	23000	101	-22839.0
LANL-WR-SS-44	D2	Zinc	83.9		60.2	23000	24	-22916.1
LANL-WR-SS-45	D2	Zinc	197		60.2	23000	137	-22803.0
LANL-WR-SS-51	C	Zinc	165		60.2	23000	105	-22835.0
LANL-WR-SS-8	A	Zinc	82.3	J	60.2	23000	22	-22917.7

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Table 16.
Summary of Radionclides Exceeding Background Value and / or Soil Screening Levels

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Activity: (pCi/g)	Laboratory & Validation Flags	Background Value (pCi/g)	Soil Screening Level (pCi/g)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL
LANL-WR-SS-46	C	Plutonium 239/40	5.63E-01	J	6.80E-02	1.10E+02	4.95E-01	-1.09E+02
LANL-WR-SS-10	A	Plutonium 239/40	3.36E-01		6.80E-02	1.10E+02	2.68E-01	-1.10E+02
LANL-WR-SS-42	D2	Plutonium 239/40	3.32E-01	J	6.80E-02	1.10E+02	2.64E-01	-1.10E+02
LANL-WR-SS-53	C	Plutonium 239/40	3.19E-01		6.80E-02	1.10E+02	2.51E-01	-1.10E+02
LANL-WR-SS-54	C	Plutonium 239/40	2.50E-01		6.80E-02	1.10E+02	1.82E-01	-1.10E+02
LANL-WR-SS-35	D2	Plutonium 239/40	2.42E-01	J	6.80E-02	1.10E+02	1.74E-01	-1.10E+02
LANL-WR-SS-14	A	Plutonium 239/40	2.41E-01		6.80E-02	1.10E+02	1.73E-01	-1.10E+02
LANL-WR-SS-47	C	Plutonium 239/40	2.35E-01	J	6.80E-02	1.10E+02	1.67E-01	-1.10E+02
LANL-WR-SS-27	B	Plutonium 239/40	2.32E-01		6.80E-02	1.10E+02	1.64E-01	-1.10E+02
LANL-WR-SS-15	A	Plutonium 239/40	2.12E-01		6.80E-02	1.10E+02	1.44E-01	-1.10E+02
LANL-WR-SS-33	D2	Plutonium 239/40	2.01E-01	J	6.80E-02	1.10E+02	1.33E-01	-1.10E+02
LANL-WR-SS-57	C	Plutonium 239/40	1.99E-01		6.80E-02	1.10E+02	1.31E-01	-1.10E+02
LANL-WR-SS-62	C (Dup SS-47)	Plutonium 239/40	1.80E-01		6.80E-02	1.10E+02	1.12E-01	-1.10E+02
LANL-WR-SS-2	A	Plutonium 239/40	1.73E-01		6.80E-02	1.10E+02	1.05E-01	-1.10E+02
LANL-WR-SS-1	A	Plutonium 239/40	1.69E-01		6.80E-02	1.10E+02	1.01E-01	-1.10E+02
LANL-WR-SS-16	B	Plutonium 239/40	1.61E-01		6.80E-02	1.10E+02	9.30E-02	-1.10E+02
LANL-WR-SS-28	B	Plutonium 239/40	1.41E-01		6.80E-02	1.10E+02	7.30E-02	-1.10E+02
LANL-WR-SS-38	D2	Plutonium 239/40	1.39E-01	J	6.80E-02	1.10E+02	7.10E-02	-1.10E+02
LANL-WR-SS-22	B	Plutonium 239/40	1.38E-01		6.80E-02	1.10E+02	7.00E-02	-1.10E+02
LANL-WR-SS-59	C	Plutonium 239/40	1.36E-01		6.80E-02	1.10E+02	6.80E-02	-1.10E+02
LANL-WR-SS-51	C	Plutonium 239/40	1.28E-01		6.80E-02	1.10E+02	6.00E-02	-1.10E+02
LANL-WR-SS-7	A	Plutonium 239/40	1.27E-01		6.80E-02	1.10E+02	5.90E-02	-1.10E+02
LANL-WR-SS-8	A	Plutonium 239/40	1.22E-01		6.80E-02	1.10E+02	5.40E-02	-1.10E+02
LANL-WR-SS-21	B	Plutonium 239/40	1.19E-01		6.80E-02	1.10E+02	5.10E-02	-1.10E+02
LANL-WR-SS-23	B	Plutonium 239/40	1.01E-01		6.80E-02	1.10E+02	3.30E-02	-1.10E+02
LANL-WR-SS-45	D2	Plutonium 239/40	9.70E-02	J	6.80E-02	1.10E+02	2.90E-02	-1.10E+02
LANL-WR-SS-58	C	Plutonium 239/40	9.50E-02		6.80E-02	1.10E+02	2.70E-02	-1.10E+02
LANL-WR-SS-64	A (Dup SS-1)	Plutonium 239/40	8.90E-02		6.80E-02	1.10E+02	2.10E-02	-1.10E+02
LANL-WR-SS-11	A	Plutonium 239/40	8.80E-02		6.80E-02	1.10E+02	2.00E-02	-1.10E+02
LANL-WR-SS-29	B	Plutonium 239/40	8.70E-02	J	6.80E-02	1.10E+02	1.90E-02	-1.10E+02
LANL-WR-SS-60	C	Plutonium 239/40	8.00E-02		6.80E-02	1.10E+02	1.20E-02	-1.10E+02
LANL-WR-SS-26	B	Plutonium 239/40	7.80E-02		6.80E-02	1.10E+02	1.00E-02	-1.10E+02
LANL-WR-SS-41	D2	Plutonium 239/40	7.20E-02	J	6.80E-02	1.10E+02	4.00E-03	-1.10E+02

Table 16.
Summary of Radionclides Exceeding Background Value and / or Soil Screening Levels

Sample Id#:	Drainage of Collection	Target Analyte / Target Compound	Activity: (pCi/g)	Laboratory & Validation Flags	Background Value (pCi/g)	Soil Screening Level (pCi/g)	> or < Background (-) results are < BV	> or < SSL (-) results are < SSL
LANL-WR-SS-3	A	Plutonium 239/40	7.10E-02		6.80E-02	1.10E+02	3.00E-03	-1.10E+02
LANL-WR-SS-43	D2	Plutonium 239/40	6.80E-02	J	6.80E-02	1.10E+02	0.00E+00	-1.10E+02
LANL-WR-SS-2	A	Cesium 137	1.16E+00		9.00E-01	5.10E+00	2.60E-01	-3.94E+00
LANL-WR-SS-62	C (Dup SS-47)	Cesium 137	1.15E+00		9.00E-01	5.10E+00	2.50E-01	-3.95E+00
LANL-WR-SS-14	A	Cesium 137	9.90E-01		9.00E-01	5.10E+00	9.00E-02	-4.11E+00
LANL-WR-SS-22	B	Cesium 137	9.70E-01		9.00E-01	5.10E+00	7.00E-02	-4.13E+00
LANL-WR-SS-54	C	Cesium 137	9.22E-01	J	9.00E-01	5.10E+00	2.20E-02	-4.18E+00

Table 17.
Contaminants of Potential Concern for Post-Removal Sampling

Sample Id	Drainage of Collection	Target Analyte/ Target Compound	Concentration (mg/kg)	Laboratory and Validation Flags
LANL-WR-SS-10	A	Aroclor 1254	1.3	D
LANL-WR-SS-14	A	Aroclor 1254	3.5	D
LANL-WR-SS-15	A	Aroclor 1254	12.0	D
LANL-WR-SS-15	A	Arsenic	4.0	
LANL-WR-SS-15	A	Iron	26,900	
LANL-WR-SS-32	D2	Benzo(a)pyrene	4.90	D
LANL-WR-SS-34	D2	Benzo(a)pyrene	0.94	
LANL-WR-SS-32	D2	Dibenz(a,h)anthracene	1.00	
LANL-WR-SS-51	C	TPH (as Diesel)	76	J
LANL-WR-SS-57	C	TPH (as Diesel)	640	D
LANL-WR-SS-51	C	TPH (as Motor Oil)	80	J
LANL-WR-SS-57	C	TPH (as Motor Oil)	710	D

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Table 18.
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Heptachlor Epoxide	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endosulfan I	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dieldrin	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	DDE[4,4'-]	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endrin	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endosulfan II	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	DDD[4,4'-]	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endosulfan Sulfate	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	DDT[4,4'-]	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Methoxychlor[4,4'-]	14	1	0.018999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endrin Ketone	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Endrin Aldehyde	14	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chlordane[alpha-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chlordane[gamma-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Toxaphene (Technical Grade)	14	1	0.189999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1016	14	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1221	14	1	0.077		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1232	14	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1242	14	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1248	14	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1254	14	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aroclor-1260	14	1	0.055		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	BHC[alpha-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	BHC[beta-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	BHC[delta-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	BHC[gamma-]	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Heptachlor	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aldrin	14	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Aluminum		1	2630		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Calcium		1	1570		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Chromium		1	3.099999905		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Iron		1	4100		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Zinc		1	27.20000076		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Americium-241		1	-0.048999999		pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Cobalt-60		1	0.006	0.021	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Cesium-134		1	-0.016000001	0.0145	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Cesium-137		1	0.003	0.0165	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Sodium-22		1	-0.035	0.018999999	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Ruthenium-106		1	-0.192000002	0.131500006	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Uranium-235		1	-0.037999999	0.0125	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitrosodimethylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Aniline	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Phenol	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Bis(2-chloroethyl)ether	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chlorophenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dichlorobenzene[1,3-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dichlorobenzene[1,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dichlorobenzene[1,2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Methylphenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Methylphenol[4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitroso-di-n-propylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Hexachloroethane	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitrobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Isophorone	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitrophenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dimethylphenol[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzoic Acid	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Bis(2-chloroethoxy)methane	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dichlorophenol[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Trichlorobenzene[1,2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Naphthalene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chloroaniline[4-]	12	1	0.75999999		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Hexachlorobutadiene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chloro-3-methylphenol[4-]	12	1	0.75999999		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Methylnaphthalene[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Hexachlorocyclopentadiene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Trichlorophenol[2,4,6-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Trichlorophenol[2,4,5-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chloronaphthalene[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitroaniline[2-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dimethyl Phthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Acenaphthylene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitroaniline[3-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Acenaphthene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dinitrophenol[2,4-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitrophenol[4-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dibenzofuran	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dinitrotoluene[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dinitrotoluene[2,6-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Diethylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Fluorene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitroaniline[4-]	12	1	0.75999999		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Nitrosodiphenylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Azobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Bromophenyl-phenylether[4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Hexachlorobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Pentachlorophenol	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Phenanthrene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Anthracene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Di-n-butylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Fluoranthene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Pyrene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Butylbenzylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dichlorobenzidine[3,3'-]	12	1	0.75999999		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzo(a)anthracene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Bis(2-ethylhexyl)phthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Chrysene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Di-n-octylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzo(b)fluoranthene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzo(k)fluoranthene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzo(a)pyrene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Indeno(1,2,3-cd)pyrene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Dibenz(a,h)anthracene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzo(g,h,i)perylene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Benzyl Alcohol	12	1	0.75999999		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Strontium-90			-0.109999999	0.204999998	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1997	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Plutonium-239			0.050000001	0.01	pci/g		ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Antimony		1	8.100000381		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Arsenic		1	1.100000024		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Barium		1	32.09999847		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Beryllium		1	0.370000005		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Cadmium		1	0.560000002		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Cobalt		1	1.600000024		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Copper		1	4.800000191		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Magnesium		1	649		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Nickel		1	2.099999905		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Potassium		1	425		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Selenium		1	0.349999994		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Silver		1	1.399999976		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Sodium		1	66.90000153		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Thallium		1	0.720000029		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Vanadium		1	5.800000191		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Manganese		1	167		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Lead		1	10.19999981		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0101	73-02151	0-0.67 ft	SED	RAD	Europium-152		1	-0.004	0.035	pci/g	U	gamma_spec	Generic:Gamma Spec.	ATICO	Analytical Technologies, Inc., Historical code one	4/8/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Mercury			0.059999999		mg/kg	U	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/27/1996
0173-96-0101	73-02151	0-0.67 ft	SED	inorganic	Uranium		1	1.820000052		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	BHC[alpha-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	BHC[beta-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	BHC[delta-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	BHC[gamma-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Heptachlor	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aldrin	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Heptachlor Epoxide	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endosulfan I	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dieldrin	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	DDE[4,4'-]	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endrin	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endosulfan II	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	DDD[4,4'-]	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endosulfan Sulfate	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	DDT[4,4'-]	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Methoxychlor[4,4'-]	15	1	0.02		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endrin Ketone	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Endrin Aldehyde	15	1	0.0039		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chlordane[alpha-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chlordane[gamma-]	15	1	0.002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Toxaphene (Technical Grade)	15	1	0.200000003		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1016	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1221	15	1	0.078000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1232	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1242	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1248	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1254	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aroclor-1260	15	1	0.039000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Aluminum		1	1340		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Iron		1	4040		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Zinc		1	27.70000076		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Americium-241		1	0.094999999	0.067500003	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Cobalt-60		1	0.011	0.022500001	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Cesium-134		1	-0.003	0.0135	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Cesium-137		1	0.015	0.0185	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Sodium-22		1	0.045000002	0.0195	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Ruthenium-106		1	-0.057999998	0.128000006	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Uranium-235		1	-0.037999999	0.0155	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitrosodimethylamine[N-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Aniline	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Phenol	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Bis(2-chloroethyl)ether	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chlorophenol[2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dichlorobenzene[1,3-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dichlorobenzene[1,4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dichlorobenzene[1,2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Methylphenol[2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Methylphenol[4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitroso-di-n-propylamine[N-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Hexachloroethane	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitrobenzene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Isophorone	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitrophenol[2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dimethylphenol[2,4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzoic Acid	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Bis(2-chloroethoxy)methane	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dichlorophenol[2,4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Trichlorobenzene[1,2,4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Naphthalene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chloroaniline[4-]	15	1	0.779999971		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Hexachlorobutadiene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chloro-3-methylphenol[4-]	15	1	0.779999971		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Methylnaphthalene[2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Hexachlorocyclopentadiene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Trichlorophenol[2,4,6-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Trichlorophenol[2,4,5-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chloronaphthalene[2-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitroaniline[2-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dimethyl Phthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Acenaphthylene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitroaniline[3-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Acenaphthene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dinitrophenol[2,4-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitrophenol[4-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dibenzofuran	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dinitrotoluene[2,4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dinitrotoluene[2,6-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Diethylphthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Fluorene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitroaniline[4-]	15	1	0.779999971		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Nitrosodiphenylamine[N-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Azobenzene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Bromophenyl-phenylether[4-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Hexachlorobenzene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Pentachlorophenol	15	1	2		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Phenanthrene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Anthracene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Di-n-butylphthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Fluoranthene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Pyrene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Butylbenzylphthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dichlorobenzidine[3,3'-]	15	1	0.779999971		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzo(a)anthracene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Bis(2-ethylhexyl)phthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Chrysene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Di-n-octylphthalate	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzo(b)fluoranthene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzo(k)fluoranthene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzo(a)pyrene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Indeno(1,2,3-cd)pyrene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Dibenz(a,h)anthracene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzo(g,h,i)perylene	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Benzyl Alcohol	15	1	0.779999971		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	15	1	0.389999986		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Strontium-90			-0.01	0.189999998	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1997	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Plutonium-239			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Antimony		1	8.100000381		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Arsenic		1	0.949999988		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Barium		1	11.5		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Beryllium		1	0.449999988		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Cadmium		1	0.560000002		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Calcium		1	942		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Chromium		1	0.959999979		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Cobalt		1	1.100000024		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Copper		1	2.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Magnesium		1	264		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Nickel		1	2.099999905		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Potassium		1	426		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Selenium		1	0.349999994		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Silver		1	1.399999976		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Sodium		1	138		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Thallium		1	0.720000029		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Vanadium		1	1.299999952		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Manganese		1	227		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Lead		1	5.599999905		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	RAD	Europium-152		1	-0.001	0.037500001	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Uranium		1	4.570000172	0.310000002	mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0102	73-02152	0-0.83 ft	SED	inorganic	Mercury		1	0.059999999		mg/kg	U	metals	CLP:ILM02.0-245.1	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	BHC[alpha-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	BHC[beta-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	BHC[delta-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	BHC[gamma-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Heptachlor	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aldrin	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Heptachlor Epoxide	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endosulfan I	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dieldrin	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	DDE[4,4'-]	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endrin	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endosulfan II	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	DDD[4,4'-]	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endosulfan Sulfate	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	DDT[4,4'-]	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Methoxychlor[4,4'-]	5	1	0.017999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endrin Ketone	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Endrin Aldehyde	5	1	0.0035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chlordane[alpha-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chlordane[gamma-]	5	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Toxaphene (Technical Grade)	5	1	0.180000007		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1016	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1221	5	1	0.071000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1232	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1242	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1248	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1254	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aroclor-1260	5	1	0.035		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Aluminum		1	1720		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Iron		1	3400		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Zinc		1	20.29999924		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Americium-241		1	-0.028999999	0.071999997	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Cobalt-60		1	-0.046	0.02	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Cesium-134		1	-0.006	0.013	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Cesium-137		1	0.015	0.014	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Sodium-22		1	-0.005	0.0165	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Ruthenium-106		1	0.104000002	0.114	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Uranium-235		1	-0.050999999	0.013	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitrosodimethylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Aniline	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Phenol	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Bis(2-chloroethyl)ether	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chlorophenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dichlorobenzene[1,3-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dichlorobenzene[1,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dichlorobenzene[1,2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Methylphenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Methylphenol[4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitroso-di-n-propylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Hexachloroethane	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitrobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Isophorone	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitrophenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dimethylphenol[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzoic Acid	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Bis(2-chloroethoxy)methane	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dichlorophenol[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Trichlorobenzene[1,2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Naphthalene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chloroaniline[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Hexachlorobutadiene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chloro-3-methylphenol[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Methylnaphthalene[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Hexachlorocyclopentadiene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Trichlorophenol[2,4,6-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Trichlorophenol[2,4,5-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chloronaphthalene[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitroaniline[2-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dimethyl Phthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Acenaphthylene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitroaniline[3-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Acenaphthene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dinitrophenol[2,4-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitrophenol[4-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dibenzofuran	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dinitrotoluene[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dinitrotoluene[2,6-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Diethylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Fluorene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitroaniline[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Nitrosodiphenylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Azobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Bromophenyl-phenylether[4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Hexachlorobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Pentachlorophenol	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Phenanthrene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Anthracene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Di-n-butylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Fluoranthene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Pyrene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Butylbenzylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dichlorobenzidine[3,3'-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzo(a)anthracene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Bis(2-ethylhexyl)phthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Chrysene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Di-n-octylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzo(b)fluoranthene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzo(k)fluoranthene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzo(a)pyrene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Indeno(1,2,3-cd)pyrene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Dibenz(a,h)anthracene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzo(g,h,i)perylene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Benzyl Alcohol	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Strontium-90			0.100000001	0.170000002	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Plutonium-239			0.029999999	0.005	pci/g		ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Antimony		1	7.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Arsenic		1	0.870000005		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Barium		1	20.60000038		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Beryllium		1	0.370000005		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Cadmium		1	0.519999981		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Calcium		1	868		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Chromium		1	1.399999976		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Cobalt		1	1		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Copper		1	2.700000048		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Magnesium		1	386		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Nickel		1	2		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Potassium		1	395		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Selenium		1	0.319999993		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Silver		1	1.299999952		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Sodium		1	83.90000153		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Thallium		1	0.670000017		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Vanadium		1	2.5		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Manganese		1	144		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Lead		1	6.400000095		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	RAD	Europium-152		1	0.035	0.032499999	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Mercury		1	0.050000001		mg/kg	U	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/27/1996
0173-96-0103	73-02153	0-0.67 ft	SED	inorganic	Uranium		1	2.119999886		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	BHC[alpha-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	BHC[beta-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	BHC[delta-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	BHC[gamma-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Heptachlor	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aldrin	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Heptachlor Epoxide	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endosulfan I	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dieldrin	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	DDE[4,4'-]	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endrin	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endosulfan II	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	DDD[4,4'-]	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endosulfan Sulfate	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	DDT[4,4'-]	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Methoxychlor[4,4'-]	11	1	0.018999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endrin Ketone	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Endrin Aldehyde	11	1	0.0038		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chlordane[alpha-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chlordane[gamma-]	11	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Toxaphene (Technical Grade)	11	1	0.189999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1016	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1221	11	1	0.075000003		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1232	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1242	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1248	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1254	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aroclor-1260	11	1	0.037999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Aluminum		1	3480		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Chromium		1	2.299999952		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Iron		1	5750		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Zinc		1	33.59999847		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Americium-241		1	-0.135000005	0.081	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Cobalt-60		1	0.017999999	0.021	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Cesium-134		1	0.021	0.014	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Cesium-137		1	0.079000004	0.032000002	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Sodium-22		1	0.024	0.0185	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Ruthenium-106		1	0.021	0.130999997	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Uranium-235		1	-0.061000001	0.016000001	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitrosodimethylamine[N-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Aniline	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Phenol	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Bis(2-chloroethyl)ether	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chlorophenol[2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dichlorobenzene[1,3-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Bis(2-chloroethoxy)methane	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dichlorophenol[2,4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Trichlorobenzene[1,2,4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Naphthalene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chloroaniline[4-]	10	1	0.74000001		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Hexachlorobutadiene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chloro-3-methylphenol[4-]	10	1	0.74000001		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Methylnaphthalene[2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Hexachlorocyclopentadiene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Trichlorophenol[2,4,6-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Trichlorophenol[2,4,5-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chloronaphthalene[2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitroaniline[2-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dimethyl Phthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Acenaphthylene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitroaniline[3-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Acenaphthene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dinitrophenol[2,4-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitrophenol[4-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dibenzofuran	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dinitrotoluene[2,4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dinitrotoluene[2,6-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Diethylphthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Fluorene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitroaniline[4-]	10	1	0.74000001		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitrosodiphenylamine[N-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Azobenzene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Bromophenyl-phenylether[4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Hexachlorobenzene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Pentachlorophenol	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Phenanthrene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Anthracene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Di-n-butylphthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Fluoranthene	10	1	0.043000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Pyrene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Butylbenzylphthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dichlorobenzidine[3,3'-]	10	1	0.74000001		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzo(a)anthracene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Bis(2-ethylhexyl)phthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Chrysene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Di-n-octylphthalate	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzo(b)fluoranthene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzo(k)fluoranthene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzo(a)pyrene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Indeno(1,2,3-cd)pyrene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dibenz(a,h)anthracene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzo(g,h,i)perylene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzyl Alcohol	10	1	0.74000001		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Strontium-90			0.419999987	0.189999998	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Plutonium-239			0.01	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Antimony		1	7.900000095		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Arsenic		1	0.99000001		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Barium		1	29.5		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Beryllium		1	0.720000029		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Cadmium		1	0.550000012		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Calcium		1	1120		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Cobalt		1	1.100000024		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Copper		1	4.099999905		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Magnesium		1	868		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Nickel		1	2.099999905		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Potassium		1	723		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Selenium		1	0.340000004		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Silver		1	1.299999952		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Sodium		1	108		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Thallium		1	0.699999988		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Vanadium		1	4.800000191		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Manganese		1	203		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Lead		1	11.30000019		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	RAD	Europium-152		1	-0.017999999	0.039500002	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Mercury			0.059999999		mg/kg	U	metals	SW-846:7470A	QESL	Quanterra Environmental Services, St. Louis, MO	4/15/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	inorganic	Uranium		1	4.099999905		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dichlorobenzene[1,4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dichlorobenzene[1,2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Methylphenol[2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Methylphenol[4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitroso-di-n-propylamine[N-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Hexachloroethane	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitrobenzene	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Isophorone	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Nitrophenol[2-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Dimethylphenol[2,4-]	10	1	0.370000005		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0104	73-02154	0-0.83 ft	SED	organic	Benzoic Acid	10	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	BHC[alpha-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	BHC[beta-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	BHC[delta-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	BHC[gamma-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Heptachlor	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aldrin	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Heptachlor Epoxide	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endosulfan I	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dieldrin	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	DDE[4,4'-]	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endrin	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endosulfan II	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	DDD[4,4'-]	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endosulfan Sulfate	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	DDT[4,4'-]	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Methoxychlor[4,4'-]	2	1	0.017000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endrin Ketone	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Endrin Aldehyde	2	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chlordane[alpha-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chlordane[gamma-]	2	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Toxaphene (Technical Grade)	2	1	0.170000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1016	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1221	2	1	0.068999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1232	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1242	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1248	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1254	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aroclor-1260	2	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Aluminum		1	1550		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Iron		1	3690		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Zinc		1	22.5		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Americium-241		1	0	0.014	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Cobalt-60		1	0.002	0.0175	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Cesium-134		1	0.002	0.0095	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Cesium-137		1	0.025	0.0135	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Sodium-22		1	0.016000001	0.0185	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Ruthenium-106		1	0.108999997	0.085500002	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Uranium-235		1	-0.041000001	0.0105	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitrosodimethylamine[N-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Aniline	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Phenol	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Bis(2-chloroethyl)ether	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chlorophenol[2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dichlorobenzene[1,3-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dichlorobenzene[1,4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dichlorobenzene[1,2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Methylphenol[2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Methylphenol[4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitroso-di-n-propylamine[N-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Hexachloroethane	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitrobenzene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Isophorone	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitrophenol[2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dimethylphenol[2,4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzoic Acid	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Bis(2-chloroethoxy)methane	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dichlorophenol[2,4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Trichlorobenzene[1,2,4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Naphthalene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chloroaniline[4-]	5	1	0.699999988		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Hexachlorobutadiene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chloro-3-methylphenol[4-]	5	1	0.699999988		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Methylnaphthalene[2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Hexachlorocyclopentadiene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Trichlorophenol[2,4,6-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Trichlorophenol[2,4,5-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chloronaphthalene[2-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitroaniline[2-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dimethyl Phthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Acenaphthylene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitroaniline[3-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Acenaphthene	5	1	0.054000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dinitrophenol[2,4-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitrophenol[4-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dibenzofuran	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dinitrotoluene[2,4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dinitrotoluene[2,6-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Diethylphthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Fluorene	5	1	0.064999998		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitroaniline[4-]	5	1	0.699999988		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Nitrosodiphenylamine[N-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Azobenzene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Bromophenyl-phenylether[4-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Hexachlorobenzene	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Pentachlorophenol	5	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Phenanthrene	5	1	0.49000001		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Anthracene	5	1	0.129999995		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Di-n-butylphthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Fluoranthene	5	1	0.569999993		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Pyrene	5	1	0.529999971		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Butylbenzylphthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dichlorobenzidine[3,3'-]	5	1	0.699999988		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzo(a)anthracene	5	1	0.289999992		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Bis(2-ethylhexyl)phthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Chrysene	5	1	0.330000013		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Di-n-octylphthalate	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzo(b)fluoranthene	5	1	0.25		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzo(k)fluoranthene	5	1	0.280000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzo(a)pyrene	5	1	0.340000004		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Indeno(1,2,3-cd)pyrene	5	1	0.209999993		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Dibenz(a,h)anthracene	5	1	0.071999997		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzo(g,h,i)perylene	5	1	0.230000004		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Benzyl Alcohol	5	1	0.699999988		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	5	1	0.349999994		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Strontium-90			0.01	0.180000007	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1997	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Plutonium-239			0.01	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Antimony		1	7.199999809		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Arsenic		1	0.639999986		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Barium		1	16.89999962		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Beryllium		1	0.409999996		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Cadmium		1	0.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Calcium		1	767		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Chromium		1	1.700000048		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Cobalt		1	1		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Copper		1	4.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Magnesium		1	466		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Nickel		1	1.899999976		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Potassium		1	381		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Selenium		1	0.310000002		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Silver		1	1.200000048		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Sodium		1	67.59999847		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Thallium		1	0.649999976		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Vanadium		1	2.599999905		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Manganese		1	155		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Lead		1	6.900000095		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	RAD	Europium-152		1	-0.052999999	0.021500001	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Mercury			0.050000001		mg/kg	U	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/27/1996
0173-96-0105	73-02154	0.83-1.67 ft	SED	inorganic	Uranium		1	1.779999971	0.119999997	mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/27/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	BHC[alpha-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	BHC[beta-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	BHC[delta-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	BHC[gamma-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Heptachlor	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aldrin	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Heptachlor Epoxide	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endosulfan I	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dieldrin	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	DDE[4,4'-]	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endrin	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endosulfan II	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	DDD[4,4'-]	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endosulfan Sulfate	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	DDT[4,4'-]	0.74000 001	1	0.0067		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Methoxychlor[4,4'-]	0.74000 001	1	0.017000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endrin Ketone	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Endrin Aldehyde	0.74000 001	1	0.0034		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chlordane[alpha-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chlordane[gamma-]	0.74000 001	1	0.0017		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Toxaphene (Technical Grade)	0.74000 001	1	0.170000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1016	0.74000 001	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1221	0.74000 001	1	0.067000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1232	0.74000 001	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1242	0.74000 001	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1248	0.74000 001	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1254	0.74000 001	1	0.034000002		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aroclor-1260	0.74000 001	1	0.089000002		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Aluminum		1	2360		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Calcium		1	3010		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Chromium		1	2.299999952		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Copper		1	5.900000095		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Iron		1	4740		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Zinc		1	41.40000153		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Americium-241		1	0.017000001	0.024	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Cobalt-60		1	-0.003	0.011	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Cesium-134		1	-0.007	0.008	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Cesium-137		1	0.011	0.008	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Sodium-22		1	0.006	0.0095	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Ruthenium-106		1	-0.075999998	0.072499998	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Uranium-235		1	-0.118000001	0.0115	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Strontium-90		1	-0.039999999	0.185000002	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1997	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitrosodimethylamine[N-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Aniline	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Phenol	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Bis(2-chloroethyl)ether	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chlorophenol[2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dichlorobenzene[1,3-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dichlorobenzene[1,4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dichlorobenzene[1,2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Methylphenol[2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Methylphenol[4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitroso-di-n-propylamine[N-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Hexachloroethane	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitrobenzene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Isophorone	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitrophenol[2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dimethylphenol[2,4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzoic Acid	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Bis(2-chloroethoxy)methane	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dichlorophenol[2,4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Trichlorobenzene[1,2,4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Naphthalene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chloroaniline[4-]	1	1	0.670000017		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Hexachlorobutadiene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chloro-3-methylphenol[4-]	1	1	0.670000017		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Methylnaphthalene[2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Hexachlorocyclopentadiene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Trichlorophenol[2,4,6-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Trichlorophenol[2,4,5-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chloronaphthalene[2-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitroaniline[2-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dimethyl Phthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Acenaphthylene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitroaniline[3-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Acenaphthene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dinitrophenol[2,4-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitrophenol[4-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dibenzofuran	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dinitrotoluene[2,4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dinitrotoluene[2,6-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Diethylphthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Fluorene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitroaniline[4-]	1	1	0.670000017		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Nitrosodiphenylamine[N-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Azobenzene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Bromophenyl-phenylether[4-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Hexachlorobenzene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Pentachlorophenol	1	1	1.700000048		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Phenanthrene	1	1	0.140000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Anthracene	1	1	0.035		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Di-n-butylphthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Fluoranthene	1	1	0.209999993		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Pyrene	1	1	0.170000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Butylbenzylphthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dichlorobenzidine[3,3'-]	1	1	0.670000017		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzo(a)anthracene	1	1	0.093999997		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Bis(2-ethylhexyl)phthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Chrysene	1	1	0.109999999		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Di-n-octylphthalate	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzo(b)fluoranthene	1	1	0.071999997		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzo(k)fluoranthene	1	1	0.089000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzo(a)pyrene	1	1	0.109999999		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Indeno(1,2,3-cd)pyrene	1	1	0.072999999		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Dibenz(a,h)anthracene	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzo(g,h,i)perylene	1	1	0.090999998		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Benzyl Alcohol	1	1	0.670000017		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	1	1	0.340000004		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Plutonium-238			0.01	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Plutonium-239			0.01	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Antimony		1	7		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Arsenic		1	1.299999952		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Barium		1	38.40000153		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Beryllium		1	0.519999981		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Cadmium		1	0.479999989		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Cobalt		1	0.970000029		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Magnesium		1	638		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Nickel		1	1.799999952		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Potassium		1	367		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Selenium		1	0.300000012		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Silver		1	1.200000048		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Sodium		1	115		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Thallium		1	0.620000005		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Vanadium		1	4.199999809		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Manganese		1	202		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Lead		1	11.19999981		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0106	73-02155	0-1.25 ft	SED	RAD	Europium-152		1	-0.027000001	0.0195	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Mercury			0.050000001		mg/kg	U	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/28/1996
0173-96-0106	73-02155	0-1.25 ft	SED	inorganic	Uranium		1	1.480000019		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Pentachlorophenol	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Phenanthrene	12	1	0.379999995		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Anthracene	12	1	0.093999997		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Di-n-butylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Fluoranthene	12	1	0.569999993		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Pyrene	12	1	0.460000008		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Butylbenzylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dichlorobenzidine[3,3'-]	12	1	0.75		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzo(a)anthracene	12	1	0.25999999		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Bis(2-ethylhexyl)phthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chrysene	12	1	0.310000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Di-n-octylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzo(b)fluoranthene	12	1	0.230000004		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzo(k)fluoranthene	12	1	0.25		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzo(a)pyrene	12	1	0.310000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Indeno(1,2,3-cd)pyrene	12	1	0.209999993		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dibenz(a,h)anthracene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzo(g,h,i)perylene	12	1	0.25999999		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzyl Alcohol	12	1	0.75		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Strontium-90			-0.050000001	0.174999997	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1997	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Plutonium-239			0.039999999	0.005	pci/g		ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Antimony		1	7.800000191		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Beryllium		1	0.629999995		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Cadmium		1	0.540000021		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Cobalt		1	2.599999905		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Magnesium		1	820		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Nickel		1	4		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Potassium		1	587		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Selenium		1	0.340000004		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Silver		1	1.299999952		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Sodium		1	123		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Thallium		1	0.699999988		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Vanadium		1	8.100000381		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Manganese		1	298		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Lead		1	15.89999962		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Europium-152		1	-0.011	0.026000001	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Mercury			0.059999999		mg/kg	U	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Uranium		1	3.619999886		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	BHC[alpha-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	BHC[beta-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	BHC[delta-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	BHC[gamma-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Heptachlor	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aldrin	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Heptachlor Epoxide	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endosulfan I	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dieldrin	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	DDE[4,4'-]	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endrin	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endosulfan II	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	DDD[4,4'-]	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endosulfan Sulfate	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	DDT[4,4'-]	10	1	0.0093		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Methoxychlor[4,4'-]	10	1	0.018999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endrin Ketone	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Endrin Aldehyde	10	1	0.0037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chlordane[alpha-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chlordane[gamma-]	10	1	0.0019		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Toxaphene (Technical Grade)	10	1	0.189999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1016	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1221	10	1	0.074000001		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1232	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1242	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1248	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1254	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aroclor-1260	10	1	0.037		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Aluminum		1	4550		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Arsenic		1	2.299999952		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Barium		1	52		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Calcium		1	2210		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Chromium		1	4.099999905		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Copper		1	8.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Iron		1	7860		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0107	73-02156	0-0.83 ft	SED	inorganic	Zinc		1	53.70000076		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Americium-241		1	-0.016000001	0.0425	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Cobalt-60		1	-0.006	0.013	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Cesium-134		1	0.002	0.011	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Cesium-137		1	0.098999999	0.0195	pci/g		gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Sodium-22		1	0.028999999	0.0115	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Ruthenium-106		1	-0.056000002	0.102499999	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	RAD	Uranium-235		1	-0.163000003	0.015	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitrosodimethylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Aniline	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Phenol	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Bis(2-chloroethyl)ether	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chlorophenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dichlorobenzene[1,3-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dichlorobenzene[1,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dichlorobenzene[1,2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Methylphenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Methylphenol[4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitroso-di-n-propylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Hexachloroethane	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitrobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Isophorone	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitrophenol[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dimethylphenol[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Benzoic Acid	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Bis(2-chloroethoxy)methane	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dichlorophenol[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Trichlorobenzene[1,2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Naphthalene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chloroaniline[4-]	12	1	0.75		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Hexachlorobutadiene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chloro-3-methylphenol[4-]	12	1	0.75		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Methylnaphthalene[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Hexachlorocyclopentadiene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Trichlorophenol[2,4,6-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Trichlorophenol[2,4,5-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chloronaphthalene[2-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitroaniline[2-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dimethyl Phthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Acenaphthylene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitroaniline[3-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Acenaphthene	12	1	0.043000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dinitrophenol[2,4-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitrophenol[4-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dibenzofuran	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dinitrotoluene[2,4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dinitrotoluene[2,6-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Diethylphthalate	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Fluorene	12	1	0.046999998		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitroaniline[4-]	12	1	0.75		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	12	1	1.899999976		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Nitrosodiphenylamine[N-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Azobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Bromophenyl-phenylether[4-]	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0107	73-02156	0-0.83 ft	SED	organic	Hexachlorobenzene	12	1	0.379999995		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/5/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitroaniline[2-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dimethyl Phthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Acenaphthylene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitroaniline[3-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Acenaphthene	8	1	0.044		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dinitrophenol[2,4-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitrophenol[4-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dibenzofuran	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dinitrotoluene[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dinitrotoluene[2,6-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Diethylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chlorophenyl-phenyl[4-] Ether	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Fluorene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitroaniline[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dinitro-2-methylphenol[4,6-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitrosodiphenylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Azobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Bromophenyl-phenylether[4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Hexachlorobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Pentachlorophenol	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Phenanthrene	8	1	0.349999994		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Anthracene	8	1	0.089000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Di-n-butylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Fluoranthene	8	1	0.579999983		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Pyrene	8	1	0.560000002		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Butylbenzylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dichlorobenzidine[3,3'-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzo(a)anthracene	8	1	0.300000012		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Bis(2-ethylhexyl)phthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chrysene	8	1	0.340000004		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Di-n-octylphthalate	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzo(b)fluoranthene	8	1	0.310000002		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzo(k)fluoranthene	8	1	0.280000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzo(a)pyrene	8	1	0.370000005		mg/kg		SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Indeno(1,2,3-cd)pyrene	8	1	0.209999993		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dibenz(a,h)anthracene	8	1	0.100000001		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzo(g,h,i)perylene	8	1	0.25		mg/kg	J	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzyl Alcohol	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Oxybis(1-chloropropane)[2,2'-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Strontium-90			-0.050000001	0.170000002	pci/g	U	SR_90	Generic:Beta Counting	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Plutonium-238			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Plutonium-239			0	0.005	pci/g	U	ISO_PU	HASL-300:ISOPU	ATICO	Analytical Technologies, Inc., Historical code one	4/17/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Antimony		1	7.5		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Arsenic		1	1.799999952		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Barium		1	21.29999924		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Beryllium		1	0.379999995		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Cadmium		1	0.519999981		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Chromium		1	1.799999952		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Cobalt		1	1		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Magnesium		1	450		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Nickel		1	2		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Potassium		1	394		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Selenium		1	0.319999993		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Silver		1	1.299999952		mg/kg	UJ	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Sodium		1	70.59999847		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Thallium		1	0.670000017		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Vanadium		1	3.5		mg/kg	J	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Manganese		1	178		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Lead		1	10.69999981		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Europium-152		1	-0.041999999	0.0295	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Mercury			0.079999998		mg/kg	J	metals	SW-846:7470A	STSL	Severn Trent Laboratories, Inc., St. Louis	4/15/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Uranium		1	1.74000001		mg/kg		metals	SW-846:6010	ATICO	Analytical Technologies, Inc., Historical code one	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Aluminum		1	1680		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Calcium		1	2190		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Copper		1	5.599999905		mg/kg	U	metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Iron		1	4790		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	inorganic	Zinc		1	46.09999847		mg/kg		metals	CLP:ILM03.0-200.7	STSL	Severn Trent Laboratories, Inc., St. Louis	4/11/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Americium-241		1	-0.037	0.074500002	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Cobalt-60		1	0.002	0.0195	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Cesium-134		1	-0.029999999	0.0135	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Cesium-137		1	0.030999999	0.0155	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Sodium-22		1	-0.005	0.017999999	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Ruthenium-106		1	0.01	0.114	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	BHC[alpha-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	BHC[beta-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	BHC[delta-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	BHC[gamma-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Heptachlor	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aldrin	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Heptachlor Epoxide	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endosulfan I	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dieldrin	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	DDE[4,4'-]	7	1	0.0036		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endrin	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endosulfan II	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	DDD[4,4'-]	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endosulfan Sulfate	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	DDT[4,4'-]	7	1	0.018999999		mg/kg		pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Methoxychlor[4,4'-]	7	1	0.017999999		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endrin Ketone	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Endrin Aldehyde	7	1	0.0036		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chlordane[alpha-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chlordane[gamma-]	7	1	0.0018		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Toxaphene (Technical Grade)	7	1	0.180000007		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1016	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1221	7	1	0.071999997		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1232	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1242	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1248	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1254	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aroclor-1260	7	1	0.035999998		mg/kg	U	pestpcb	SW-846:8080	RFWC	Roy F. Weston, West Chester, PA	4/10/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	RAD	Uranium-235		1	-0.011	0.0115	pci/g	U	gamma_spec	Generic:Gamma Spec.	PARA	Paragon Analytics, Inc.	4/8/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitrosodimethylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Aniline	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Phenol	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Bis(2-chloroethyl)ether	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chlorophenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dichlorobenzene[1,3-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dichlorobenzene[1,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dichlorobenzene[1,2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Methylphenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Methylphenol[4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitroso-di-n-propylamine[N-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996

Table 18. (cont.)
Combined Data Summary Table – Post Removal Sampling & Historical Data

Sample Identification	Location Identification	Depth	Media Code	RFI Class	Analyte Name	Percent Moisture	Dilution Factor	STD Sample Value	STD Uncertainty	STD Reporting Units	FU4 Qual	Analytical Suite	Analysis Method Code	Laboratory Code	Laboratory Name	Analysis Date	Shipping Date	Collection Date
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Hexachloroethane	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitrobenzene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Isophorone	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Nitrophenol[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dimethylphenol[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Benzoic Acid	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Bis(2-chloroethoxy)methane	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Dichlorophenol[2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Trichlorobenzene[1,2,4-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Naphthalene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chloroaniline[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Hexachlorobutadiene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chloro-3-methylphenol[4-]	8	1	0.730000019		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Methylnaphthalene[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Hexachlorocyclopentadiene	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Trichlorophenol[2,4,6-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Trichlorophenol[2,4,5-]	8	1	1.799999952		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996
0173-96-0108	73-02157	0.25-0.83 ft	SED	organic	Chloronaphthalene[2-]	8	1	0.360000014		mg/kg	U	SVOC	SW-846:8270	RFWC	Roy F. Weston, West Chester, PA	4/9/1996	4/1/1996	3/28/1996

12.0 FIGURES

Figure 1. Site Map with Landfill Area and Drainages A, B, C, and D2 Depicted

Figure 2. Sample Locations for Drainages A, B, C, and D2

Figure 3. Contaminants of Potential Concern for Drainages A, B, C, and D2

Figure 4. Drainage Map with Approximate Primary Locations of Debris Depicted for Drainages A, B, C, and D2.

Figure 5. Conceptual Site Model – Risk Analysis

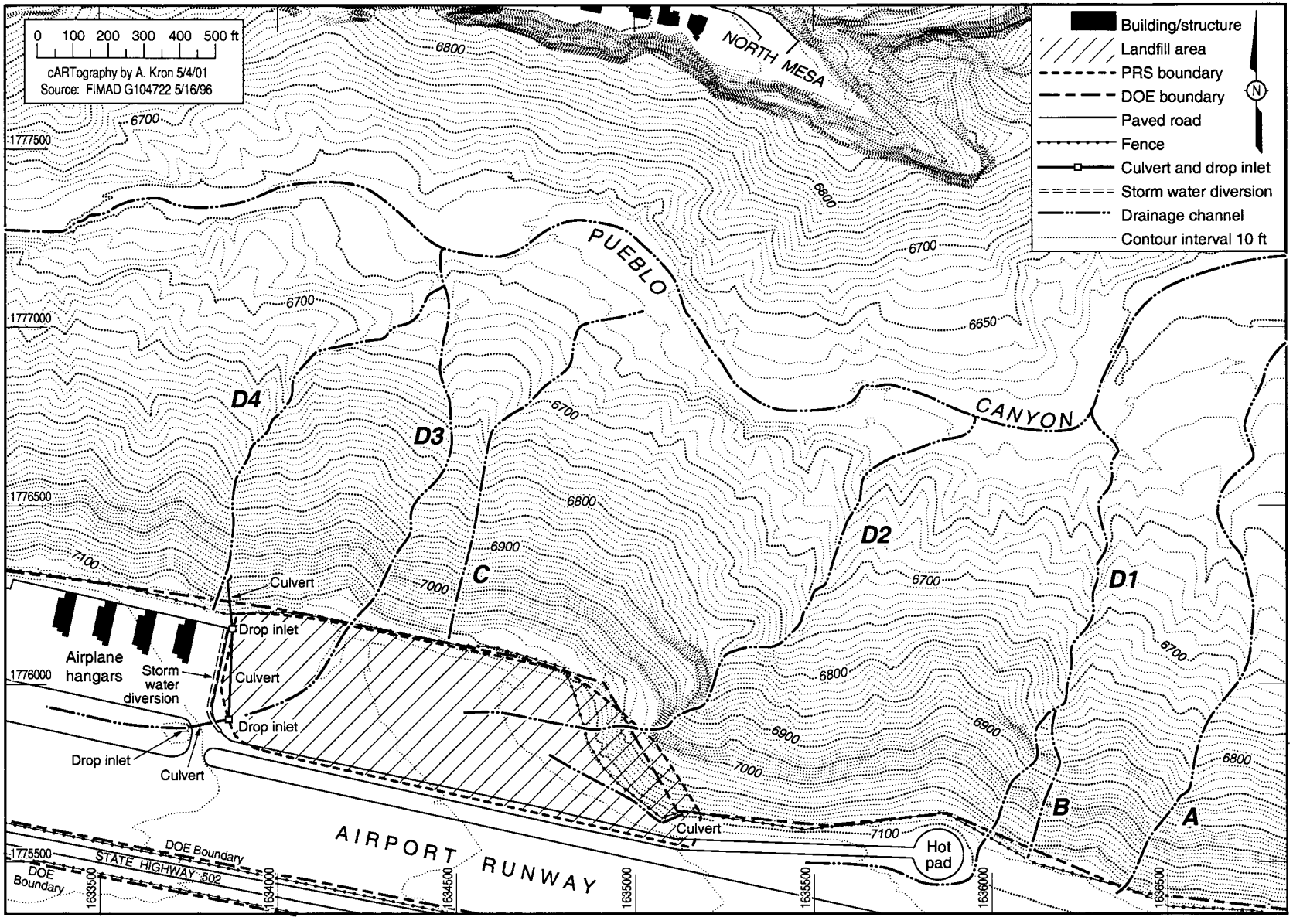

Figure 1. Site Map with Landfill Area and Drainages A, B, C, and D2 Depicted

Figure 2. Sample Locations for Drainages A, B, C, and D2

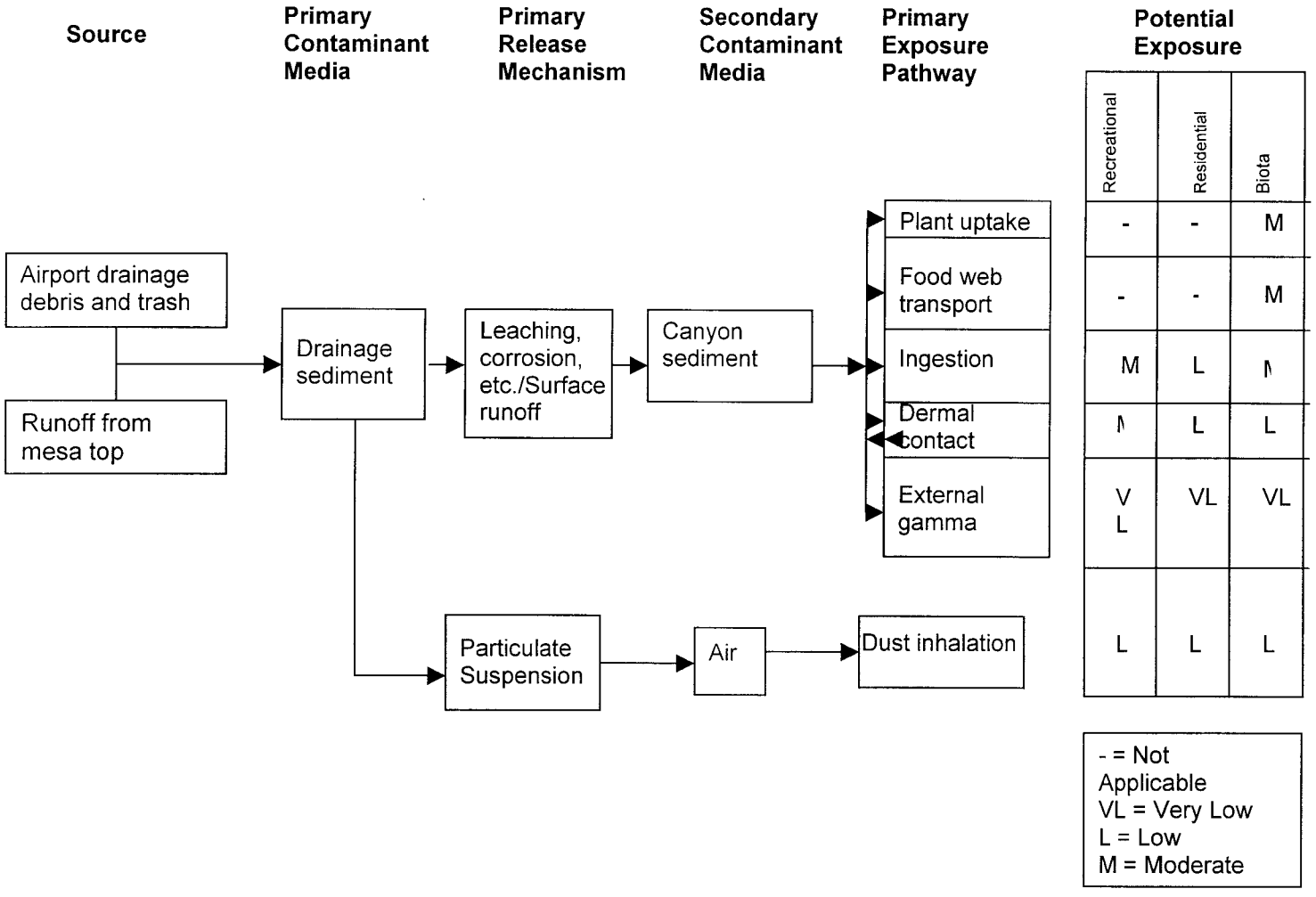

Figure 5. Conceptual Site Model – Risk Analysis

APPENDIX A

FIELD METHODS

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A FIELD METHODS

The major components of the post-removal sampling field program are defined in the project FSP. The following sections highlight the key areas of the FSP used to ensure the collection of representative samples from Drainages A, B, C, and D2.

A.1 Project Scope and Objectives

The overall scope of the Los Alamos Airport Landfill – Waste Removal Project is to mitigate solid waste in Drainages A, B, C, and D2, which are directly affected by past landfill operations. The objective of the post-removal sampling effort in these drainages is to effectively characterize the conditions that exist in each, due to contact with the waste, and to verify the effectiveness of the remedy. The overriding objectives of the post-removal sampling are to:

- Determine if the levels of previously identified contaminants have remained constant, decreased, or increased,
- Determine if the solid waste removal, coupled with natural attenuation of contaminants, has sufficiently reduced the risks to human health and public safety that the site may be closed out,
- Verify the effectiveness of the remedy,
- Locate and characterize any localized contamination identified during waste removal, and
- If localized contamination exceeds regulatory limits, make recommendations for additional actions.

A.1.1 Key Sampling Objectives

Sampling in the impacted drainages has not occurred for nearly six years. Previous sampling was limited to 13 sediment samples from the affected areas. As a result, it is unclear if the full nature and extent of contamination is understood. It is also not clear if SVOCs identified as the key contaminants have naturally attenuated since that time. It is reasonable to think that these mid-range boiling point chemicals will have degraded somewhat in the arid and generally warm climate of north central New Mexico. However, only a more comprehensive set of data acquired from the drainage areas will allow for a complete evaluation of these factors. The possibility exists that chemical constituents were present at that time that exceed the maximum concentrations measured in 1997. Should this be the case, the site may require additional measures to reduce the contaminant levels and the human health risks they pose to comply with the requirements of RCRA.

If natural attenuation has occurred, human health risks quantified using historical data may be effectively reduced as of 2003. Because the risks calculated from this data were at or very near acceptable risk levels, waste removal coupled with natural attenuation may be sufficient to mitigate all of the hazards remaining in area drainages. Should this be the case, the site will likely be deemed acceptable for RCRA closure.

Finally, available literature does not indicate that releases of hazardous, toxic, or radioactive (HTRW) materials have occurred at the landfill (LANL 2002). However, sampling efforts completed from 1994 to 1997 indicate the presence of trace metals, radionuclide, and organic constituents. At this time, it is unknown if waste removal activities will uncover areas of localized contamination or 'hot spots' that were not discovered during previous characterization activities. Should hot spots be identified, the primary objective of post-removal sampling will be to characterize these areas of contamination. Because this factor is an unknown, it may not come into play during the collection of confirmation samples. However, it is defined to ensure that field personnel are aware of its importance to fulfilling the project's overall objective. Should significant levels of contamination be found in hot spots, or if hot spots are determined to be wide

spread, additional actions may be necessary to effectively reduce human health risks to comply with RCRA.

The DOE has concluded that due to the ephemeral nature of the drainage system, coupled with the extremely low quantities of rainfall in the area, surface and groundwater contamination is not likely impacted by the site. In addition, given the shallow depths of soils and the warm, dry area environment, volatile organic compounds likely do not persist at the site. Based on this, sampling will not be conducted for surface water, groundwater, or air. The collection of soils/sediments should be sufficient to determine site conditions. As a result, only sediment will be collected during post-removal efforts.

A.1.2 Data Acquisition Strategy

To accomplish sampling objectives, 70 sediment samples, five field duplicates, and five field blanks will be collected for laboratory analysis of SVOCs, total analytical metals, PCBs, pesticides, perchlorate, ^{239}Pu, ^{137}Cs, ^{90}Sr, and TPH to include diesel and motor oil fractionation.

The steepness of the area terrain generally prevents the build-up of sediments within the drainage system. However, the 2002 LANL *Interim Measure Report* indicates that there are several areas where sediments accumulate – likely due to changes in the drainage relief. Based on these findings, it is anticipated that the bulk of the samples will consist of surface to near surface samples ranging in depth from ground surface to 1 ft. Following debris removal, 15 soil samples will be collected in each drainage at approximately 30-ft intervals, or where there is evidence of soil contamination. If soil or sediment at any sampling location is greater than 2 ft thick, a second sample will be collected approximately 2 ft below the first or at the soil/bedrock interface, whichever is encountered first using a hand auger or hand tools. The FTL will determine the best locations for collection of these samples. Each will be obtained from a position collocated with one of the 70 natural samples to allow for an evaluation of area variability. In addition, five field blanks will also be collected to evaluate the cleanliness of sample containers, field sampling activities, shipping, and laboratory sample handling, preparation, and analysis. Sample handling, screening for radioactivity, and sampling shipping will comply with the requirements outlined in LANL ER Project SOPs for these tasks (Appendix B, FSP).

Samples will be collected throughout the drainage system starting down slope where the waste removal team has defined the waste boundary and traveling upslope to where waste is most concentrated near the landfill. Sample collection will be completed in accordance with LANL ER Program SOPs for the collection of surface soils, subsurface soils, and sediment sample collection (Appendix B, FSP).

A DOE certified laboratory has been selected from three qualified candidates, to ensure that data meeting USEPA Level III requirements is obtained. In addition, during the procurement of the laboratory, a number of quality requirements related to schedule, sample handling and analysis, and report deliverables were specified to ensure that the data meets project requirements. Per the statement of work for this contract, a 10-day delivery schedule was required for each of the bidding laboratories. The remaining quality items are defined in the QAPP.

Field sampling will commence at the site following the removal waste from each drainage. It is anticipated that waste removal will take approximately 30 days. During that time, review of field plans and planning for on-site sampling will be completed. Field sample collection should be completed during a five-day period after waste removal activities have been completed. Contingencies for weather, site safety issues, and issues related to site conditions may expand this schedule slightly. It is anticipated that sample shipments will take place twice during field activities to ensure that all samples are prepared and analyzed within method specific holding times (QAPP). The laboratory will complete analysis and return complete data packages within 10 days of receipt of the last project sample.

Upon receipt of the data packages, data validation will be completed in accordance with the following LANL ER SOPs for SVOCs, pesticides/PCBs, inorganic analyses, radionuclide analyses, and TPH (Appendix B, FSP). Procedures for performing data validation are also outlined in the QAPP. Data validation will be completed two weeks following the receipt of laboratory reports. Validation reports will be included as an appendix in the final IM report.

A.1.3 Non-Measurement Data Acquisition

Non-measurement data is information contained in databases, literature, handbooks, local planning authorities, the National Weather Service, etc. that is used to develop a complete understanding of past and current site use patterns, site weather, and a range of other issues related to assessing site conditions. The majority of non-measurement data associated with the Los Alamos Airport Landfill have been gathered as part of previous literature searches and associated sampling efforts. Significant non-measurement data gathering is not anticipated as part of the post-removal sampling effort. Should sampling results indicate that site conditions warrant additional actions at the site, data users may deem it necessary to acquire all available information related to the site.

A.1.4 Field Activities by Area of Concern

The following sections delineate the rationale, sampling strategy, and procedures to be used during the collection of sediment samples from Drainages A, B, C, and D2 adjacent to the Los Alamos Airport Landfill. As mandated by the statement of work for contract DACW05-03-C-0008, each of the samples will be collected and handled in the same way, and each will be analyzed for the same parameters. No sampling will occur for media other than the soils/sediments contained in the described drainages. The only variations expected in sample collection will be the depth of individual samples. Because of this continuity, the site will be discussed as a whole when defining sampling protocols, and the entire site will be considered a single AOC.

A.2 RATIONALE/DESIGN

Previous sampling efforts in the areas adjoining the landfill have sought to identify the contaminants that have resulted from landfill operations. Limited sampling results summarized in the *Interim Measure Plan for 73-001(a)*:

- Identified a relative distribution of contamination throughout the drainage system,
- Established a list of contaminants for the AOC, and
- Established background concentrations for contaminants.

However, given the limited number of sample locations, a broad understanding of the spatial extent of contamination and the measurement of potential hot spots has not occurred. Based on these preliminary findings, the DOE has recommended that both random and biased sampling in Drainages A, B, C, and D2 be conducted to:

- Establish contamination boundaries,
- Evaluate contaminant levels versus previous sampling exercises, and
- Evaluate localized hot spots that may occur due to contact with landfill materials.

A.3 RANDOM SAMPLING

Following waste removal, random sampling will be conducted in each of the four drainages to more fully evaluate the nature and extent of contamination. The DOE has determined that collection of random samples on 30-ft intervals in each drainage, will be sufficient to augment existing data and to fully characterize impacted areas (LANL 2002). This translates to an estimated 15 surface samples per drainage or a total estimated number of random samples of 60.

This total may vary based on the depth of sediment at individual sample locations. As noted previously, at any sample location, where the depth of sediment exceeds 2 ft, a second sample will be obtained from this location at a depth of 2 ft below the initial sample, or at the bedrock interface, whichever is reached first. In the event that sediment is found with any frequency, to have a thickness of 2 ft or more, the number of random samples will increase accordingly. Because information delineating soil thickness is not presently available, it is impossible to predict the number of additional samples that will be collected at depth. However, notations in the *Interim Measure Plan for 73-001(a)* identify the presence of three 'sediment accumulation areas' in each of the drainages. Based on this information, up to 12 depth samples may be required to conform to the sampling strategy. No assumptions have been made for purposes of this plan, as on site observations have not yet been made. However, field planning will include contingencies for additional sampling to ensure that adequate field supplies are available.

The point where 30-ft intervals will begin in each drainage, will be determined based on the observations of the waste removal team and the information they gather as to the extent of waste distribution. After reviewing this information, the FTL will determine where the sampling intervals will begin. Until waste removal activities have concluded, it will be difficult to predict with any certainty the lateral extent of the waste boundary and therefore, the points where sampling should begin.

Due to the steep terrain upgrade of Pueblo Canyon, sampling will originate at the lowest point downgrade in each drainage, where the waste removal team identified solid waste. Sampling from lower elevations to higher within the drainages, will help to prevent cross contamination of sampling locations caused by personnel movements during sample collection and by sediment displaced during the collection of soils/sediments. Sample collection will be completed in accordance with the requirements outlined in the following LANL ER Project SOPs (Appendix B - FSP):

- ER-SOP-01.01, Rev. 1, *General Instructions for Field Investigations*, 12/13/01,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01,
- ER-SOP-01.03, Rev. 1, *Handling, Packaging, and Shipping of Samples*, 4/29/02,
- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03,
- ER-SOP-06.09, Rev. 1, *Spade and Scoop Method for Collection of Soil Samples*, 2/08/01,
- ER-SOP-06.10, Rev. 1, *Hand Auger and Thin-Wall Tube Sampler*, 8/26/98, and
- ER-SOP-06.14, Rev. 0, *Sediment Material Collection*, 3/16/92.

Based on available literature, sediment depths in the drainage areas rarely exceed 2 ft in thickness. Consequently, it is anticipated that sample collection for random samples, biased samples, and field duplicates for each sample type, will be completed using ER-SOP-06.09, Rev. 1, *Spade and Scoop Method for Collection of Soil S*amples in concert with ER-SOP-06.14, Rev. 0, *Sediment Material Collection*. However, should the conditions of sediments in the drainages vary significantly, the FTL may determine that the use of hand augers is necessary to obtain accurate and representative samples at depth. If this method is chosen, the FTL will identify the reasoning for selecting this method and will document the logic for the selection in the field logbook. To minimize the quantities of investigation derived waste (IDW) generated during post-removal sampling, the field team will procure and bring to the work site, sufficient stainless steel:

- Scoops,
- Spades,
- Shovels, and/or
- Hand augers.

Equipment decontamination will occur in accordance with LANL ER-SOP-01.08, Rev. 1, *Field Decontamination of Drilling and Sampling Equipment* (Appendix B). Following sample collection, all excess sediment at the sampling location will be removed from the sampling device where the sample was obtained using a stiff nylon brush. This technique is referred to as "dry decontamination". The sample device will then be covered either in a Ziploc bag or Visquene to prevent the escape of the remaining residuals, not to be used again for this sampling effort. Similarly, the nylon brush used to perform dry decontamination will be shaken toward the ground to remove all loose residuals. It will then be placed in the Ziploc bag with the sampling device it was used to decontaminate. Once isolated, the nylon brush will not be used again for decontamination on this sampling effort. After completion of sampling activities, the HSO will screen all equipment and corresponding nylon brushes for radiation levels to ensure that no material is transported from the site that exceeds regulatory requirements.

If radiation levels exceed 2 nCi/g, the affected field device(s), will be segregated until sampling is complete. In the interim, all contaminated equipment will be stored at a location outside of the site boundaries. The location will be approved by the HSO, the LANL safety representative, and will be completed in accordance with all LANL requirements. Following the completion of all sampling, decontamination will be completed using the appropriate cleaning agents (detergents, rinse waters, etc.) in spray bottles to minimize the quantity of IDW. This technique is known as "wet decontamination". Collection of decontamination residues will be completed in accordance with ER-SOP-01.08, Rev. 1 and with ER-SOP-01.06, Rev. 2, *Management of Environmental Restoration Project Waste*, 12/13/01 (Appendix B). Management of IDW is discussed more fully in Section 8.0 of this report.

A.4 BIASED SAMPLING

To further augment data collection for the site, the DOE has determined that biased sampling will be conducted at all locations where physical evidence such as free product, odors, soil staining, or stressed vegetation indicate the presence of localized contamination. The waste removal team will identify these locations during waste removal activities in Drainages A, B, C, and D2. Procedures for documenting the location of hot spots are outlined in Section 5.1.3.

Prior to collection of biased samples, all locations identified by the waste removal team as hot spots, will be evaluated versus other planned locations. As was the case with random sampling, collection of hot spot samples will be conducted from the lowest point in the drainage to the highest, to avoid cross contamination of downgrade locations. This will be factored into the chronology of random sampling as well, so that sampling in each drainage begins at the lowest point and proceeds up the drainage. It is unknown what quantity of biased sampling will be necessary, as waste removal activities have not begun. At field locations where hot spots have been identified, a biased sample will be collected. Similar to random sampling, if any hot spots occur at a location with sediment thickness exceeding 2 ft, a second biased sample will be collected at a depth of 2 ft below the initial sample or at the bedrock interface. Should any biased sampling occur within five ft (+/- 5 ft) of a planned random sample location, the biased sample will serve as both the biased and the random sample at this location (i.e., a second sample need not be collected at the 30 ft interval if a biased sample falls within five ft of its location). Collection of biased samples will also comply with the LANL SOPs outlined in Section 5.1.1.

As part of biased sampling efforts, should any sample location contain staining, stressed vegetation, or odors, consistent with petroleum spills, that location will add TPH with diesel and motor oil fractionation to the analysis sequence. Field team members will be cognizant of potential petroleum staining during the initial site inspection and during sample staking prior to sampling. These areas will be identified on the field stake as a "hot spot" and with "possible petroleum staining". The FTL will inspect all locations identified by these markings prior to sample collection. Those that he feels have a reasonable likelihood of containing petroleum products will identify sample containers for TPH with fractionation. At locations where it is unclear what the source of the staining may be, the FTL will coordinate with the PM to determine what

type of waste was located at this point. If any of the waste material (drums, car bodies, etc.) identified by the PM are likely to have contained petroleum, TPH will become an analyte of concern. For those locations with no staining or other evidence of petroleum products, TPH will not be a required analyte.

A.5 FIELD QUALITY CONTROL SAMPLES

Field quality control (QC) samples for the post-removal sampling effort will consist of:

- Five collocated field duplicates, and
- Five field blanks.

Field QC samples will be collected in such a way that the proper containers, preservative(s), and sufficient sample volumes are prepared to ensure that each analysis type has the proper frequency of field duplicates and field blanks. Based on preliminary estimates of 70 sediment samples, planned field QC frequencies of five field duplicates and five field blanks exceeds LANL requirements of 1 field duplicate and one field blank for every 20 sediment samples collected, providing room to expand the number of samples to 100 before additional QC samples are required.

A sediment field duplicate will be collected in each of the four drainages to during normal sampling activities. They will be co-located with the sample it is duplicating. The sample will be collected from the same depth, using the sampling protocols outlined in Section 5.1.1. The duplicate location will be immediately adjacent to, and upgrade of the original sample location. The fifth field duplicate will be selected by the FTL during sample collection. The location will be chosen to provide the most useful information to end data users.

Five liquid field blanks will also be collected during normal sampling activities. A field blank will be created at the start of sampling for each drainage to be analyzed for all requested parameters. To prepare field blanks for inorganic parameters, deionized water will be placed in the sample container(s) that correspond with the volume, preservation, and storage requirements (Table 4, QAPP) for the analysis type(s) requested. Inorganic field blanks will then be preserved for the analyses it will undergo prior to the start of sampling, in accordance with the requirements outlined in Table 5 of the FSP.

For organic parameters, high purity – organic free water (HPLC water) will be placed in the container(s) for each analysis type, as outlined in Table 4 of the QAPP. The liquid blank will then be preserved in accordance with the requirements outlined in Table 5 of the FSP. Once prepared, the field blanks will be placed in coolers with the necessary ice, chains of custody, etc. and will accompany the samples they are associated with to and from the site and will be stored with the samples. The field blanks will also accompany the samples in shipping to the analytical laboratory and will be analyzed as blind samples. The fifth field blank will be prepared to accompany the last group of samples through the sampling sequence, sample shipment, and through the analytical process in the same fashion as those created for the individual drainages.

Should increased numbers of samples be required because of sediment thickness or widespread hot spots, additional field QC samples may be necessary to meet the required frequency. The FTL will track this issue daily to ensure that sufficient QC samples are collected and submitted for analysis. If the current estimate of 80 samples needs to be increased to adequately characterize the site, field personnel will contact the PM. The PM will in turn request approval from the RPM and PM before additional sampling commences. Field QC sample will be collected in accordance with the following LANL ER Project SOPs:

- ER-SOP-01.01, Rev. 1, *General Instructions for Field Investigations*, 12/13/01,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01,

- ER-SOP-01.03, Rev. 1, *Handling, Packaging, and Shipping of Samples*, 4/29/02,
- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03, and
- ER-SOP-01.05, Rev. 1, *Field Quality Control Samples*, 12/17/01.

In addition to field blanks and field duplicates, one additional field QC sample will accompany each of the sample coolers. To ensure that the sample temperature requirements outlined in Table 5 are met, a temperature blank will be added to each cooler. The temperature blank will consist of a polyethylene bottle filled with deionized water. The temperature blank will be placed in the cooler prior to shipment. Upon receipt at the laboratory, the SDC will measure the temperature of the water in the temperature blank and record it on the accompanying COC form. Temperature blanks and associated samples are required to be at or below 4°C when they arrive at the laboratory to comply with LANL ER-SOPs for sample handling. Sufficient ice will be placed in each sample cooler to ensure this requirement is met.

A.6 DOCUMENTING SAMPLING LOCATIONS

Documenting sample locations will be a critical part of post-removal sampling activities. Data users and decision makers will require good location information in order to determine the nature and extent of contamination. They will also require this information to determine if immediate actions are necessary at hot spot locations. To ensure that field sampling activities can be reconstructed, sample locations will be documented using a three-pronged approach. The key aspects of this approach will include:

- Staking each sample location,
- Mapping the stake location using a field global positioning system (GPS), and
- Logging all stake locations in the field logbook.

To initiate these activities, waste removal team members will stake all hot spots at the time they are observed. The post-removal sampling team will use these stakes to identify hot spots so that sample collection can proceed quickly. The FTL will verify all locations identified as hot spots prior to beginning fieldwork. In addition, a complete inspection of the site will be completed by the FTL and field team members to identify hot spots missed during waste removal. The initial inspection will help to ensure that areas of localized contamination are not overlooked. Following this effort, a sampling chronology will be created by the FTL that will minimize cross contamination. The chronology will be documented in the field logbook. To commence fieldwork, the field team will locate the point of origin for sampling in each drainage. This will be the first sample collected. To document its location, the sample will be collected, a field number will be assigned (along with other pertinent sampling information), and the number will be entered onto a wood stake or plastic marker flag.

A GPS reading will then be taken of the sample location, which will be recorded in the field logbook and on the stake. The stake will be pounded securely into the ground at the point where the sample was collected, as a secondary means of finding the sample location. In the event that stakes are uprooted, the GPS readings will ensure that each sample location can be found. This procedure will be repeated for each of the random and biased sampling locations to ensure that sampling activities can be reproduced.

The location information will be used to create a geographic information system (GIS) map of the site. The GIS map will be used as a tool to present the data and other pertinent information for the site in the final restoration report. It may also serve as a tool for decision makers in the future should contamination issues warrant additional actions at the site.

A.7 SAMPLING AND ANALYTICAL PROTOCOLS

Contract DACW05-03-C-0008 allows for the collection and analysis of 70 natural samples and 10 field QC samples. Each sample will be analyzed for the same parameters. The only variation in the analytical scheme relates to the analysis of QC samples. Current plans suggest that there will be 75 sediment samples and 5 liquid field blanks. The analytical methods for both soil and liquid blanks will remain the same, however, sample preservation, holding times, and reporting limits will vary by sample matrix. Each of the samples collected during the post-removal sampling will be analyzed for:

- SVOCs,
- Target analyte list metals,
- PCBs/Organochlorine pesticides,
- Perchlorate,
- ^{239}Pu,
- ^{137}Cs,
- ^{90}Sr, and
- TPH [to include diesel and motor oil fractionation].

Target analyte list metals are: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silica, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, and Zinc.

A.8 Field Operations Documentation

This section outlines field documentation activities that will be completed to ensure that all field-sampling activities are completed in accordance with LANL ER requirements and all applicable regulations.

A.8.1 Field Logbook

Field logbooks are legal documents that provide the written record of all field data gathered, field observations, field equipment calibrations, the samples collected for analysis, and sample custody. They also provide day-to-day information documenting that site safety is being maintained on the work site. All field logbooks will be bound and their pages will be numbered consecutively to ensure the integrity of the data they contain. All entries in field logbooks will be made in permanent ink; any mistakes made during data entry will be crossed-out with a single line, initialed, and dated by the field team member making the entry. The field logbook will contain, at minimum, the following entries.

- Identification of all field team members on-site each day,
- Identification of all site visitors,
- Observed weather conditions,
- References to the field methods used to obtain daily samples,
- Field sample identification number,
- Location of each sampling point, to be identified by the field sample number,
- Date and time of sample collection,
- Name and initials of sampler(s),
- Sample preservative,
- Description of the material sampled (particle sizes, color, soil types),
- Types, numbers, and volumes of samples collected,
- Date, time, COC form numbers, and air bill numbers for sample shipment(s),
- Any safety issues,
- Any changes in field sampling activities due to safety requirements, and
- Any deviations from planned sampling activities,

- Photographic records.

In addition to identifying sample locations by field sample number and GPS measurements, each sample locations will be documented by obtaining photographs for each. Each color photograph will note the location where the sample was acquired and will illustrate the physical nature of the sampling area. Photographs will be used following the investigation to document the color of sample media, course material at the location, soil staining, stressed vegetation, or other information that led to the collection of samples, and other defining features at each location. All photographs will be noted in the field logbook along with those entries identified in Section 6.1. Following field activities, a separate photographic log will be created for use in the final report. The photographic log will contain the following information:

- Date,
- Time,
- Photographer,
- Field sample identification number,
- Direction of the photographic view, and
- Sequential number of the photograph.

A.8.2 Sample Documentation

There are other key elements to documenting field activities, specifically documentation necessary to identify samples and to track them through the analytical process. Documentation of field sampling and documentation of sample custody will be maintained in accordance with LANL ER-SOP-1.04, Rev. 5, *Sample Control and Field Documentation*, 12/12/02. The following sections describe the type and use of sample labels and COC records.

A.8.3 Sample Labels

All samples collected from Drainages A, B, C, and D2 will be clearly labeled in the field using permanent ink. Multiple fractions of each sample may be collected due to preservation requirements. Each container for a given sample will be labeled using the information below.

- Sample Identification number (as identified in Table 6 above),
- Date the sample was collected,
- Time the sample was collected,
- Analysis request for the sample or sample fraction,
- Preservative requirements, and
- Sampler initials.

Each of these entries will also be entered on the appropriate COC form, which will be retained as part of the project's administrative record. All of these entries will also be made in the field logbook to complete the paper trail for the samples.

A.8.4 Chain-of-Custody Records

Chain-of-custody (COC) refers to the process by which the holder of a sample or samples is identified throughout the sampling and analysis process. Sample custody begins when the sample is generated from the sample location. At the time of collection for the first post-removal sample, a COC form will be initiated. The information pertaining to each sample will be entered on a COC form provided by the analytical laboratory. At the time sampling on a single day is completed and samples are stored to ensure proper preservation, the field sampler will sign the COC form denoting they are in his/her custody. On these occasions, samples will be stored in a cooler and refrigerated as necessary, in a refrigerator with access limited to official project personnel only.

When a cooler(s) is ready for shipment to the analytical laboratory, the FTL or his designee will sign the completed COC form(s), signifying the transfer of custody to the laboratory sample and document custodian. The FTL will retain the field sampler copy (usually the yellow copy) as part of the project's permanent record. The remaining two copies will be placed in a Ziploc bag, taped to the lid of the cooler, and will accompany the samples in shipping.

If all information pertinent to the analysis request cannot be entered on the COC form, the field team will utilize a supplemental form to capture this information. A 'Laboratory Notification Form' (Appendix C, QAPP) as described in USACE Manual EM 200-1-3, shall be used for any supplemental information necessary to communicate analysis requirements to the analytical laboratory.

A.8.5 Records Management

To ensure that sampling and analysis records are complete and accurate, project personnel must perform record keeping and document storage in accordance with the Quality Management Plan. The key areas of records management include:

- Document Control, and
- Data Management.

Document control consists of the clear identification of all project-specific information in an orderly fashion, secure storage of all pertinent project related documentation, and controlled distribution of this documentation. Proper document control will ensure that all project documents receive the proper level of review, comment, and revision. It will also ensure that project personnel are using the most up to date guidance.

Data management consists of proper review, reporting, and control of all project data acquired during the investigation. Data may consist of field observations, photographic records, and laboratory reports.

All aspects of document control and data management will be overseen by the PQO. The PQO will review all records related to post-removal sampling prior to their distribution to the document control coordinator. Any changes made to project-specific information will result in the assignment of the next sequential revision number to the document. Following approval, it will be transferred to the document control coordinator for archival. All project information will be maintained as part of the site's administrative record for 5 years, or until a project close-out is requested by the client. No project document will be disseminated by the document control coordinator to any person other than those identified in Table 4, without written authorization from the PM and the PQO.

A.8.6 Sample Packaging and Shipping

Sample packaging and shipping involves everything from sample preservation to shipment of samples to the laboratory. Sample preservation will be completed in accordance with Table 5 of this FSP and ER-SOP-01.02, Rev. 1, *Sample Container and Preservation.* Sample packaging, shipping preparation, and shipment will be completed in accordance with: ER-SOP-01.03, Rev. 2, *Handling, Packaging, and Shipping of Samples.*

Tables 2-5 summarize the measured levels of chemicals found at the site. The data indicates that all of the Contaminants for the site are sufficiently low, that post-removal samples will meet the requirements in 49 CFR 172.101 as U.S. Department of Transportation (DOT) small quantity hazardous material samples. As a result, DOT requirements for packaging, shipping papers, labels, and placards noting shipping cooler contents as hazardous can be waived.

To ensure that sample shipments meet these requirements sediment samples shall be field screened by a radiation control technician (RCT) or the HSO. Screening personnel will note the levels of the samples, document it on the COC or another form where space is available, and note in the field logbook. Based on historic data, it is anticipated that all samples will have activity less than 70 Becquerels per gram (Bq/g) or 2 nanocuries per gram (nCi/g). Samples at these levels are not regulated by the DOT. Should any sample or group of samples exceed 70 Bq/g [2nCi/g], special arrangements will need to be made with the LANL Sample Management Office (SMO) and their partner group 'BUS-4'.

In preparation of sample shipment, ice will be placed in each cooler. The ice will be placed inside double bags such as Ziplocs or clean trash bags and sealed. Sufficient ice will be placed in each cooler to ensure that ice is present in the coolers when they arrive at the laboratory. If ice cannot be acquired near the site, blue ice can be used as a substitute. Preserved samples will be placed in sealed Ziploc bags or equivalent so as not to contact melting ice should it escape, or other sample residues in the event of container leakage or breakage. The preserved samples will placed atop the ice, to ensure that prescribed handling temperatures are maintained. The cooler will then be over packed with chemically inert material to ensure that samples do not move during shipment. The cooler will then be sealed using packing tape. Custody seals will be affixed on the cooler in such a way, that if the cooler is opened, the seal will be broken. Do not place tape between the cooler and the custody seal or the cooler may be opened and resealed without evidence of the seals being broken.

Field personnel will use Federal Express© or an equivalent shipping company for the shipment of samples. They will be used for two reasons. First, Federal Express© offers the means of maintaining a custody record for field samples from the time they are shipped until their receipt at the laboratory, allowing all aspects of shipment and laboratory receipt to be documented. Secondly, they offer a means of shipping samples on cargo-only flights that may not be offered by shipping companies who use commercial flights only. Use of cargo-only flights may be necessary, should activity levels in samples exceed 2 nCi/g. Shipping information for the analytical laboratory is provided below.

Upon receiving samples at the laboratory, the sample and document custodian will sign and date the COC affixed to inside of the cooler lid, signifying laboratory acceptance of sample custody. The laboratory will adhere to all of the requirements outlined in LANL ER SOPs:

- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01, and
- ER-SOP-15.09, Rev. 0, *Chain of Custody for Analytical Data Packages*, 3/27/00.

Custody procedures for samples in the laboratory include limited access to the facility, sample tracking throughout the analytical sequence, proper sample storage, and maintaining custody of samples, at a minimum, until their holding times have been exceeded.

Laboratory reporting will include field and laboratory custody documentation, sufficient to demonstrate that sample custody and integrity has been maintained throughout the analysis process. Transmittal of the laboratory generated data packages will include a letter signed by the laboratory manager or his/her designee signifying final release of project data. The laboratory will maintain project data in their archive for five years, or until project personnel have signified closeout of the project. The laboratory manager and sample and document custodian will retain responsibility for records management related to post-removal sampling. At no time will data for this project be disseminated without written authorization from the PrM, the RPM, the PM, and/or the PQO.

A.9 INVESTIGATION DERIVED WASTE

IDW is waste generated during the process of sampling/investigating a site to determine if hazardous constituents are present. Collection, labeling, storage, characterization, and disposal of IDW will be completed in accordance with LANL ER-SOP-01.03-6, Rev. 2, *Management of Environmental Restoration Project Waste*, 12/13/01. Examples of IDW include:

- Wash water and associated decontamination fluids,
- Personal protective equipment (PPE),
- Sample media residue, and
- Disposable field equipment.

The sampling procedures employed on this project are designed to minimize the quantities of IDW generated. As noted, all sample media that can be physically removed from used sampling devices will be scraped and brushed back into the sample location. This will greatly limit the quantity of solid residues that will be contained on equipment. After dry decontamination, each piece of field equipment will be placed in protective plastic to avoid contact with project personnel, vehicles, and other sampling devices. This sampler will not be used again for the project. Nylon brushes used to perform dry decontamination will be isolated in the same protective plastic as the device it was used to decontaminate.

Following their isolation, the device and the nylon brush will be field screened by the RCT or the HSO to determine if radiation levels are in excess of 70 Bq/g or 2 nCi/g. Those field items that do not exceed this level will be considered safe for shipment off-site. Any field equipment that exceeds 2nCi/g shall be segregated from other equipment in area approved by LANL. At this point, wet decontamination will be necessary for this equipment in order to safely remove it from the site. If field equipment is identified for wet decontamination, a waste management plan (WMP) will be prepared and submitted for review by the PrM or RPM before decontamination occurs. A temporary storage area will be identified in the WMP and will be approved by LANL prior to decontamination.

After completion of field activities, any field equipment found to contain excess levels of activity, will undergo wet decontamination whereby, residual sample media will be washed from the equipment. The rinsates and the sample residuals will be captured in a washbasin, with sufficient capacity to ensure that a release does not occur. The IDW generated from wet decontamination will then be stored in a container that complies with all DOT specifications. The container will be marked in accordance DOT placarding requirements, and a sample (or samples) will be collected from the storage vessel(s) to determine the appropriate course of action for disposal. Following waste characterization, waste disposal will be performed in accordance with all applicable regulations.

Following sample collection, PPE will be placed in a sealed garbage bag. This sequence will be repeated for each sample. At the end of each day, the storage bag will be sealed using packing tape. Used PPE will be then be transported for accumulation away from the work site, in the area(s) where solid waste was accumulated during retrieval from Drainages A, B, C, and D2. Similar to sampling equipment, should PPE be found to contain radiation levels above 2 nCi/g, contingencies will be developed in the WMP that will account for the storage, sampling, and disposal of contaminated PPE.

Used PPE storage bags that are found to contain radiation levels below 2 nCi/g, will be disposed of with the solid waste removed from the drainages. As the PPE will have contacted the same materials as the solid waste, the levels and types of constituents contained on both should be consistent.

A.10 FIELD ASSESSMENT/THREE-PHASE INSPECTION PROCEDURES

To ensure the quality of all field activities, a three-phase inspection process will be incorporated into each phase of field sampling. The steps of the three-phase process include:

- Preparatory inspection,
- Initial inspection, and
- Follow-up inspection(s).

The inspection process is designed to ensure that all field planning is conducted in accordance with this FSP, the QAPP, and all LANL SOPs necessary to complete each task. The PQO is responsible for oversight of all aspects of project quality assurance.

The preparatory inspection will consist of a review of all project-specific planning documents to ensure that field-sampling activities comply with applicable guidance and regulatory requirements. The preparatory inspection will also take inventory of field related materials such as field logbooks, field equipment, sample containers, etc. to ensure that the field team is properly equipped to complete sampling efforts. Following the preparatory inspection, the PQO will identify any deficiencies in the planning process and will direct corrective actions to ensure that field planning is completed properly. The findings of the initial inspection and any corrective actions will be noted in the contractor quality control (CQC) logbook.

The PQO or his designee will complete the CQC logbook daily during field activities to ensure that field sampling and related activities are progressing in accordance with project requirements. Following the preparatory inspection and implementation of corrective actions, fieldwork will commence. The PQO will accompany the field team to the project site and perform an initial inspection of field activities to ensure that they are proceeding according to plan. Any deviations that are deemed outside of project requirements will be identified in the CQC, will be brought to the attention of the PM and the FTL, and immediate corrective actions will be taken. Fieldwork will be halted until such time as the corrective action can be implemented and documented. After successful implementation of the corrective action, it will be identified in the CQC, along with the means for proper implementation. The PQO will continue to monitor field activities until he is convinced that all procedures are implemented and working properly.

Because the planned duration of post-removal sampling is quite short, the PQO will remain on-site throughout field sampling activities. The PQO will make daily CQC entries noting the progress of field sampling, any deviations from project plans, and any corrective actions necessary to remedy problems. As a result, follow-up inspections will be a continuous process, completed following the initial inspection. CQC entries will be made for each day of the field sampling exercise. The CQC entries will be made part of the project's permanent record by providing the final CQC logbook to the document control coordinator. Copies of the CQC entries will be added to the final report as an attachment.

A.10.1 Non-Conformance/Deviations & Corrective Actions

Corrective action procedures are identified and implemented when any activity, material, or data element deviates from project guidance and fails or will fail to meet project requirements. Examples of these types of deviations would include:

- Sampling equipment failure,
- Cross contamination of equipment or field supplies,
- Improper sampling technique,
- Improper sample labeling,
- Improper sample preservation,
- Improper equipment or materials, and

- Changing field conditions.

Because of the short duration of planned field activities at the Los Alamos Airport Landfill, corrective actions for the project will need to be identified and implemented quickly. Field deviations and any corresponding corrective actions will be addressed through continuous inspection activities by the PQO as outlined in Section 9.0 of the FSP. The constant presence of QA oversight should aid greatly in minimizing mistakes in the field.

The analytical laboratory will note any problems or deviations from this FSP, the QAPP, or other standard practices immediately upon receipt of project samples. These will be brought to the attention of the PQO or the PM immediately as well, to ensure that:

- Sample holding times are met,
- Additional sample quantities can be obtained if samples are broken, due to insufficient sample volume, or due to improper preservation, or
- If other improper sample handling or documentation exists.

If deviations occur during sample analysis, these will be documented to ensure their traceability. If changes in the analytical regime of this QAPP, the FSP, or the prescribed analysis methods are planned or required, the laboratory manager or his/her designee will contact the PQO immediately for approval of this deviation. If major QA/QC exceedances are identified, the laboratory manager or his/her designee will contact the PQO or the PM immediately to ensure that the appropriate corrective action can be identified and implemented.

During the review and validation of analytical data, should any major contractual deficiencies be identified, more formal corrective actions may be necessary. Minor deficiencies such as missing information can be obtained immediately by the PQO or his designee contacting the analytical laboratory directly. Major QA/QC exceedances that will lead to data disqualification will require a more formal approach. In the event that data produced by the laboratory does not meet USEPA Level III requirements, the PQO will contact the PM so that he may discuss the potential corrective actions with the RPM and/or PrM. All subsequent actions will be documented in the CQC and all procedures developed to remedy the problem will be formally documented. All formal corrective action measures will be included in the final report.

EQUIPMENT & MATERIALS SURVEY FORM

Page 1 of 3

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
9/11/03	Shipment of Sample Coolers	Mike Bradshaw	

No.	Area Surveyed	Direct Reading µR/hr				Removable Readings			
		Alpha / 100 cm²		[redacted]-Gamma[redacted]		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross [redacted]	Sample [redacted]	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Top	N/A	N/A	N/A	<17	N/A	<220	N/A	<220
	Bottom				<17				
	Side 1				<17				
	Side 2				<17				
	Side 3				<17				
	Side 4				<17				
2	Top				<16				
	Bottom				<17				
	Side 1				<17				
	Side 2				<15				
	Side 3				<17				
	Side 4				<16				
3	Top				<14				
	Bottom				<16				
	Side 1				<14 [redacted]				
	Side 2				<15				
	Side 3				<15				
	Side 4				<15				

Comments:

Package conforms to 49CFR172

<2mR <220dpm α <2,000 β

dpm B/G

Survey Instrument Data	Direct [redacted]	Direct [redacted] Gamma	Removable Alpha	Removable Beta Gamma
Scaler Model	Ludlum M 5		Ludlum 2929	
Serial #	0792		0772	
Cal Due Date	12/5/03		11/14/03	
Probe Model	N/A		N/A	
Serial #	N/A		N/A	
Cal Due Date	N/A		N/A	
Bkg Counts	12 µR		0.9	44
Bkg Count Time	1		1	50
Bkg CPM	N/A			
Efficiency / 100	N/A		13%	22%
Area Cor. Factor	N/A			
Smpl Count Time	1			
MDA	N/A			

SUPERVISOR SIGNATURE EDi

DATE 9/11/03

EQUIPMENT & MATERIALS SURVEY FORM

Page 2 of 3

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
9/11/03	Shipment of Sample Coolers	Mike Bradshaw	

No.	Area Surveyed	Direct Reading µR/hr				Removable Readings			
		Alpha / 100 cm²		[redacted]-Gamma[redacted]		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross [redacted]	Sample [redacted]	Gross CPM	Sample DPM	Gross CPM	Sample DPM
4	Top	N/A	N/A	N/A	< 16	N/A	< 20	N/A	< 2000
	Bottom				< 15				
	Side 1				< 15				
	Side 2				< 15				
	Side 3				< 16				
	Side 4				< 15				
5	Top				< 16				
	Bottom				< 16				
	Side 1				< 15				
	Side 2				< 15				
	Side 3				< 15				
	Side 4				< 15				
6	Top				< 17				
	Bottom				< 15				
	Side 1				< 15				
	Side 2				< 15				
	Side 3				< 15				
	Side 4				< 16				
					<				

Comments:

Package conforms to 49 CFR 172

< 2mR r < 220 dpm α

< 2,200 dpm B/γ

Survey Instrument Data	Direct		Removable	
	[redacted]	[redacted] Gamma	Alpha	Beta Gamma
Sealer Model	Ludlum Mod 5		Ludlum 2929	
Serial #	0492		0772	
Cal Due Date	12/5/03		11/15/03	
Probe Model	N/A		N/A	
Serial #			N/A	
Cal Due Date			N/A	
Bkg Counts	12mR		09	44
Bkg Count Time	1		1	50
Bkg CPM	NA			
Efficiency / 100	NA		18%	22%
Area Cor. Factor	NA			
Smpl Count Time	1			
MDA	NA			

SUPERVISOR SIGNATURE: EDI

DATE: 9/11/03

EQUIPMENT & MATERIALS SURVEY FORM

Page 3 of 3

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
9/11/03	Shipment of Sample Coolers	Mike Bradshaw	

No.	Area Surveyed	Direct Reading µR/hr				Removable Readings			
		Alpha / 100 cm²		[redacted]-Gamma[redacted]		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample [redacted]	Gross CPM	Sample DPM	Gross CPM	Sample DPM
7	Top	N/A	N/A	N/A	<16	N/A	<20	N/A	<200
	Bottom				<15				
	Side 1				<15				
	Side 2				<15				
	Side 3				<14				
	Side 4				<14				
8	Top				<14				
	Bottom				<15				
	Side 1				<15				
	Side 2				<14				
	Side 3				<16				
	Side 4				<15				
9	Top				<14				
	Bottom				<15				
	Side 1				<15				
	Side 2				<15				
	Side 3				<15				
	Side 4				<15				

Comments:

Package conforms to 49 CFR 172

<2mR γ <220 dpm α

<3200 dpm β

Survey Instrument Data	Direct		Removable	
	[redacted]	[redacted] Gamma	Alpha	Beta Gamma
Scaler Model	Ludlum M4		Ludlum 2929	
Serial #	0492		0772	
Cal Due Date	12/5/03		11/15/03	
Probe Model	N/A		N/A	
Serial #	N/A		N/A	
Cal Due Date	N/A		N/A	
Bkg Counts	12 µR		0.9	44
Bkg Count Time	1		1	50
Bkg CPM	N/A			
Efficiency / 100	N/A		18%	22%
Area Cor. Factor	N/A			
Smpl Count Time	1			
MDA	N/A			

SUPERVISOR SIGNATURE [signature] EDI

DATE 9/11/03

Pat Seccomb

From: "Mike Bradshaw" <mbradshaw@edi-nm.com>
To: <peipatmt@montana.com>
Sent: Thursday, October 09, 2003 3:26 PM
Subject: Sampling Equipment

Pat,

A radiological survey was conducted on all sample containers. No indication of radioactive contamination was detected nor should any be expected with regard to sampling equipment. If there had been any readings on the samples above background, the equipment would then be suspect. However, all readings were within the background range.

Best Regards,
Mike Bradshaw
Health Physicist

APPENDIX B

ANALYTICAL PROGRAM

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B ANALYTICAL PROGRAM

The major components of the post-removal sampling analytical program are defined in the project QAPP. The following sections highlight the areas key to obtaining data of known and reliable quality. Following definition of key quality assurance factors, the complete assessment of post-removal data quality is provided.

B.1 Data Quality Objectives

Data quality objectives (DQOs) are used to define the type, quantity, and quality levels of data necessary to accommodate decision-making at the project site. They are defined in this QAPP to ensure that data acquisition for the post-removal sampling effort results in site-specific data sufficient to:

- Direct the closure of the Los Alamos Landfill and impacted drainages, or
- Assist in identifying additional actions necessary to mitigate impacts.

B.1.1 Data Use - Background

The NMED regulates the Los Alamos Airport Landfill as a solid waste management unit (SWMU) to be managed and closed under the laws and regulations prescribed by the RCRA. Post-removal sampling efforts at the site are intended to evaluate the levels of contaminants versus those identified during previous LANL RFI efforts. The post-removal sampling effort is also intended to better define the spatial extent of contamination resulting from waste distribution throughout Drainages A, B, C, and D2. Lastly, this effort is designed to identify any contaminants and/or contamination uncovered during waste removal, not previously characterized by RFI efforts.

The regulatory driver for the project is RCRA corrective action (NMED 2003). As a result, post-removal sampling data will need to be of sufficient quality and quantity to support RCRA decision-making related to site closure. In Section 5 of the FSP, the suite of analytical parameters and the sampling strategy have been defined for Drainages A, B, C, and D2. DOE has determined that data meeting USEPA Level III requirements will be sufficient to support closure decisions. Level III data will be achieved through the use of USEPA SW-846, USEPA 300 Series, and DOE radionuclide methodologies coupled with the reporting requirements outlined in Section 8.0 of the QAPP.

Historical data for the site (Section 1.3, FSP) indicates that both contamination and activity levels fall below NMED and DOE human health and dose threshold limits. It is anticipated that contaminants of concern will likely be measured at similar levels, with the possible exception of localized areas of contamination. If identified, hot spots may contain levels of contamination and/or activity exceeding acceptable levels. In addition, previous sampling efforts did not obtain samples in Drainages A or C or in the upper reaches of Drainage B, and comprehensive sampling was not completed throughout the drainage system. As a result, the extent of area contaminants and radionuclides is not fully established.

The post-removal sampling effort will be utilized to delineate the boundaries of area contamination, to define areas of localized contamination, and to provide decision makers with data of sufficient quality so they may determine if RCRA closure can proceed, or if additional corrective actions are necessary. The following sections of this QAPP define the requirements for measurement data acquired from Drainages A, B, C, and D2 to ensure that these objectives are met.

B.1.2 Measurement Quality Objectives for Data

Overall project objectives are defined in Section 3.1. DQOs and measurement quality objectives (MQOs) are the tools used by field and laboratory personnel to ensure these objectives are met. Data quality objectives are the requirements defined by project endpoints and regulatory drivers. MQOs are the quantitative and qualitative measures used to evaluate data quality versus the overriding DQOs for the project. The key MQOs include:

- Precision,
- Accuracy,
- Instrument Detection Limits/Practical Quantitation Limits/Minimum Detectable Concentration,
- Completeness,
- Representativeness, and
- Comparability.

The following sections define the project-specific DQOs for measurement data, how they will be applied to sample data, and the MQOs that will be utilized to evaluate compliance with DQO requirements.

B.1.2.1 Precision

Precision is defined as the measure of agreement or reproducibility, among individual measurements for the same chemical or radiochemical property, under the same analytical conditions. Precision is measured in terms of relative percent difference (RPD) using the following calculation:

$$RPD = \frac{[\text{Original Sample Result} - \text{Duplicated Sample Result}]}{([\text{Original Sample Result} + \text{Duplicate Sample Result}]/2)} \times 100$$

Precision for post-removal sampling will be measured based on the performance of laboratory duplicate samples for inorganic and radionuclide analyses, and for matrix spike and matrix spike duplicate pairs for organic analyses. Because sampling techniques and the sample matrix will be uniform throughout the sampling effort, the industry standard precision criteria for evaluating solid matrices of +/- 35% RPD will be used to evaluate project precision. Precision will be evaluated by analysis type, to determine compliance with the USEPA criteria. The following define the individual analysis types that will be evaluated for post-removal sampling.

- SVOCs,
- Target analyte list metals,
- PCBs/Organochlorine pesticides,
- Perchlorate,
- ^{239}Pu,
- ^{137}Cs,
- ^{90}Sr, and
- TPH (to include diesel and motor oil fractionation).

Target analyte list metals are: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silica, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, and Zinc.

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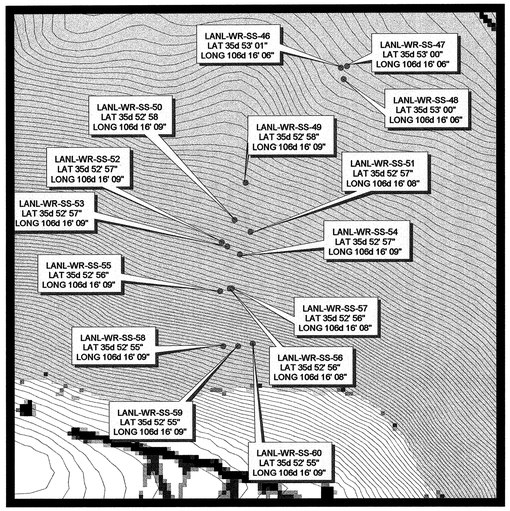
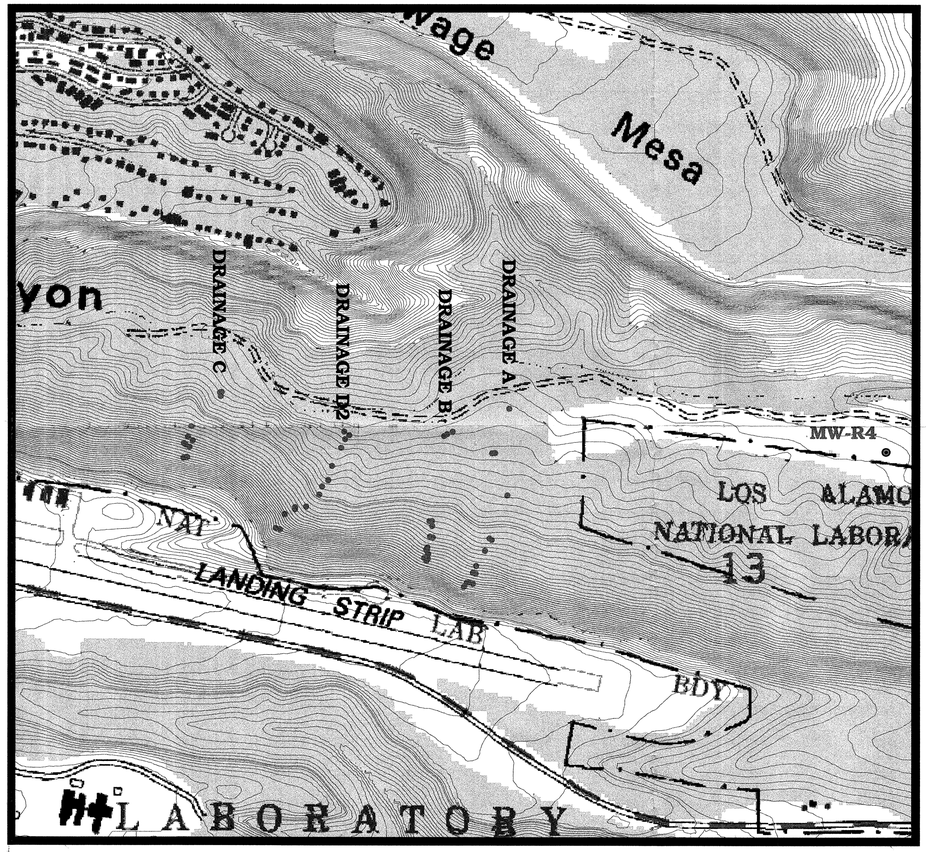
DRAINAGES A,B,C, AND D2

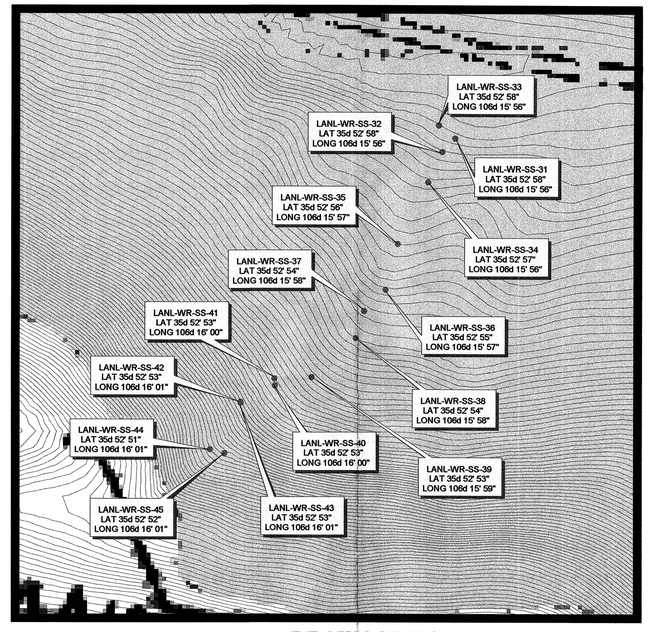


1 inch = 60 feet

DRAINAGE C

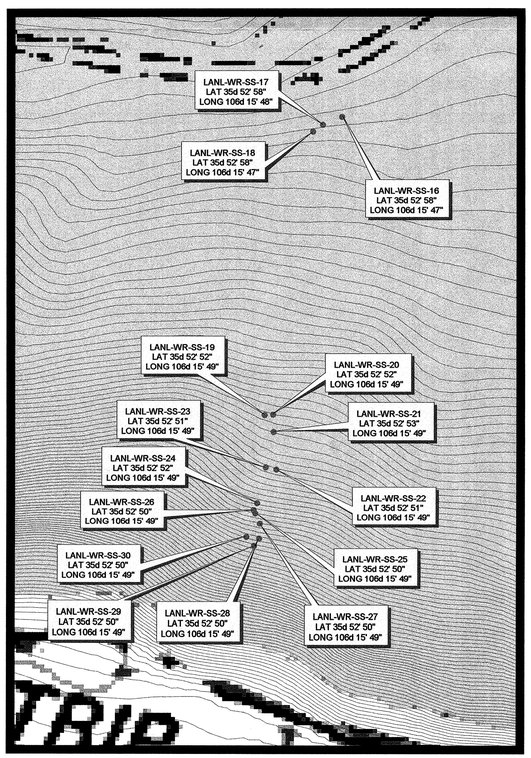


1 inch = 200 feet



1 inch = 60 feet

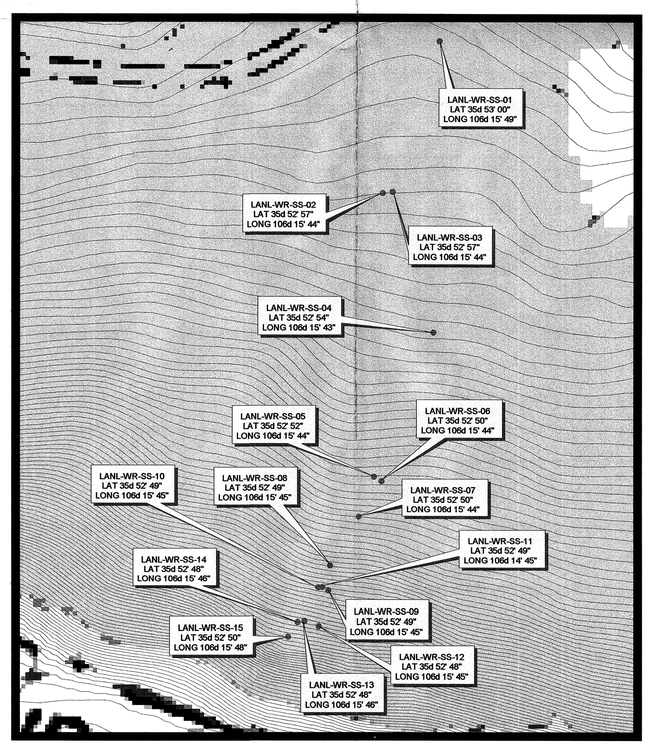
DRAINAGE D2



DRAINAGE B

1 inch = 60 feet

N



DRAINAGE A

1 inch = 60 feet

FIGURE 2
SAMPLE LOCATIONS
DRAINAGES A,B,C, AND D2
LANL WASTE REMOVAL PROJECT
POST REMOVAL SAMPLING

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The objective for each analysis type is to achieve 90% compliance with the prescribed precision criteria (i.e., at minimum, 9 of 10 samples will have associated laboratory duplicates or matrix spike duplicates, showing agreement that is ≤ 35%). Precision will be given equal weight with accuracy in determining the completeness for this project. The determination of precision criteria will be segregated by analysis type, meaning that all SVOCs will be evaluated for precision criteria together to determine if this MQO has been met. This will ensure that duplicate precision from each analysis type is applied only to that parameter(s). It will also ensure that precision is evaluated for samples and QC samples that were prepared and analyzed using the same analytical methods. Precision evaluations will be performed following data assessment procedures (Section 9.0).

Results qualified as estimated quantities due to imprecision, signified by a 'J' validation flag, will be considered outside of the precision goals for this project. Although likely biased somewhat due to imprecision, these results may be used in the site evaluation process. In such cases, biases in reported results will be considered during data evaluation for 'J' flagged results. Sample results qualified as rejected quantities due to imprecision, signified by an 'R' validation flag, are also outside of the precision goals for the project. Rejected results are not suitable for use in evaluating site conditions, due to the excessive QC exceedances that led to the assignment of this qualifier.

Field duplicates will not be used in the determination of sampling and analysis precision. Instead, they will be used to evaluate the natural variability of sampling and the sample matrix. This variability will be key in data evaluation for the project, as it will aid in predicting ranges in the sample results. Having this information, will also aid data users in evaluating the effect of sample variability on human health and ecological risks, and the suitability of this site for closure.

B.1.2.2 Accuracy

Accuracy is defined as the comparison of a known quantity of a reference standard to the value measured by the laboratory during analysis. Accuracy is assessed during data validation by evaluating the performance of reference standards such as:

- Laboratory control samples,
- Radioactive tracers,
- Matrix spikes,
- Matrix spike duplicates, and
- Surrogate compounds.

Reference standards will be assessed during data validation (Section 9) in accordance with LANL ER-SOPs. Any of the listed reference standards, which result in the qualification of sample results because of poor performance, will be considered outside of QC requirements. The objective for each analysis type is to achieve 90% compliance with these accuracy criteria (i.e., At minimum, 9 of 10 samples will be expected to have associated reference standards that meet the requirements of the analytical method and LANL ER-SOPs for data validation).

Accuracy will be given equal weight with precision in determining the completeness of the data set. When evaluating accuracy, individual analysis types will be compared with one another only, as other analyses will not rely on the same QC during analysis to determine accuracy.

B.1.2.3 Detection Limits

Several minimum levels of detection are defined in the analytical methods for post-removal sampling activities. These include:

- Instrument detection limits (IDLs) – inorganic & organic analyses,

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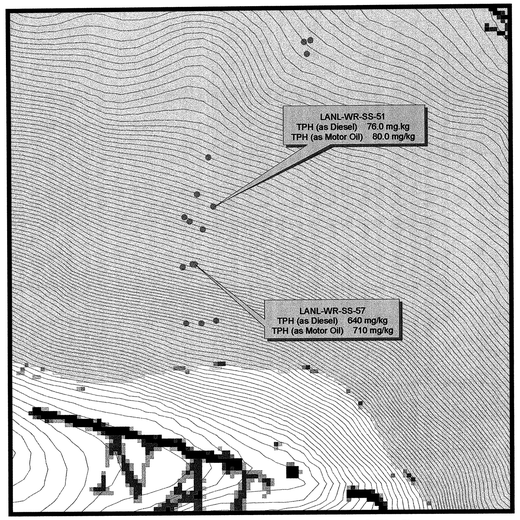
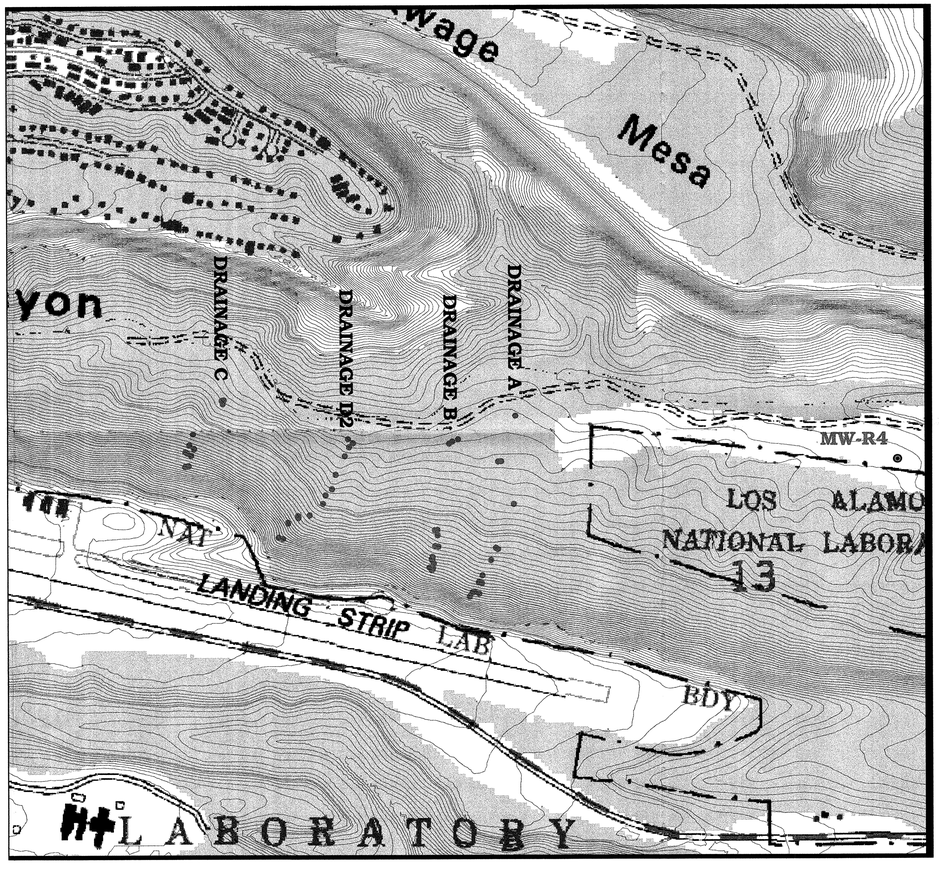
DRAINAGES A,B,C, AND D2

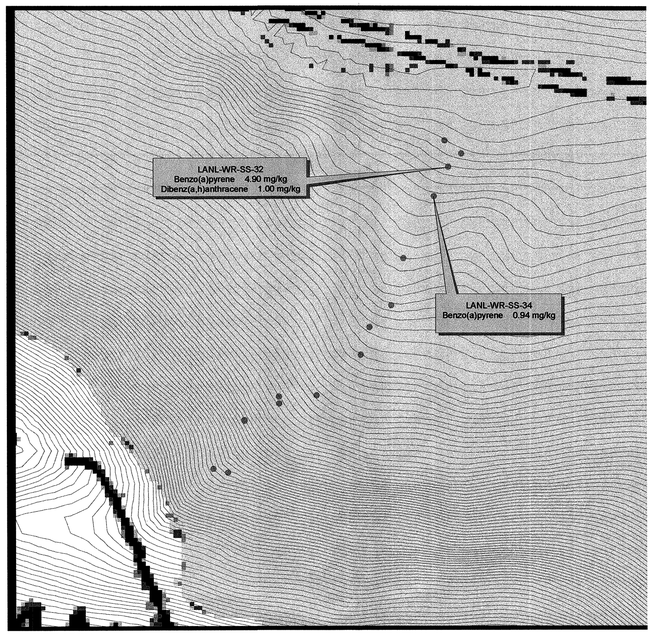


1 inch = 60 feet

DRAINAGE C

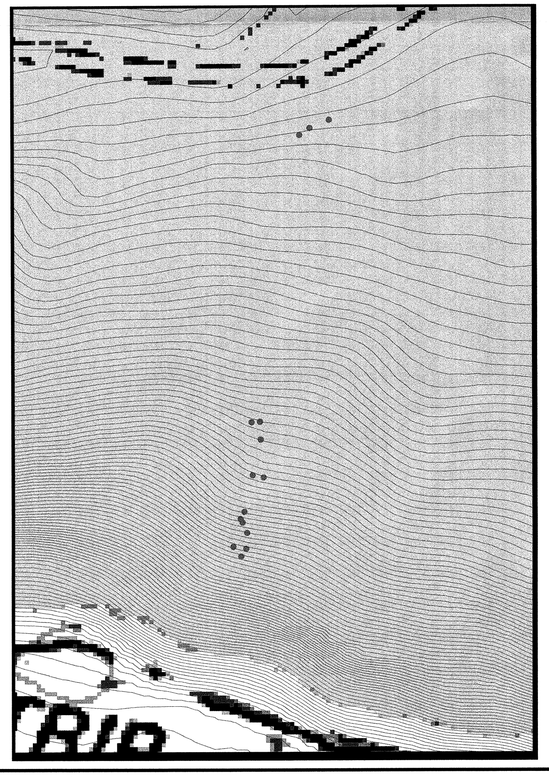


1 inch = 200 feet



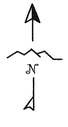
1 inch = 60 feet

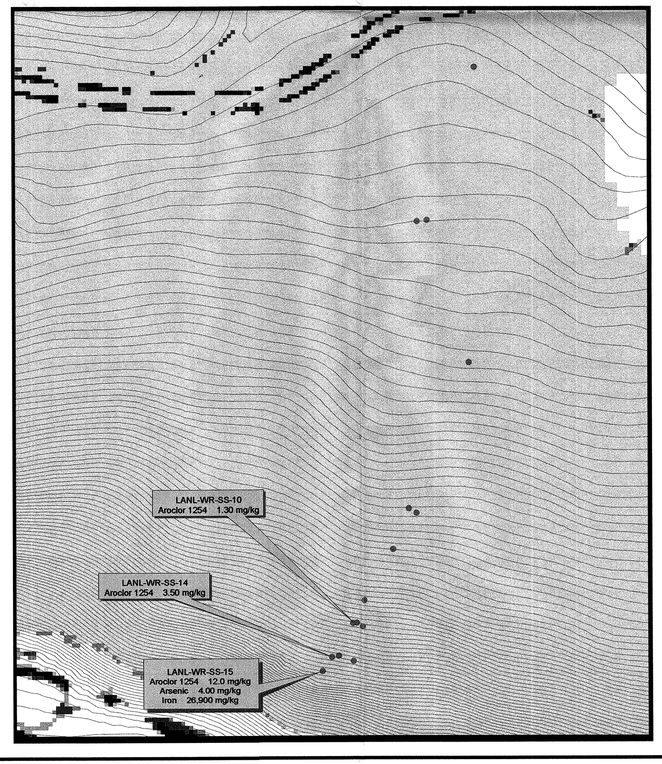
DRAINAGE D2



DRAINAGE B

1 inch = 60 feet





DRAINAGE A

1 inch = 60 feet

FIGURE 3
CONTAMINANTS OF
POTENTIAL CONCERN
DRAINAGES A,B,C, AND D2
LANL WASTE REMOVAL PROJECT
POST REMOVAL SAMPLING

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- Method detection limits (MDLs) – perchlorate,
- Minimum detectable concentration (MDC) – radiochemical parameters, and
- Practical quantitation limits (PQLs) – organic analyses.

Minimum levels of detection will be evaluated as part of data validation efforts to ensure that reported concentrations and activities comply with the analytical methods specified in this QAPP and project-specific needs. The effects of minimum detection limits on reported sample results will be evaluated in accordance with LANL ER-SOPs. Sample detection limits are expected to meet the sensitivity requirements defined in the prescribed analytical methods – Table 7. Any anticipated or observed deviations from the prescribed minimum detection requirements will be communicated to the PQO immediately.

Laboratory personnel are cautioned, that despite the RCRA regulatory framework under which this project is being completed, risk based evaluations are likely to be utilized to demonstrate the suitability of this site for closure. As a result, achieving the best available sensitivity for sample analysis will be crucial to performing these tasks. The laboratory, in all cases, will seek to achieve the lowest possible levels of detection in analyzing samples for this project. At a minimum, post-removal sample data will comply with the detection limits and practical quantitation limits specified in the Table 8 to ensure that risk based screening levels are not exceeded due to analytical insensitivity. Tables 2 thru 4 summarizes historical data for the site and risk based screening action levels (SALs) for each of the COPC found during previous investigations of the site. Should deviations from these methods be anticipated or observed, the PQO will be contacted immediately to determine their impact on sample analysis.

Minimum levels of detection will be evaluated as part of the accuracy determination for project data. The effects of elevated levels of detection on reported results will be evaluated on a case-by-case basis. If any sample result is qualified as an estimated quantity due to detection limit exceedances, signified by a 'J' validation flag, the sample result will be considered outside of accuracy requirements. No parameters are expected to be disqualified solely on minimum levels of detections. The goal for each parameter is to achieve 90% compliance with detection limits during analysis.

B.1.2.4 Representativeness

Representativeness is defined as the degree to which a sample or group of samples is indicative of the population being sampled. Representative data is acquired by establishing a sampling strategy that assures the sample population accurately represents natural conditions at the site. Representativeness is also assured by using proven and well-documented sampling methods and field personnel who are properly trained in the use of those methods.

Historical data for the Los Alamos Airport Landfill and impacted drainages indicates that sediment in the area is relatively uniform throughout. The materials are primarily described as sediments in an ephemeral drainage system. The only variability noted in the sample population lies in the depth at which they are distributed in the drainage system. This is illustrated by the notation in the *2002 LANL Interim Measures Report*, which indicates that there are a number of sediment accumulation areas within each drainage, likely due to relief changes that occur from the landfill to the floor of Pueblo Canyon. There are no notations in the literature indicating a wide range of particle sizes, debris, or other factors that might significantly increase variability in area samples, beyond the natural heterogeneity of solid matrices.

Based on this information, the DOE has determined that the collection of 15 samples from each drainage will be sufficient to obtain sediments that are representative of the natural system. Additional contingencies are also provided to account for increasing depths of soils/sediments in accumulation areas, by mandating that additional sampling be conducted at depth in areas where solid materials exceed depths of 2 ft. Finally, representative data from the drainage system will

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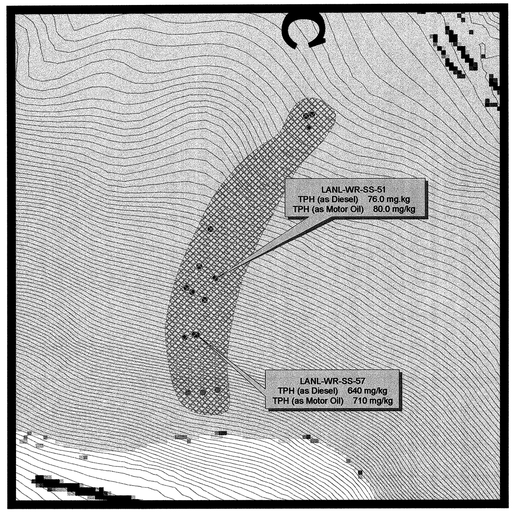
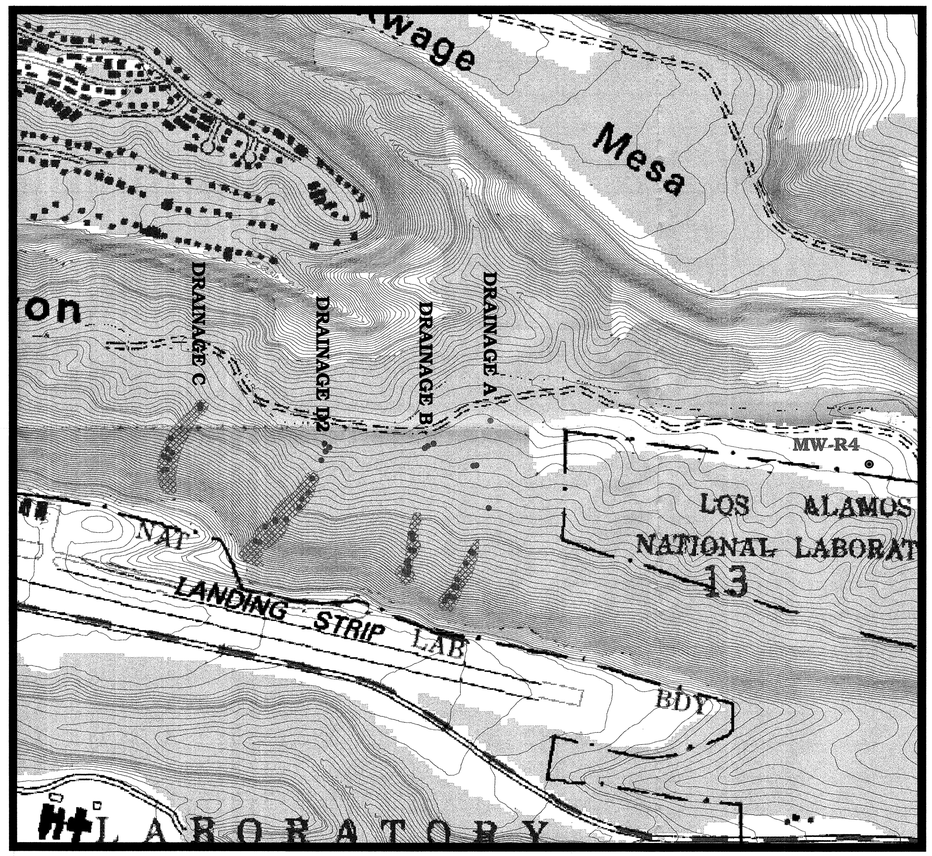
DRAINAGES A,B,C, AND D2

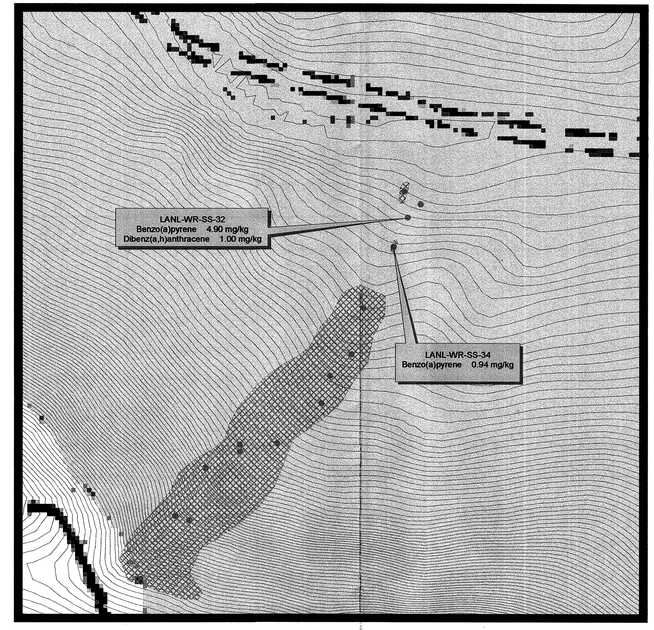


1 inch = 60 feet

DRAINAGE C

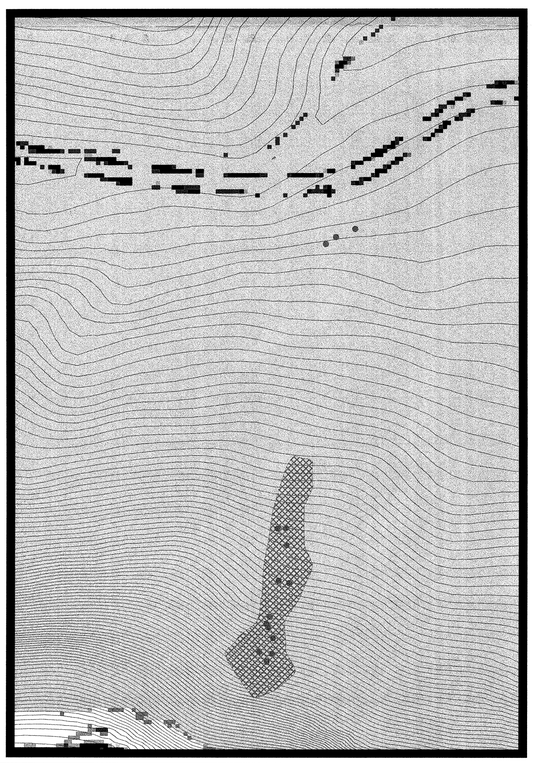


1 inch = 200 feet



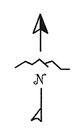
1 inch = 60 feet

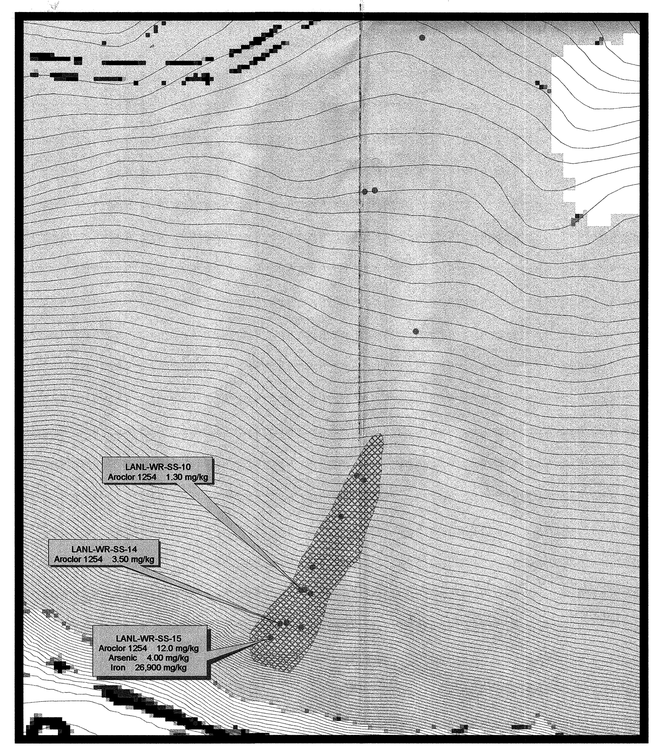
DRAINAGE D2



DRAINAGE B

1 inch = 60 feet





DRAINAGE A

1 inch = 60 feet

FIGURE 4
DRAINAGE MAP WITH APPROXIMATE PRIMARY LOCATIONS OF DEBRIS DEPICTED
DRAINAGES A,B,C, AND D2
LANL WASTE REMOVAL PROJECT
POST REMOVAL SAMPLING

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be accounted for, by ensuring that sampling activities span the waste boundaries from the landfill to its lateral extent down Drainages A, B, C, and D2.

The IM report produced by Portage for the RCRA corrective action will contain a discussion of representativeness. This discussion will incorporate all preliminary sample planning, all field observations, and the results of sample analysis to define the level to which, representative data has been obtained from the site.

B.1.2.5 Completeness

Completeness is defined as the number of valid data points obtained from the sampling effort, compared with the total number of data points obtained. For post-removal sampling, data points will be considered valid when they comply with the specifications outlined in the analytical methods described in the FSP, and this QAPP. Specifically, valid data points will be those that comply with the MQOs defined in the preceding sections. Completeness is expressed as a percentage and is defined by the calculation below.

$$\textit{\%Complete} = \frac{\text{Number of Valid Data Points}}{\text{Total Number of Data Points}} \times 100$$

The overall goal for post-removal sampling efforts is 90% completeness. Completeness will be applied to all of the samples from the post-removal effort and will be segregated by analysis type. This will ensure that quality control evaluations are made among sample data acquired using the same analytical method and the same QC requirements. Precision and accuracy for each analysis type will contribute equally to the determination of completeness for that analysis type (i.e., each will be given equal weight in determining what data points from a given analysis type meet the project MQOs and DQOs).

B.1.2.6 Comparability

Comparability is defined as the degree of confidence with which one data set can be compared with another. The objective of any good sampling and analysis program is produce data of the highest possible quality. Comparability between data sets should only be sought when existing data sets meet these requirements. Seeking comparison with data that is not indicative of site conditions, or that was acquired using a faulty quality assurance program, is not desirable. That is not the case with existing data for this site.

According to the *2002 LANL Interim Measures Plan*, 1994-1997 sampling efforts conducted in and around the Los Alamos Airport Landfill employed the use of RFI personnel with demonstrated field experience. RFI field personnel utilized LANL ER-SOPs in the collection of samples, consistent with the procedures that will be employed during post-removal sampling. Data acquisition utilized LANL ER-SOPs for sample handling, shipment, custody, and analysis and data validation was completed in accordance with LANL ER-SOPs for each analysis type. The data evaluation for these efforts indicates that sample data of sufficient quality was acquired to support decision-making at the site. Based on these factors, data collected from 1994-1997 will be directly comparable to data acquired during post-removal sampling efforts. Coupled with this data set, the more comprehensive post-removal sampling effort should provide for a more complete analysis of site conditions, aiding decision makers moving forward at the site.

B.2 SAMPLE RECEIPT, HANDLING, CUSTODY, AND HOLDING TIME REQUIREMENTS

The following sections define the procedures and protocols to be used by the analytical laboratory related to the receipt of project samples, documentation of field sample condition, assuring

sample custody during the analytical sequence, and holding time requirements for each analysis type and sample matrix.

Sample receipt refers to the time when field samples arrive at the analytical laboratory either by field personnel or by overnight shipping providers. Once samples arrive at the laboratory, there are a series of systematic activities that are required to ensure that the laboratory adheres to sample custody and handling procedures. Sample receiving, documenting samples upon receipt, and sample handling and storage will adhere to the following LANL ER-SOPs coupled with the analytical methods defined in the FSP and Tables 3 and 4 of the QAPP:

- ER-SOP-01.04, Rev. 5, *Sample Control and Field Documentation*, 3/18/03,
- ER-SOP-01.02, Rev. 1, *Sample Container and Preservation*, 10/05/01, and
- ER-SOP-15.09, Rev. 0, *Chain of Custody for Analytical Data Packages*, 3/27/00.

Upon receiving samples at the laboratory, the sample and document custodian (SDC) will sign and date the COC affixed to inside of the cooler lid, signifying laboratory acceptance of sample custody. The laboratory will retain the second copy of the COC form as part of the project archive at their facility. The original COC form will accompany the original data package to Portage.

After sample custody has been accepted, the SDC will document the condition of the samples upon receipt at the laboratory. Key elements of this process will include documenting:

- The temperature of coolers at the time of their arrival,
- The condition of all sample containers, and
- Documenting that pH adjustments have been properly completed in the field (when necessary).

Any anomalies or conditions that do not comply with the FSP, this QAPP, and/or the analytical method requirements will be documented and the PQO will be contacted immediately to determine an appropriate course of action.

After the laboratory manager and/or the PQO have deemed all samples acceptable for analysis, the SDC will assign a unique laboratory identification number to each sample. This will include each fraction collected at a single location to accommodate varying sample analyses and preservation requirements. Sample fractions collected from the same location, will be identified by reviewing the field identification number (FSP, Table 6); each will have the same field identification number. Along with laboratory identification numbers, the SDC will document the date and time that samples were received, adherence to preservation requirements, the analysis request for each sample, and the schedule for delivery of the sample results.

Samples will be stored in a refrigerator maintained at a temperature that is < 4°C throughout their time in the laboratory. Samples may be removed from refrigeration during sample preparation and analysis only. Table 3 defines the analytical methods and holding times to be used for post-removal samples (LANL ER-SOP-01.02, Rev. 1). Table 4 of the FSP outlines the container volume and specifications requirements for each analysis type. Samples will be maintained at the laboratory until sample holding times have expired. Should special waste handling and disposal requirements be identified, provisions for the handling and disposal of laboratory samples will be included in the waste management plan for investigation derived waste (IDW). If no special requirements are identified, the laboratory may dispose of the samples in accordance with their small quantity generator permit.

B.3 ANALYTICAL PROCEDURES

Waste removal and post-removal sampling in and around the Los Alamos Airport Landfill is governed by RCRA. Based on this, the DOE has determined that data meeting USEPA Level III

requirements will be sufficient to support decision making at the site. Tables 5 and 6 of the FSP and Tables 3 and 4 of the QAPP delineate the analytical test methods that will be utilized to ensure that Level III data is met. The following sections specify additional actions required of the analytical laboratory to ensure compliance with project DQOs and the project schedule.

B.3.1 Preventative Maintenance

Preventative maintenance is designed to ensure that sample analysis is not delayed by instrument or equipment downtime. The laboratory will perform preventative maintenance for each laboratory instrument and each piece of laboratory equipment in accordance with the manufacturer's specifications to ensure that they:

- Are in proper working order during project sample analysis,
- Are performing sufficient to meet sensitivity, precision, and accuracy requirements, and
- Do not cause work stoppages during project sample analysis.

Laboratory analysts and group leaders will be sufficiently trained so as to recognize the symptoms of improper instrument performance. Laboratory personnel shall also be properly trained in the performance of instrument or equipment troubleshooting. The laboratory shall maintain SOPs identifying what steps are taken when identifying poorly performing instrumentation, troubleshooting, and steps to be taken when problems are identified.

When repairs are necessary for laboratory instruments/equipment, the item in question will be taken out of service, notations in its dedicated logbook will identify the date it was removed from use, and laboratory personnel or manufacturers repair personnel will repair it before it is used again. The repaired item will be calibrated according to manufacturer's specifications prior to reentering service. Following recalibration, notations will be made in its dedicated logbook denoting when the instrument was repaired, what was repaired, and when recalibration was completed. It is recommended that the laboratory maintain service contracts with certified instrument repair personnel, to ensure timely repairs on major laboratory instruments and equipment.

B.3.2 Calibration Procedures

Laboratory instrumentation will be calibrated and/or tuned in accordance with each of the specified analytical methods in Tables 4 and 5. Calibrations will include all laboratory instruments and equipment (e.g., inductively coupled plasma (ICP), graphite furnace atomic absorption (GFAA), gamma spectrometers (GMS), gas chromatographs/mass spectrometers (GC/MS), analytical balances, pipettes, etc.), reference standards used for calibration, standard preparation, calibration techniques, sequential calibration actions, performance tolerances provided by the specific analytical method, and calibration dates and frequency. In addition, records for all laboratory prepared standards will be maintained and provided with each data package.

Initial calibration checks for all analysis types will use standard reference materials prepared from different sources than those used to calibrate the instrument. They will also include periodic checks during sample analysis as prescribed by the analytical method for each analysis type. Initial and continuing calibration checks will be reported with each data package in accordance Section 8.1 and the *Laboratory Quality Manual.*

If instrument calibration or calibration checks fall outside of the method specified requirements, the instrument will be recalibrated, and all samples will be reanalyzed using an acceptable calibration. Data generated using non-compliant calibrations, will not meet the MQOs for this project. In such a case, if sample holding times have not been exceeded, the laboratory will

recalibrate the instrument in question and will reanalyze the samples at no expense to the project. If holding times have been exceeded, the laboratory will pay the costs of resampling and will analyze the new samples at no expense to the project. Calibration exceedances that will be considered non-compliant include:

- Failure to meet GC/MS tuning criteria,
- Failure to meet source check requirements for radiochemical analyses,
- Failure to meet method prescribed ICV or CCV requirements for metals or Perchlorate analyses, and
- Failure to meet method prescribed laboratory control sample requirements.

In the event that instrument problems result in project delays, such that sample holding times may be in jeopardy of being exceeded, the laboratory manager or his designee will contact the PQO immediately to determine the appropriate course of action. Arrangements will likely be made through the analytical laboratory, to ship samples to another subcontract laboratory who can perform the work.

Portage has identified two additional sources of analytical services that are qualified to perform these functions. The primary analytical laboratory will oversee the transfer of custody to the secondary laboratory, and will coordinate all efforts with the PQO. The analytical laboratory will bear responsibility for any cost overruns for the project in this case, caused by tightened sample turnarounds or variations in laboratory costs. The secondary laboratory will be required to review and sign the sampling and analysis plan, signifying their understanding and compliance with its requirements, prior to completion of sample analysis.

B.3.3 Laboratory QC Procedures

Laboratory QC procedures will adhere to the analytical methods outlined in Tables 4 and 5. Key QC procedures, QC samples, and QC sample frequencies are dictated by these methods. In general, the laboratory will analyze two kinds of quality control samples to ensure that data quality for post-removal samples is met:

- Instrumental quality control, and
- Batch quality control.

Instrument quality control consists of standard materials used for instrument calibration, periodic instrument calibration checks, and those samples analyzed as part of the analysis process that are not directly affiliated with natural samples.

It is the responsibility of the analyst, the laboratory quality assurance officer, and ultimately the laboratory manager to ensure that all instrument QC has been prepared and analyzed properly and that the instruments used to quantify them are operating properly. Any deviations from the requirements outlined in the analytical methods, this QAPP, and the attached LANL ER-SOPs for data validation that affect data quality, will be documented by the laboratory and brought to the attention of the PQO immediately. The laboratory shall comply with the requirements of the analytical methods and the LANL ER-SOPs for data validation in full.

The second form of quality control samples are batch quality control samples. They consist of QC samples that are prepared and analyzed along with the natural samples, or as supplements to natural samples to monitor the effectiveness of the analytical process. Batch quality control includes separate sample analyses and fortified natural samples such as:

- Preparation or method blanks,
- Matrix spikes and matrix spike duplicates,
- Laboratory duplicate samples,

- Laboratory or method control samples,
- Radioactive tracers,
- Surrogates/system monitoring compounds, and
- Internal standards.

Laboratory QC samples (e.g., blanks and laboratory control samples) shall be included in the preparation batch with the field samples. An analytical batch is a number of samples (not to exceed 20 environmental samples plus the associated laboratory QC samples) that are similar in composition (matrix) and that are extracted or digested at the same time and with the same lot of reagents. The term analytical batch also extends to cover samples that do not need separate extraction or digestion (e.g., volatile analyses by purge and trap). The analytical batch is a group of samples that are analyzed sequentially. The identity of each analytical batch shall be unambiguously reported for each analysis type to ensure reviewers and validators can identify the QC samples and the associated environmental samples. Each analytical method specifies the general acceptance limits for batch QC requirements. The LANL ER-SOPs for data validation, contained in Attachment B of this QAPP, delineate specific batch QC acceptance criteria. These will be used to evaluate the quality of each analyte and analytical group. The laboratory will review these criteria prior to sample analysis to ensure that analysts are familiar with these requirements. Reported results will comply with these criteria in full. The laboratory will analyze all batch QC in the same fashion that natural samples are quantified to ensure that realistic data is obtained. At no time may the laboratory alter its preparation or analysis methods to accommodate QC samples.

B.3.4 Performance/System Audits

An audit is a systematic check of all procedural aspects of a process - either analytical or sampling. It is intended to assure that all facets of a project are operating within the framework of project goals. Auditing of field and laboratory activities is the responsibility of the PQO. Each audit will be coordinated through the appropriate laboratory and field personnel. Below is a checklist of items (at minimum) that should be included in an audit plan or scope.

- Date of the audit,
- Identification of audit participants,
- Identification of Audit Activities,
- Expected audit deliverables,
- Corrective action items,
- Schedule for corrective action responses, and
- Means of audit response.

B.3.4.1 Sampling Audit

Initial and continuous audits of field sampling will be performed as part of the three-phase inspection process outlined in the FSP. They will be completed to ensure that personnel are implementing sampling protocols properly. An evaluation of field performance shall include at a minimum, the following:

- Verification of sampling methodology,
- Verification that all QA/QC procedures are being used,
- Verification that proper sampling handling procedures are being utilized; packing, labeling, preservation, shipping, and archiving,
- Identification of any deviations from procedure,
- Verification of program documents (field logbook completion, COC form completion, sample tag completion, and any appropriate field worksheet completion),
- Initiation of any necessary corrective actions, and

- Provision of a final audit report.

Objectives for auditing ongoing field sampling are to determine not only progress, but also to assure procedures are being properly implemented. Emphasis should be placed on the following areas:

- Verifying that sampling is being completed in accordance with the SAP,
- Verifying that the proper samples are being collected,
- Verifying that field notebooks, COC forms, and sample labels and tags are being completed properly, and
- Identifying problems and initiating immediate corrective actions if possible.

Operational features of field sampling that should be observed include:

- Sampling procedures,
- Sampling equipment,
- Sampling technique,
- Decontamination procedures,
- Sample security/custody,
- Sample containers,
- Waste disposal, storage, and containment, and
- Logbook entries (e.g., weather conditions, location description, and field measurements).

B.3.4.2 Laboratory Auditing Procedures

Similar to a sampling audit, laboratory audits are intended to review all internal laboratory protocols. These reviews ensure that laboratory procedures are documented and practiced at all times. Items that should be reviewed during a laboratory audit include:

- Sample receiving and sample log-in procedures,
- COC procedures,
- Equipment logbooks and instrument logbooks,
- Standard operating procedures,
- Laboratory QA plan, and
- Data and sample management and storage.

Submittal of the laboratory QA plan is a very suitable form of audit. It not only provides written evidence of laboratory practices, it also assures that project personnel are familiar with the procedures used in producing analytical data. This project will maintain, as a part of the permanent record, a copy of a QA plan from the analytical laboratory it employs.

To accommodate this, a copy of the laboratory quality assurance plan (QAP) has been obtained. It is identified as, "Severn-Trent, St. Louis, *Laboratory Quality Manual*, Rev. 3, Document No. L-Q-001, December 31, 2002. The information contained in STL L-Q-001 is in keeping with good laboratory practices and the industry standards dictated by this QAPP.

B.3.5 Nonconformance/Corrective Actions

Corrective action procedures are implemented when a sample or group of samples falls outside of analytical data quality objectives, when sampling procedures or instrumentation have fallen outside of the project requirements, or when a deviation from field or laboratory procedure has had a significant impact on project data.

Standard analytical procedures, this QAPP, and the project statement of work dictate the course of action when laboratory analyses fail to meet MQOs. All analyses requested for this project are governed by a standard analytical procedure (Tables 4 and 5 - QAPP). When any item related to sample collection, receiving, custody, or analysis fall outside of the guidance provided by the analytical method or this QAPP, the laboratory manager or his designee will contact the PQO. Together, a corrective action will be identified, documented, and implemented to mitigate the problem.

Corrective action procedures that are implemented from audit findings must often be developed on a case-by-case basis. These procedures may include, but are not limited to:

- Altering procedures,
- Resampling,
- Reanalysis,
- Changes in equipment or containers, and/or
- Recommending an initial or a follow-up audit.

Corrective actions, once enacted, should be added to project related documents as appropriate to ensure they are fully documented and available to project personnel. Corrective actions, if necessary, shall be completed immediately given the short time horizons of this project. Problems requiring corrective action in the laboratory shall be documented in accordance with Section 4.9 of the *Laboratory Quality Manual*. The laboratory manager or quality assurance officer will initiate all corrective action requests and will ensure that they are implemented and properly documented. Specific items that may require corrective action may include:

- Improper sample preservation,
- Broken sample containers,
- Improperly completed custody or shipping forms,
- Improper instrument calibration,
- Poor instrument or batch QC performance, and
- Improper reporting of results.

In all cases, when corrective actions items are identified at the laboratory, they will be immediately documented and brought to the attention of the PQO. Corrective action planning and implementation will occur on an accelerated schedule to ensure:

- Sample holding times are preserved,
- Resampling can be completed quickly, and
- The project schedule can be met.

B.4 DATA REDUCTION/CALCULATION OF DATA QUALITY INDICATORS

Laboratory data reduction procedures are required to ensure that timely corrective actions are implemented in the laboratory and to determine compliance with the analytical method requirements. Data reduction, review, and reporting, procedures described in this section will ensure:

- Complete documentation is maintained,
- Transcription and data reduction errors are minimized,
- The data accurately represents the raw data, and
- The reported results are qualified using method specific criteria as is necessary.

B.4.1 Data Reduction

Data reduction is the process by which raw laboratory data is compiled into a coherent report format. Data reduction procedures, whether performed by the instrument or manually following analysis, shall follow the methodologies outlined in laboratory SOPs and/or the analytical method. Project-specific variations to statistical approach or formulas may be identified, depending on project-specific requirements. However, as a rule, the laboratory shall adhere to the procedures outlined in each of the analytical methods and Section 5.9 of the *Laboratory Quality Manual.* All automated calculations, whether from the instrument, the laboratory information system (LIMS), or spreadsheets shall be verified manually before their use. In addition, all software shall be tested with a mach set of sample data to verify its correct operation via accurate capture, processing, manipulation, transfer, recording, and reporting of data.

The chosen analytical laboratory has a demonstrated track record performing analysis for the DOE. Their procedures and protocols have undergone extensive auditing procedures by the sample management offices at several DOE laboratories including LANL. As part of these audits, software calculations and data reduction procedures have been verified to ensure compliance with DOE requirements. In addition, the analytical laboratory's quality manual has been reviewed prior to preparation of this QAPP. Their procedures are in keeping with good laboratory practices, industry standards, and the requirements of this project.

B.4.2 Data Review

All analytical data generated by the laboratory shall be reviewed prior to release of the report the project. This internal data review process will include reviews of instrumental data and data reduction. A minimum of three levels of review will be completed beginning with the analyst, followed by the QA officer, and finally by the laboratory manager.

The analyst who generates the analytical data has the prime responsibility for the correctness and completeness of the data. Each step of this review process involves evaluation of data quality based on both the results of the QC data and the professional judgment of those conducting the review. The application of technical knowledge and experience to the data evaluation is essential in ensuring that data of acceptable quality are generated. All data generated and reduced shall be reviewed in accordance with the analytical procedures, Section 9.0 of this QAPP, and Section 5.9 of the *Laboratory Quality Manual.*

B.4.3 Laboratory Flags

The laboratory shall add laboratory flags during the data generation/review process in accordance with the analytical methods. Laboratory flags that will be applied to analytical data for post-removal sampling are listed in Table 5. Examples of when they shall be applied include:

- When sample results fall below the reporting limit,
- When sample results fall between the reporting limit and the method specified limit,
- When a given analyte of concern is found in both the laboratory blank and associated samples,
- When samples exceed the upper linear concentration range of the instrument,
- When samples results have been diluted and surrogate compounds are not recovered,
- When the analyst has rejected a result due to insufficient confirmation,
- When the matrix spike is outside of method specified limits,
- When method of standard of additions are performed,
- When method of standard additions fails to produce a curve that is > 0.995,
- When the percent difference between GFAA measurements are > 20%,

- When GFAA analytical spike recovery falls outside of the 85-115% recovery limits, and
- When the duplicate or matrix spike duplicate fails to meet the +/- 35% agreement limit.

B.4.4 Limits of Detection

This section describes the procedures to be used for determining limits of detection for post-removal samples. In general, these procedures are more fully discussed in the analytical methods and the *Laboratory Quality Manual.* The analytical laboratory will adhere the procedures herein, as well as those defined in the analytical methods and their quality manual. Table 8 delineates the maximum contract required detection and quantitation limits (reporting limits) for non-detect sample results. Table 2-4 provides a summary of historical data for the site and includes risk based screening thresholds or SALs. These levels shall not to be exceeded due to instrumental insensitivity during analysis for non-detect results. Table 7 of the QAPP defines the flags to be assigned by the laboratory in the course of reporting sample results.

B.4.4.1 Method Detection Limits

A method detection limit (MDL) is the minimum concentration or baseline of an analytical instrument or method. It is defined as the 99% confidence limit of seven consecutive measurements determined on three non-consecutive days for a low-level reference standard. The laboratory shall establish MDLs for each method, matrix, and analyte for each instrument the used for the project. The laboratory shall reestablish MDLs quarterly to account for natural drift and changing instrument conditions. Finally, the laboratory shall provide an MDL determination summary as part of each laboratory data package.

The laboratory shall demonstrate the MDLs for each instrument and analysis type using the following instructions:

Estimate the MDL using one of the following:

- The concentration value that corresponds to an instrument signal/noise ratio in the range of 2.5 to 5, or

- The concentration equivalent of three times the standard deviation of replicate measurement of the analyte in reagent water, or

- The region of the standard curve where there is a significant change in sensitivity (i.e., a break in the slope of the standard curve).

Prepare (i.e., extract, digest, etc.) and analyze seven samples of a matrix spike (American Society for Testing and Materials Type II water for aqueous methods, Ottawa sand for soil methods, glass beads of 1 mm diameter or smaller for metals) containing the analyte of interest at a concentration three to five times the estimated MDL.

Determine the variance (S^2) for each analyte as follows:

$$S^2 = \frac{1}{n-1}\left[\sum_{i=1}^{n}\left(x_i - \bar{x}\right)^2\right]$$

Where x_i = the ith measurement of the variable x and $\bar{x}$ = the average value of x

$$\overline{X} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

Determine the standard deviation (s) for each analyte as follows:

$$s = (S^2)^{1/2}$$

Determine the MDL for each analyte as follows:

$$MDL = 3.14(s)$$

Note: 3.14 is the one-sided t-statistic at the 99% confidence level appropriate for determining the MDL using 7 samples). If the spike level used in step 2 is more than 10 times the calculated MDL, repeat the process using a smaller spiking level.

B.4.4.2 Reporting Limits

The method specific detection limits/practical quantitation limits represent the contract required detection limits (CRDLs). The laboratory shall compare their MDLs to the CRDLs prior to sample analysis. The laboratory MDLs cannot exceed the CRDLs. The laboratory shall verify the stability of the instrument baseline during each analytical run by analyzing a standard that has a concentration that is five times greater than the CRDL. These standards will be evaluated during data validation to determine their effect on project data quality.

B.4.4.3 Method Detection Limits

A method detection limit (MDL) is the minimum concentration or baseline of an analytical instrument or method. It is defined as the 99% confidence limit of seven consecutive measurements determined on three non-consecutive days for a low-level reference standard. The laboratory shall establish MDLs for each method, matrix, and analyte for each instrument the used for the project. The laboratory shall reestablish MDLs quarterly to account for natural drift and changing instrument conditions. Finally, the laboratory shall provide an MDL determination summary as part of each laboratory data package.

The laboratory shall demonstrate the MDLs for each instrument and analysis type using the following instructions:

Estimate the MDL using one of the following:

- The concentration value that corresponds to an instrument signal/noise ratio in the range of 2.5 to 5, or

- The concentration equivalent of three times the standard deviation of replicate measurement of the analyte in reagent water, or

- The region of the standard curve where there is a significant change in sensitivity (i.e., a break in the slope of the standard curve).

Prepare (i.e., extract, digest, etc.) and analyze seven samples of a matrix spike (American Society for Testing and Materials Type II water for aqueous methods, Ottawa sand for soil methods, glass beads of 1 mm diameter or smaller for metals) containing the analyte of interest at a concentration three to five times the estimated MDL.

Determine the variance (S^2) for each analyte as follows:

$$S^2 = \frac{1}{n-1}\left[\sum_{i=1}^{n}\left(x_i - \bar{x}\right)^2\right]$$

Where x_i = the ith measurement of the variable x and $\bar{x}$ = the average value of x

$$\bar{X} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

Determine the standard deviation (s) for each analyte as follows:

$$s = (S^2)^{1/2}$$

Determine the MDL for each analyte as follows:

$$MDL = 3.14(s)$$

Note: 3.14 is the one-sided t-statistic at the 99%confidence level appropriate for determining the MDL using 7 samples). If the spike level used in step two is more than ten times the calculated MDL, repeat the process using a smaller spiking level.

B.4.4.4 Reporting Limits

The method specific detection limits/practical quantitation limits represent the contract required detection limits (CRDLs). The laboratory shall compare their MDLs to the CRDLs prior to sample analysis. The laboratory MDLs cannot exceed the CRDLs. The laboratory shall verify the stability of the instrument baseline during each analytical run by analyzing a standard that has a concentration that is five times greater than the CRDL. These standards will be evaluated during data validation to determine their effect on project data quality.

B.5 LABORATORY OPERATIONS DOCUMENTATION

This section is intended to provide laboratory personnel with the remaining guidance needed to comply with project data quality objectives. The key areas include:

- Data reporting requirements,
- Report content requirements,
- Planned project schedule and corresponding turnaround times, and
- Data management.

B.5.1 Data Reporting and Report Content Requirements

To augment the method-specific requirements outlined in this QAPP, specific reporting requirements were identified during the bid process with prospective laboratories, to ensure that data that meets or exceeds Level III requirements will be provided. These requirements will help to ensure that all laboratory QC requirements are analyzed, documented, and reported to the project. Specific QC requirements are outlined in the analytical methods. The key requirements that are required for inclusion in laboratory data packages, depending on analysis type include:

- Sample receiving documentation,
- COC forms,

- Laboratory sample preparation sheets,
- Standard preparation logs,
- Table summarizing laboratory and field identification numbers,
- Calibration information (report forms and raw data),
- Instrument tuning (report forms and raw data),
- Initial and continuing calibration checks/verifications (report forms and raw data),
- Control charts specific to radiochemical parameters (report forms and raw data),
- Blank analysis (report forms and raw data),
- Duplicate sample analysis (report form and raw data),
- Matrix spike/matrix spike duplicate analysis (report form and raw data),
- Laboratory control sample analysis (report form and raw data),
- Tracer recoveries (report form and raw data),
- Surrogate/system monitoring compounds (report form and raw data),
- Internal standard analysis (report form and raw data),
- ICP interference check samples (report form and raw data),
- Serial dilution sample analysis (report form and raw data),
- GFAA quality control analysis (report form and raw data),
- Linear range analysis (report forms and raw data),
- Intercomparison QC results for radiochemical parameters (summary forms), and
- Activity concentrations plus 1-sigma total propagated uncertainties (with each result).

The laboratory will perform all calculations in accordance with the analytical methods and standard LANL reporting requirements. In addition, the laboratory will provide summary report forms for all field samples and all laboratory field QC indicators, and they will provide all raw data necessary to support the reported results. Specific uses for these data elements are outlined in Section 9 of this QAPP, Data Assessment Procedures.

B.5.2 Planned Project Schedule

The planned schedule for post-removal sampling, hinges on the successful removal of waste from Drainages A, B, C, and D2. Presently, sampling is set to commence following the completion of waste from all of the drainages, as sampling will proceed more quickly than will waste removal. Waste removal is set to commence on August 11, 2003 with plans to be completed by September 5, 2003. Post-removal sampling is planned to commence on September 8, 2003 and continue through the week until September 12, 2003. This schedule is dependent on weather conditions, the effectiveness of waste removal activity, equipment breakdowns, and a number of other contingencies.

Once initiated, it is anticipated that two shipments of samples will be sent to the analytical laboratory to accommodate sample holding times and preservation requirements and to assist the laboratory in meeting the required turnaround time for radionuclide analyses. Depending on the speed of the sampling activities, it is anticipated that half of the sample collection will be completed by mid-week.

At that point, a cooler or coolers and the appropriate shipping documentation will be prepared, and the cooler(s) will be shipped via Federal Express to STL of St. Louis. If no delays are encountered during the balance of the week, samples will be shipped on Friday, Saturday or the Monday of the following week to ensure that samples arrive at the laboratory with sufficient time to meet sample preparation holding times. Sampling activities will be scheduled around availability of the shipping company to deliver samples to the laboratory. The laboratory project manager will be kept abreast of all project developments to ensure that coordination between the field team and the laboratory is smooth. The laboratory will prepare and analyze the samples and provide laboratory data packages within 10 days of receipt of the last project sample to ensure that project requirements are met.

B.5.3 Data Management

The laboratory will manage copies of all data generated for the post-removal sampling project along with all original documentation that accompanies the data. Laboratory logbooks, other internal documentation, corrective action measures, and data packages will be retained by the laboratory for five years or until such time as directed by the PrM, the RPM, the PM, and/or the PQO that the project can be closed out. All electronic deliverables and associated instrument and computer back-ups will also be retained for this period to ensure that data can be reproduced if necessary. The laboratory shall maintain electronic and hardcopy records sufficient to recreate each analytical event conducted pursuant to their subcontract, the FSP, this QAPP, and the analytical method requirements.

B.6 DATA ASSESSMENT PROCEDURES

Data assessment involves the verification of results reported by the laboratory and comparison of verified results with field information and MQOs to determine its usability of project data. This process defines quality control review and data validation. The following defines the procedures to be used during QC reviews and data validation.

B.6.1 Quality Control Review

Quality control reviews are the responsibility of laboratory personnel. They are conducted to ensure that laboratory data complies with method and QAPP requirements. QC reviews involve an evaluation of data from the laboratory bench or instrument, through to the final data package. The laboratory will comply with the protocols for QC review identified in the analytical methods, the *Laboratory Quality Manual,* and this QAPP. The following describes how QC reviews will be conducted in the laboratory.

B.6.2 Laboratory Analyst

The laboratory analyst is responsible for generating the data used as the basis for laboratory reports. The analyst represents the first person in the QC review chain. Their work is the most critical, as they will initiate method specific corrective actions that will ensure data reported by the laboratory, complies with the analytical requirements.

The laboratory analyst will review data during and immediately following, each analytical sequence. They will perform calculations as necessary for all QC samples and will review the results of these calculations with method and project specific requirements. Any anomalies that require repreparation and/or reanalysis of samples, will be initiated immediately by the analyst in concert with laboratory quality assurance officer. Upon approval of all data, the laboratory analyst will pass the data to the laboratory quality assurance officer for technical review of all calculations and all data quality indicators.

B.6.3 Laboratory Quality Assurance Officer

The laboratory quality assurance officer (QAO) is responsible for performing QC reviews of all raw analytical data and all initial reports compiled from the raw data. The QAO will be responsible for ensuring that the data generated from post-removal sampling complies with all method specific requirements and all provisions outlined in this QAPP. If data that does not comply with either is identified, the QAO will initiate immediate corrective action within the laboratory in concert with the laboratory manager. Items that will result in delays in project schedule, or that will require corrective action from project personnel, will be identified to the PQO. Those that do not will be documented and implemented immediately to ensure the integrity of sample holding times and adherence to the project schedule. Upon approval of initial reports,

the QAO will pass the reports and supporting information to the laboratory manager for final approval.

B.6.4 Laboratory Manager

The laboratory manager is ultimately responsible for the quality of analytical data reported for this project. He is also responsible for ensuring that the data package complies with the specifications of the analytical method and the provisions of this QAPP. Upon receiving data approved by the QAO, the laboratory manager will provide a final review of the raw data, the data package, and corresponding supporting information to ensure compliance. Any anomalies identified during this review will again be addressed through immediate corrective actions. Items that will result in delays in the project schedule, or that will require corrective action from project personnel, will be identified to the PQO. Those that do not will be documented and implemented immediately to ensure the integrity of sample holding times and adherence to the project schedule. The laboratory manager will signify that data and data packages comply with the method and QAPP requirements, by signing the data package. Once approved, the data package may be transmitted to the PQO for validation.

B.7 DATA VALIDATION

Upon receipt of approved laboratory data packages, the PQO will initiate data validation through the validation team identified in Section 3. Validation of data from post-removal sampling efforts will be completed in accordance with the following LANL ER Program SOPs (Appendix B):

- ER-SOP-15.02, Rev. 1, *Routine Validation of Semivolatile Organic Data*, 5/29/03,
- ER-SOP-15.03, Rev. 1, *Routine Validation of Organochlorine Pesticides and Polychlorinated Biphenyls Data*, 5/27/03,
- ER-SOP-15.05, Rev. 1, *Routine Validation of Inorganic Data*, 5/21/03,
- ER-SOP-15.06, Rev. 1, *Routine Validation of Gamma Spectroscopy Data*, 5/20/03,
- ER-SOP-15.07, Rev. 1, *Routine Validation of Chemical Separation Alpha Spectrometry, Gas Proportional Counting; and Liquid Scintillation Data*, 5/19/03,
- ER-SOP-15.09, Rev. 0, *Chain of Custody for Analytical Data Packages*, 3/27/00,
- ER-SOP-15.15, Rev. 0, *Sample Management Office: Receiving and Shipping of Analytical Samples*, 10/30/00.

All of the analytical data (100%) will undergo data validation to ensure compliance with the USEPA Level III requirements for the project. Following data verification, each data validator will complete a validation record package that complies with the listed SOPs and submit it for review to the PQO. The PQO will identify any inaccuracies, typographical errors, or items requiring additional effort to the data validator. After corrections have been made, the data validator will submit the revised report to the PQO who will perform a final review of the report. Upon approval, both the validator and the PQO will sign the report cover page. Once complete, the PQO will utilize the validated results for each analysis type to perform a reconciliation of project MQOs and DQOs.

B.7.1 MQO/DQO Reconciliation

Reconciliation of project MQOs and DQOs will be completed following data validation. Only after data validation can a complete determination be made as to the performance of QC during sample analysis, and the effects its performance on data quality. MQOs for the project will be resolved using the precision and accuracy criteria outlined in Section 4 of this QAPP. The process will proceed as described in the following sections.

B.7.2 Precision Determination

The analysis types for post-removal sampling efforts are defined by:

- SVOCs,
- PCB/Pesticides,
- Total metals,
- Perchlorate, and
- Radionuclides.

Each analysis type will be accompanied by a laboratory duplicate or matrix spike/matrix spike duplicate. These will be compared in each data package, fore each analysis type, to determine compliance with the +/- 35% precision limit. The number of results complying with this limit will be determined based on laboratory duplicates and the sample batches they accompany. From that, the total number of compliant results will be compared with the total number of results obtained. This process will be completed for all data packages for an individual analysis type. From that, a total number of precise results will be determined (e.g., 68 of 75 or 90.7% of the samples for total metals achieved compliance with precision criteria).

B.7.3 Accuracy Determination

Similar to precision determinations, each analysis type will be accompanied by a series of QC samples that will indicate the accuracy of reported results. For frame of reference, sample results not qualified during data validation based on the accuracy QC samples, will have met accuracy requirements. Those qualified as estimated or rejected quantities, will not have met all accuracy requirements. Each data package for each analysis type will be evaluated during data validation, to determine the effect one or more QC indicators may have had on data quality. This will be completed for each data package for each analysis type. From this evaluation, a total number of samples meeting accuracy criteria will be determined (68 of 75 or 90.7% of the sample results were unqualified, and therefore, met accuracy requirements).

B.7.4 Completeness

Completeness is the aggregate of results that have met the precision and accuracy goals of the project. Because the number of samples and the sample matrix will be the same for both precision and accuracy determinations, the percentage of results for each analysis type, meeting precision criteria will be averaged with the total number of results meeting accuracy to determine the overall completeness for each analysis type. The overall completeness for the post-removal effort, will be remain segregated by analysis type so that data users can evaluate the quality of individual parameters at the point of decision making. To calculate the completeness for individual analysis type, the following calculation will be used.

$$\% \text{ Complete} = \frac{\% \text{ of Precise Results} + \% \text{ Accurate Results}}{2}$$

B.7.5 Bias

Bias is the measure of the drift or variability among measurements, primarily for organic and radiochemical measurements. These factors will be evaluated during data validation to determine compliance with the analytical methods and LANL ER-SOPs for data validation. Biases related to sample analysis will be factored into the evaluation of data for accuracy as part of the validation effort.

B.7.6 Variability

Variability will be measured in terms of laboratory and field duplicate performance. As noted, field duplicate results will not be used in determining the precision of analytical results for this project. Instead, they will be used to determine the range of variability or sampling bias that may be inherent in reported results. This variability will likely be useful to end data users in determining the suitability of this site for closure. Uses of sample variability may be used to quantify uncertainties related to risk-based evaluations at the site, by determining the range of chemicals and radionuclides measured at the site. The final IM report will discuss variability in terms of reported results, to assist data users in evaluating site data and how natural variability may impact decision-making at the site.

B.7.7 Representativeness and Comparability

The final IM report will also contain a complete evaluation of representativeness and comparability of this data set, to the site and to historical data. As noted, it is expected that the post-removal sample data will be quite comparable to results obtained by the LANL RFI team from 1994-1997, given the consistency of the procedures used to acquire data and the expected consistency of the sample matrix. It is anticipated that the collection of random and biased samples, samples collected at depth, and collection of samples to evaluate conditions previous waste locations, will result in data that accurately represents the conditions at the site.

B.8 Data Quality Assessment

Two key objectives of the post-removal sampling effort were to verify the environmental conditions in Drainages A, B, C, and D2 following the removal of waste and to better define the levels of COPC at the site as a whole. A related objective was to determine if COPCs measured during prior LANL RFI site investigations had attenuated over time. To make these determinations, the sampling effort was designed to obtain data of sufficient quality to support decision-making at the site moving forward. The following sections provide the reconciliation of data quality objectives (DQOs) and measurement quality objectives (MQOs) as defined in the project QAPP for each analysis type. The key analyses performed in Drainages A, B, C, and D2 included:

- SVOCs,
- PCBs,
- Organochlorine pesticides,
- TPH (diesel and motor oil fractions),
- Target analyte list metals
- Perchlorate and
- Radionuclides (^{137}Cs, $^{239/240}Pu$, and ^{90}Sr).

B.8.1 Precision

Precision is defined as the measure of agreement or reproducibility, among individual measurements for the same chemical or radiochemical property, under the same analytical conditions. Precision is measured in terms of relative percent difference (RPD) using the following calculation:

$$RPD = \frac{[\text{Original Sample Result} - \text{Duplicated Sample Result}]}{([\text{Original Sample Result} + \text{Duplicate Sample Result}]/2)} \times 100$$

The objective for each analysis type was to achieve 90% compliance with the prescribed precision criteria (i.e., at minimum, 9 of 10 samples will have associated laboratory duplicates or matrix spike duplicates, showing agreement that is $\leq$ 35%). Precision for post-removal sampling

has been evaluated based on the performance of laboratory duplicate samples for inorganic and radionuclide parameters, and for matrix spike and matrix spike duplicate (MS/MSD) pairs for organic analyses in accordance with the project QAPP. Field quality control samples (field blanks and field duplicates) were not used in determining the number of results meeting precision criteria for the project. Instead, only the 60 natural samples were used to determine the percentage of acceptable results. A total of three sample delivery groups (SDGs) containing all of the 60 natural samples were analyzed to quantify post-removal samples. The three SDGs are:

- LANL-WR-SS-1,
- LANL-WR-SS-21, and
- LANL-WR-SS-41.

The following sections summarize the precision determinations for each analysis type.

B.8.1.1 Semivolatile Organic Compounds

The analysis of three SDGs for SVOCs yielded 3840 data points. Of these, 3780 or 98% of the sample results, met precision criteria for the MS/MSD pairs. The remaining 60 data points, or 2%, failed to meet the project precision criteria for soil matrices. Affected sample data includes: 4-Chloroanaline, 3-Nitroanaline, and 4-Nitroanaline in samples LANL-WR-SS-21 through LANL-WR-SS-40. It should be noted that none of these sample results are qualified for use, as the USEPA and LANL ER-SOPs do not require qualification of data based solely on the performance of the MS/MSD. Overall post-removal samples met the project DQO for precision of 90%, with 98% SVOC results meeting the requirements outlined in the QAPP.

B.8.1.2 Polychlorinated Biphenyls

The analysis of three SDGs for PCBs yielded 540 data points. Of these, 520 or 96% of the sample results, met precision criteria for the MS/MSD pairs. The remaining 20 or 4%, failed to meet the project precision criteria for soil matrices. The affected sample data includes Aroclor 1260 for samples LANL-WR-SS-41 through LANL-WR-SS-60. It should be noted that none of these sample results are qualified for use, as the USEPA and LANL ER-SOPs do not require qualification of data based solely on the performance of the MS/MSD. Overall post-removal samples met the project precision DQO of 90%, with 96% of PCB results meeting the requirements outlined in the QAPP.

B.8.1.3 Organochlorine Pesticides

The analysis of three SDGs for pesticides yielded 1260 data points. Of these, 1260 or 100% of the sample results, met precision criteria for the MS/MSD pairs. However, 79 of 1260 results or 6% of pesticide results were qualified due to imprecision between dual column measurements for positive results. Each has been qualified during validation to reflect the uncertainty associated with the reported concentrations. Overall pesticide data met the 90% DQO for accuracy with 94% of the reported results meeting the requirements in the QAPP.

B.8.1.4 Total Petroleum Hydrocarbons (Diesel and Motor Oil Fractions)

The analysis of three SDGs for TPH yielded 70 data points. Of these, 30 or 43% of the sample results, met precision criteria for the MS/MSD pairs. The remaining 40 or 57% failed to meet the project precision criteria for soil matrices. The affected sample data includes: both fractions for samples LANL-WR-SS-25, LANL-WR-SS-31 through LANL-WR-SS-49, and LANL-WR-SS-50 through LANL-WR-SS-60 as an MS/MSD was not performed due to matrix difficulties. Because of this omission, a precision determination could not be made for the affected samples. However, the affected results have note been qualified based solely on MS/MSD performance. Overall

post-removal samples did not meet 90% DQO for precision, with 43% of the TPH results meeting the requirements of the QAPP.

B.8.1.5 Target Analyte List Metals

The analysis of three SDGs for TAL metals yielded 1380 data points. Of these, 1360 or 99% of the sample results, met precision criteria for laboratory duplicate samples and/or serial dilution samples. The remaining 20 or 1% failed to meet the project precision criteria for soil matrices. The affected sample data includes: magnesium for samples LANL-WR-SS-41 through LANL-WR-SS-60. These results are qualified due to imprecision based on poor serial dilution performance. Overall post-removal samples met the 90% precision DQO with 99% of the TAL metals meeting the requirements of the QAPP.

B.8.1.6 Perchlorate

The analysis of three SDGs for Perchlorate yielded 60 data points. Of these, 60 or 100% of the sample results, met precision criteria for the duplicate pairs.

B.8.1.7 Radionuclides

The analysis of three SDGs for 137Cs, 239/240Pu, & 90Sr yielded 180 data points. Of these, 160 or 89% of the sample results, met precision criteria for the laboratory duplicate samples. The remaining 20 or 11% failed to meet precision criteria for soil matrices. The affected sample data includes: 137Cs for samples LANL-WR-SS-41 through LANL-WR-SS-60. Due to this imprecision, all of these results have been qualified as estimates for use in evaluating site conditions. Overall post-removal samples fell slightly below the 90% DQO for precision with 89% of radionuclide results meeting the requirements outlined in the QAPP.

B.8.2 ACCURACY

Accuracy is defined as the comparison of a known quantity of a reference standard to the value measured during analysis. Accuracy is assessed during data validation by evaluating the performance of reference standards such as:

- Laboratory control samples,
- Radioactive tracers,
- Matrix spikes,
- Matrix spike duplicates, and
- Surrogate compounds.

Reference standards were assessed during data validation in accordance with LANL ER-SOPs. Any of the listed reference standards, which resulted in the qualification of sample results due to poor performance, were considered outside of QC requirements. The objective for each analysis type was to achieve 90% compliance with these accuracy criteria (i.e., at minimum, 9 of 10 samples will be expected to have associated reference standards that meet the requirements of the analytical method and LANL ER-SOPs for data validation). Field quality control samples (field blanks and field duplicates) were not used in determining the number of results meeting accuracy criteria for the project. Instead, only the 60 natural samples were used to determine the percentage of acceptable results. The same three SDGs containing all of the 60 natural samples were used to quantify post-removal samples for accuracy. The following sections summarize the accuracy determinations for each analysis type.

B.8.2.1 Semivolatile Organic Compounds

Of the 3840 data points for SVOCs, 3580 or 93% met the accuracy criteria for batch and instrument quality control (QC). The remaining 260 results or 7%, failed to meet accuracy requirements. The bulk of the affected samples are not qualified, as the only QC failure identified was poor MS/MSD performance. As noted, neither USEPA nor LANL procedures qualify data based on MS/MSD results alone. Qualified sample results include: LANL-WR-SS-41 through LANL-WR-SS-54 due to poor initial calibration performance and LANL-WR-SS-57 due to poor internal standard performance. Overall post-removal samples met the 90% DQO for accuracy with 93% of SVOC results meeting the requirements outlined in the QAPP.

B.8.2.2 Polychlorinated Biphenyls

Of the 540 data points for PCBs, 520 or 96% met the MS/MSD accuracy criteria for batch and instrument QC. The remaining 20 or 4%, failed to meet accuracy requirements. None of these are qualified, as only the matrix spike failed to meet accuracy requirements and qualification based solely on its performance is not advised by USEPA or LANL procedures. Because none of the results were qualified, in actuality, all PCB results met accuracy criteria. Overall post-removal samples met the 90% DQO for accuracy with 100% of PCB results meeting the requirements outlined in the QAPP.

B.8.2.3 Organochlorine Pesticides

Of the 1260 data points for Pesticides, 1001 or 79% met the accuracy criteria for batch and instrument QC. The remaining 259 or 21% failed to meet accuracy requirements. Sample data qualified due to poor QC performance include: Endosulfan Sulfate, Endrin Aldehyde, and Endrin Ketone in samples LANL-WR-SS-1 through LANL-WR-SS-20; beta-BHC, Endosulfan I, Endosulfan Sulfate, and Endrin Aldehyde in samples LANL-WR-SS-21 through LANL-WR-SS-40; Endosulfan I, Endosulfan Sulfate, and Endrin Aldehyde in samples LANL-WR-SS-41 through LANL-WR-SS-60. Each of these results is qualified due to poor laboratory control sample (LCS) performance. The remaining 59 results are not qualified, as the only QC difficulties were associated MS/MSD performance. Overall post-removal samples did not meet the 90% DQO for accuracy with 79% of Pesticide results meeting the requirements outlined in the QAPP.

B.8.2.4 Total Petroleum Hydrocarbons (Diesel and Motor Oil Fractions)

Of the 70 data points for TPH, 61 or 87% of the sample results met the accuracy requirements. The remaining 9 or 13% failed to meet the accuracy requirements for batch and instrument QC. The affected sample data includes: LANL-WR-SS-31, 33, 41, 46, 47, 48, 49, 50, 52, 53, 55, 56, 58, and 59 due to poor surrogate performance and LANL-WR-SS-39RE1 and LANL-WR-SS-51RE1 due to exceeded holding times. Each of these results has been qualified due to the noted accuracy issues. Overall post-removal samples fell slightly below the 90% DQO for accuracy with 87% of TPH results meeting the requirements outlined in the QAPP.

B.8.2.5 Target Analyte List Metals

Of the 1380 data points for TAL metals, 1200 or 87% of the sample results met the accuracy requirements. The remaining 180 or 13% failed to the meet the accuracy requirements for batch and instrument QC. The affected samples are: aluminum for all samples due to poor LCS performance; antimony in LANL-WR-SS-1 through LANL-WR-SS-40 due to a low matrix spike recovery; and zinc in LANL-WR-SS-1 through LANL-WR-SS-20 due to a low matrix spike recovery. Each of these results has been qualified for use in evaluating site conditions due to these exceedances. Overall post-removal samples fell slightly below the 90% DQO for accuracy with 87% of TAL metals meeting the requirements outlined in the QAPP.

B.8.2.6 Perchlorate

Of the 60 data points for Perchlorate, 60 or 100% of the sample results met the accuracy requirements outlined in the QAPP.

B.8.2.7 Radionuclides

Of the 180 data points for ^{137}Cs, $^{239/240}Pu$, and ^{90}Sr, 180 or 100% of the sample results met the accuracy requirements outlined in the QAPP.

B.9 COMPLETENESS

Completeness is defined as the number of valid data points obtained from the sampling effort, compared with the total number of data points obtained. For post-removal sampling, data points have been considered valid when they comply with the specifications outlined in the analytical methods described in the project FSP, and the MQOs and DQOs defined in the project QAPP.

The overall completeness goal for the sampling and analysis effort was defined in the QAPP as 90%. Completeness has been applied to all of the samples from this effort and has been segregated by analysis type. Precision and accuracy have each been considered in determining completeness for each analysis type. To calculate the completeness for each analysis type, the following expression has been used:

$$\textit{\% Complete} = \frac{\text{\# of valid data points}}{\text{Total \# of data points}} \times 100$$

The following details the determination of completeness for project sample data by analysis type. Appendix O provides supporting calculations for completeness results.

B.9.1 Semivolatile Organic Compounds

In evaluating completeness for SVOCs, the overall accuracy value is the limiting factor in determining which data points are valid. Completeness for SVOCs cannot exceed the number of accurate results as determined in Section 18.2.1. Therefore, the completeness for SVOCs is bound by the level of accurate results obtained or 93%. This satisfies the overriding data quality objective for project data of 90%. Limitations to SVOC results can be found in Appendix 13.C, Analytical Reports.

B.9.2 Polychlorinated Biphenyls

If precision and accuracy are considered in determining PCB completeness, precision would be limiting factor in arriving at a completeness result. This would translate to a completeness of 96% for PCB results. However as noted previously, MS/MSD pairs do not result in qualifications or limitations for use of organic data. Therefore, the precision result is not reflective of PCB data usability. Instead, all of the PCB results were found to be acceptable for use without restriction. Consequently, the accuracy result or 100% reflects PCB data usability. This satisfies the overriding data quality objective for project data of 90%.

B.9.3 Organochlorine Pesticides

In evaluating completeness for pesticides, the overall accuracy value is the limiting factor in determining which data points are valid (i.e., completeness for pesticides cannot exceed the number of accurate results as determined in Section 18.2.3). Therefore, the completeness for pesticides is bound by the level of accurate results obtained or 79%. This does not satisfy the overriding data quality objective for project data of 90%. The principal cause of analytical

difficulties for project samples, were matrix interferences caused primarily by Aroclor compounds during analysis. Limitations to SVOC results can be found in Appendix 13.C, Analytical Reports.

B.9.4 Total Petroleum Hydrocarbons (Diesel and Motor Oil Fractions)

If both precision (43%) and accuracy (87%) results for TPH are used to determine completeness, the precision value for TPH would be the limiting factor in determining a completeness value. This analysis would result in a 43% completeness result for TPH data and would not satisfy the overriding data quality objective for project data of 90%. However, this number is not reflective of the usability of TPH data. The precision value for TPH is skewed considerably due to the omission of an MS/MSD during sample analysis for two of three SDGs. As noted previously, data restrictions are not placed on organic constituents based solely on the performance, or in this case omission, of the MS/MSD pair. In fact, ER-SOP-15.03, Rev. 1; *Routine Validation of Organochlorine Pesticides and Polychlorinated Biphenyls Data*, does not require the review of the MS/MSD as a QC indicator. Consequently, the completeness result is not reflective of data usability. Rather, the accuracy result of 87% better reflects the usability results, as no limitations have been assigned to TPH results based on precision. While 87% falls slightly below project DQOs for completeness, it reflects the quality of TPH results (i.e., TPH results are much less restricted for use than would be indicated using precision as an indicator in this case). Limitations to reported TPH data can be found in Appendix 13.C, Analytical Reports.

B.9.5 Perchlorate

The completeness for Perchlorate results is 100%. This satisfies the overriding data quality objective for project data of 90%. There are no limitations assigned to Perchlorate data.

B.9.6 Radionuclides

In evaluating completeness for radionuclides, the overall precision value is the limiting factor in determining which data points are valid (i.e., completeness for Pesticides cannot exceed the number of precise results as determined in Section 18.1.6). Therefore, the level of precise results obtained or 89% serves as the upper bound the completeness of radionuclides. This is slightly less than the overriding data quality objective for project data of 90%. Limitations to SVOC results can be found in Appendix 13.C, Analytical Reports.

B.10 VARIABILITY

Per the provisions in the project QAPP, field duplicate samples have been used to determine the range or variability associated with this sampling effort. To evaluate variability, field duplicate results have been compared directly with the original sample they were intended to mimic. The precision of these measurements has been evaluated using an RPD comparison to illustrate natural variances in the sample matrix. Table 1 summarizes the results of this analysis.

A total of 952 data points were evaluated as part of the variability determination for project samples. 755 of the sample results, or 79.3% were reported as non-detects or were less than two times the reporting limit in both the original sample and the field duplicate. Each of these results demonstrated acceptable variability. The remaining 197 data points, or 20.7% of the total, showed measurable levels of COPCs. 142 of these points, or 14.9% of the total, showed acceptable precision (RPD $\leq$ 35%). The remaining 54 results demonstrated precision outside of the +/- 35% agreement limit. Overall, 94.2% of the sample and duplicate results showed acceptable precision. The remaining 5.8% of sample/duplicates demonstrated precision outside of the +/- 35% limit prescribed for soil matrices. The following lists the COPCs affected by high variability and the drainages the sample pairs originated in.

Drainage A: All results showed acceptable variability

Drainage B: Lead

Drainage C: Aluminum, Barium, Calcium, Lead, Magnesium, Manganese, Potassium, and TPH (motor oil)

Drainage D2: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Endrin Ketone, Fluoranthene, gamma-Chlordane, Indeno(1,2,3)pyrene, 4,4-DDT, Lead, Phenanthrene, Pyrene, and Sodium.

The variability measured for lead in Drainages B has little impact on the overriding uses for project data, as both samples were measured below the area background concentration of lead of 20 mg/kg.

The variability noted for constituents in Drainage C also has little bearing on decision-making at the site, as all of the noted metals except lead are below area background concentrations. In the case of lead, the original sample result was above background at 25.3 mg/kg. The duplicate was measured at 16 mg/kg. The average of these two values is 20.6, which is at the area background. While the TPH values showed unacceptable agreement, both are significantly below the most conservative action limits with the original sample measured at 16 mg/kg and the duplicate at 30 mg/kg.

The variability noted for sodium in Drainage D2 has little impact on site decision-making as both sodium values are below the area background concentration of 1,470 mg/kg. The average of the two lead values is 25.8 mg/kg or slightly above the area background concentration of 20 mg/kg. The measured level of 4,4-DDT in the original sample (6.9 ug/kg) likely will not contribute significantly to human health or ecological risks. In addition, the field duplicate result was a non-detect indicating that any adjustments to 4,4-DDT during data evaluation would likely lower the concentration to be considered at the site.

The variability noted for key PAHs has a more significant effect on the evaluation and use of project data. Compounds which may contribute to risks at the site, particularly Benzo(a)pyrene, were found at their maximum concentrations in Drainage D2 in sample LANL-WR-SS-32. This sample was duplicated in this case by LANL-WR-SS-61. The majority of the PAH compounds were detected in the parts per million (ppm) range in LANL-WR-SS-32. The field duplicate values for this location were measured at or near the reporting limits for the same compounds, in the ppb range. Detections for key PAH compounds were similar across the board for the original sample and the field duplicate. In addition, the quality of the reported results for these locations has been found to be within USEPA method/QAPP requirements by method validation. These factors indicate that the PAH compounds are likely present in Drainage D2 [See Figure 1]. Therefore, the variability is likely due to other factors. The detection of PAHs in drainages downgrade of the Los Alamos Landfill is consistent with previous LANL RFI investigations, which found that PAHs were distributed throughout the landfill complex and the down gradient drainages. Historical literature suggests that their deposition likely originated from bi-monthly burning practices employed at the landfill during much of its operation.

However, the wide range of concentrations between the two samples indicates that sample matrix likely has played a large role in variable results. Field observations gathered during sample collection indicate the soil at this location consists of sand with gravel. In addition, bedrock was measured at a rather shallow depth (5 in.). Based on the large particle sizes observed at this location, it is likely that any chemicals adsorbed to soils would be highly variable and unpredictable. In the absence of significant fines, the distribution of COPCs at this location would be expected to be variable. In this case, the measured results bear this out, with concentrations ranging from levels near SALs to the ppm range.

Because of the variability of the measured results, it is recommended that upper tolerance limits (UTLs) be utilized by data users for all detected COPCs in evaluating site conditions. Their use

will allow decision makers to account for the wide range of concentrations identified for key COPCs that showed detections at the site. The use of UTLs to evaluate LANL soils is a well-documented practice. An example includes the published LANL area background soil and sediment data, which employ UTLs to incorporate the wide range of concentrations and activities, found in area soils for metals and radionuclides.

B.11 REPRESENTATIVENESS

Prior to planning and executing sampling activities, a High Performance Team (HPT) comprised of DOE-LANL and NMED personnel completed deliberations, to determine what level of sampling would result in representative data from the site. The HPT concluded that 60 random samples distributed evenly in 15 sample subgroups per drainage, was sufficient to determine if the remedy in Drainages A, B, C, and D2 was effective. A caveat was added that whenever soils exceeded 2 ft in depth, a second sample would be collected from 2 ft to bedrock. Portage was directed to create a Sampling and Analysis Plan (SAP) that accommodated these conclusions. A SAP was prepared and approved by the USACE and DOE-LANL and was implemented in the field.

Prior to sample collection, all sample locations were staked and surveyed to ensure proper documentation of field activities. While staking and surveying was underway, the PrM provided guidance indicating, recent consultations with NMED had resulted in a modification to the sampling design. The original design called for 15 random samples collected in a linear fashion from the bottom of each drainage to the top. The modification called for emphasizing sample collection in areas where soils/sediments accumulate in each drainage. Field guidance called for the placement of sample locations laterally across sediment accumulation areas, reducing the number of linear samples collected in the valley of each drainage. This modification was made throughout Drainages A, B, C, and D2 and samples were collected accordingly.

The data gathered during this effort covered the spatial boundaries of the key drainages. In addition, the modified sampling strategy resulted in more comprehensive data acquisition from areas where soils were more highly distributed. While the modification resulted in a more biased sampling approach to the drainage system, it has also likely resulted in more conservative data for the site.

The data acquired from project sampling is also representative of areas where waste was heavily distributed prior to the execution of the RCRA corrective action. To ensure this, the PM accompanied the field team leader (FTL) during initial site inspection activities and during site staking and surveying. The PM identified major areas where waste was distributed and lateral cross-sections were placed at many of these locations. These factors, coupled with the findings of the HPT indicate the sampling strategy employed, resulted in representative data from the site. As noted, any biases in this data set, are likely in the direction of increasing the measured concentrations due to the partially biased nature of the modified sampling strategy, which likely resulted in a more conservative view of site conditions.

An example of this is illustrated in TPH results. During sample collection soils were collected throughout the drainages whenever the field team observed asphalt residues. In these cases, TPH samples were collected downgrade of areas of asphalt identification and collection continued upgrade in each drainage until asphalt was no longer visible or when the top of the drainage was reached. The biased nature of TPH sampling has most certainly resulted in a conservative view of conditions in the drainage system.

B.12 COMPARABILITY

There are now two data sets for the drainage system that bisect the Los Alamos Airport Landfill. These include the data gathered by the LANL RFI team between 1994 and 1997 and the post-removal sample data presented herein. The two sets are quite comparable based on the

conditions under which they were acquired. Similarities between the data sets are described by the following elements.

- Both data sets were acquired under sampling and analysis plans that were approved by DOE-LANL.
- Both data sets employed LANL-ER-SOPs for all aspects of sample collection, handling, documentation, shipment, etc.
- A DOE approved and reputable contract laboratory that employed standard USEPA methods to quantify COPCs, generated both data sets.
- Both data sets underwent data validation in accordance with LANL-ER-SOPs.
- Both data sets utilized published background concentrations as determined by the LANL ER Project in LA-UR-98-4847 in evaluating positive detections at the site.

Because the similarities in the data sets are quite uniform, data users may utilize the RFI generated data to make comparisons as to both the historical and current conditions at the site. Both data sets are quite credible and have demonstrated adherence to LANL and other industry standards in acquiring the on-site data.

The only discernable difference in the data sets is minor and has no effect on direct comparison between the two sets. The data acquired during the 1994-1997 RFI efforts, was generated from a relatively small number of sample locations (13) and did not concentrate on the drainage areas alone. Instead, the (13) locations span the drainage system, including areas lying between the major drainages. As a result, it is not clear whether the two populations represent the same conditions. Only statistical treatments of the two data sets will allow a determination to be made as to the appropriateness of direct comparison of the results. Also in contrast, post-removal efforts incorporated a more comprehensive number of sample locations (60) within the drainage system to better define the extent of COPCs while monitoring the effectiveness of the remedy. Whatever limitations to the RFI data, overall they are augmented by the additional information obtained during this sampling effort. The comparability of the two sets based on the similarity of their acquisition is very high and data users should evaluate both data sets in making decisions at the site.

Discuss the analytical methods, a summary of data quality objectives, and the data quality review procedures. A summary of data quality exceptions and their effect on the acceptability of the field and laboratory analytical data with regard to the investigation and the site status shall be included in this appendix along with references to the case narratives provided in the laboratory reports.

APPENDIX C

ANALYTICAL REPORTS

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Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10/14/2003 Lab Code: SVOA

Contract Laboratory Name: STL St. Louis

Validator: Berta Oates Organization: Portage Environmental

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☒ Semivolatile Organics
- ☐ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☐ Inorganics
- ☐ Radiochemistry

Other (describe):

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☒	☐	☐	8. Quantitation reports
☒	☐	☐	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☒	☐	☐	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

(Attach additional comment sheets as necessary.)

Validator's signature: Jm H. Zith Date: 10-20-03

SOP-15.02, R1

Los Alamos National Laboratory
RRES-Remediation Program

SVOC Data-Validation Checklist

Yes	No	(check one)	Comment
☐	☒	1. The Sample was extracted >1 to =2 times the appropriate hold time requirement.	
☐	☒	2. The Sample was extracted >2 times the appropriate holding time requirement.	
☐	☒	3. The Sample was analyzed outside the analytical holding time requirement.	
☐	☒	4. The instrument performance check (DFTPP) is not present or fails acceptance criteria.	
☐	☒	5. The initial calibration is not present.	
☐	☒	6. The initial calibration does not have either 5 calibration points or a low standard at the reporting limit.	
☒	☐	7. The initial calibration analyte %RSD is >30%.	2,4-dinitrophenol RSD >30%. 14 results qualified.
☐	☒	8. The analyte minimum RRF is <0.05 in the initial calibration.	
☐	☒	9. CCV is not present.	
☐	☒	10. The continuing calibration analyte %D is >25%.	
☐	☒	11. The analyte minimum RRF is <0.05 in the continuing calibration.	
☐	☒	12. The method blank information is not present.	
☒	☐	13. The analyte detected in the method blank <u>and</u> sample result for analyte is =5x/10x the amount in blank.	Bis(2-ethylhexyl)phthalate found in blank. 3 sample results qualified "U."
☐	☒	14. The analyte detected in the method blank <u>and</u> sample result for analyte is >5x/10x the amount in method blank.	
☐	☒	15. IS information is not present.	
☐	☒	16. The IS area in the CCV is <50%R or >200%R.	
☐	☒	17. The IS retention times have shifted by more than 30 s.	
☐	☒	18. The sample IS area is >200%R.	
☒	☐	19. The sample IS area is <50%R but =10%R.	Low internal standard recovery for one sample.
☐	☒	20. The Sample IS area is <10%R.	
☐	☒	21. The surrogate information is not present.	
☐	☒	22. The surrogate %R is greater than the UAL.	
☐	☒	23. The surrogate %R is greater than the LAL but =10%.	
☐	☒	24. The surrogate %R is <10%.	
☐	☒	25. There is one surrogate %R <LAL and one surrogate %R >UAL.	
☐	☒	26. LCS information is not present.	
☐	☒	27. The LCS %R is >UAL.	
☐	☒	28. The LCS %R is <LAL but =10%.	
☐	☒	29. The LCS %R is <10%.	
☐	☒	30. Mass spectral information is missing.	
☐	☒	31. The mass spectrum does not meet method specifications.	
☐	☒	32. TICs were requested but not reported.	
☐	☒	33. The sample was diluted inappropriately.	
☐	☒	34. Other obvious data quality issues were identified.	

Overall Assessment of Data

Batch 3258447 (samples LANL-WR-SS-1 through -20)

3,3'-dichlorobenzidine exhibited a 0% recovery in the matrix spike/matrix spike duplicate analysis (lab control limits are specified as 10-115%). No flags were assigned to samples data, as the LCS results for this compound were in control.

Batch 3261273 (samples LANL-WR-SS-21 through -40)

MS/MSD results were outside the corresponding control limits for the following analytes:

- 4-chloroaniline: 13% MS recovery, 95% RPD.
- 3-nitroaniline: 16% MS recovery, 98% RPD.
- 4-nitroaniline: 14% MS recovery, 63% RPD.
- 3,3'-dichlorobenzidine: 0% recovery in both MS and MSD.

No action was taken, as the LCS demonstrated acceptable performance.

Batch 3264138 (samples LANL-WR-SS-41 through -60)

2,4-dinitrophenol exhibited a 34.76% RSD in the ICAL. This exceeds the 30% criterion. The affected samples are LANL-WR-SS-41 through -54. These results have been qualified "UJ."

Sample LANL-WR-SS-57 exhibited low internal standard recovery for perylene-d12. As a result, the seven compounds associated with perylene-d12 have been qualified "UJ," to indicate a possible bias in reported results.

Batch 3265536 (samples LANL-WR-SS-61 through -64)

Results for 3,3'-dichlorobenzidine in the MS/MSD analyses were outside the corresponding control limits. However, no action has been taken, as the LCS demonstrated acceptable recovery.

Batch 3258462 (samples LANL-WR-SS-65 through -67)

Bis(2-ethylhexyl)phthalate was detected in the laboratory blank and in all samples. All bis(2-ethylhexyl)phthalate results have been qualified "U," as the amounts in the samples were less than 10x the blank amount.

Attachment A

Form I's Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.031 / g
Work Order: FX9251AC
Dilution factor: 1
Moisture %:6.4

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

for 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.031 / g
Work Order: FX9251AC
Dilution factor: 1
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

10/16/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Lab Sample ID: F3I130129 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.031 / g
Work Order: FX9251AC
Dilution factor: 1
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	88	(10 - 115)
2,4,6-Tribromophenol	80	(19 - 115)
Terphenyl-d14	80	(10 - 115)

FORM I

10/13/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g
Work Order: FX93G1AN
Dilution factor: 1
Moisture %: 6.1

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
65794-96-9	3-Methylphenol & 4-Methylphe	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U

Rw 10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g
Work Order: FX93G1AN
Dilution factor: 1
Moisture %: 6.1

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U

FORM I

10/2/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g
Work Order: FX93G1AN
Dilution factor: 1
Moisture %:6.1

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
218-01-9	Chrysene	120	U
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	72	(19 - 115)
Phenol-d5	74	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	71	(10 - 115)

10/1/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX93H1AN
Dilution factor: 1
Moisture %: 9.4

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX93H1AN
Dilution factor: 1
Moisture %: 9.4

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX93H1AN
Dilution factor: 1
Moisture %:9.4

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	87	(10 - 115)
2-Fluorobiphenyl	94	(10 - 115)
2,4,6-Tribromophenol	85	(19 - 115)
Terphenyl-d14	78	(10 - 115)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.042 / g
Work Order: FX93J1AN
Dilution factor: 1
Moisture %: 9.3

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

BN 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.042 / g
Work Order: FX93J1AN
Dilution factor: 1
Moisture %:9.3

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.042 / g
Work Order: FX93J1AN
Dilution factor: 1
Moisture %: 9.3

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	72	(10 - 115)

FORM I

10/13/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g
Work Order: FX93P1AN
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g
Work Order: FX93P1AN
Dilution factor: 1
Moisture %: 11

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g
Work Order: FX93P1AN
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	88	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	70	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g
Work Order: FX93T1AN
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

Bw 10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g
Work Order: FX93T1AN
Dilution factor: 1
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g
Work Order: FX93T1AN
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	72	(27 - 115)
Nitrobenzene-d5	81	(10 - 115)
2-Fluorobiphenyl	88	(10 - 115)
2,4,6-Tribromophenol	77	(19 - 115)
Terphenyl-d14	71	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g Date Received: 09/12/03
Work Order: FX93V1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:16

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U

Bw 10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g Date Received: 09/12/03
Work Order: FX93V1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:16

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethyl phthalate	390	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	390	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g Date Received: 09/12/03
Work Order: FX93V1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:16

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	72	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	69	(10 - 115)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g
Work Order: FX93X1AN
Dilution factor: 1
Moisture %: 9.2

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g Date Received: 09/12/03
Work Order: FX93X1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:9.2

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

Pw 10/2/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.019 / g
Work Order: FX93X1AN
Dilution factor: 1
Moisture %:9.2

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	64	(19 - 115)
Phenol-d5	64	(27 - 115)
Nitrobenzene-d5	72	(10 - 115)
2-Fluorobiphenyl	79	(10 - 115)
2,4,6-Tribromophenol	68	(19 - 115)
Terphenyl-d14	63	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.021 / g Date Received: 09/12/03
Work Order: FX9301AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:19

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl) ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	820	U
621-64-7	N-Nitrosodi-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	140	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	140	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2000	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.021 / g
Work Order: FX9301AN
Dilution factor: 1
Moisture %:19

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	410	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	140	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethyl phthalate	410	U
86-73-7	Fluorene	140	U
7005-72-3	4-Chlorophenyl phenyl ether	410	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	140	U
129-00-0	Pyrene	140	U
85-68-7	Butyl benzyl phthalate	410	U
56-55-3	Benzo(a)anthracene	140	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
218-01-9	Chrysene	140	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.021 / g
Work Order: FX9301AN
Dilution factor: 1
Moisture %:19

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	140	U
207-08-9	Benzo(k)fluoranthene	140	U
50-32-8	Benzo(a)pyrene	140	U
193-39-5	Indeno(1,2,3-cd)pyrene	140	U
191-24-2	Benzo(ghi)perylene	140	U
53-70-3	Dibenzo(a,h)anthracene	140	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	67	(19 - 115)
Phenol-d5	67	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	83	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	65	(10 - 115)

10/17/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g
Work Order: FX9311AN
Dilution factor: 1
Moisture %: 11

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g
Work Order: FX9311AN
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX9311AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:11

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	86	(10 - 115)
2,4,6-Tribromophenol	77	(19 - 115)
Terphenyl-d14	71	(10 - 115)

FORM I

10/13/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.069 / g
Work Order: FX9321AN
Dilution factor: 1
Moisture %:9.3

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

FORM I

LOT# F3I130129

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.069 / g Date Received: 09/12/03
Work Order: FX9321AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:9.3

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

FORM I

Bw 9/22/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.069 / g Date Received: 09/12/03
Work Order: FX9321AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:9.3

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	71	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	69	(10 - 115)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.043 / g
Work Order: FX9331AN
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.043 / g
Work Order: FX9331AN
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.043 / g
Work Order: FX9331AN
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	64	(19 - 115)
Phenol-d5	65	(27 - 115)
Nitrobenzene-d5	75	(10 - 115)
2-Fluorobiphenyl	78	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	68	(10 - 115)

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 013
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g
Work Order: FX94A1AN
Dilution factor: 1
Moisture %: 16

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 013
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g
Work Order: FX94A1AN
Dilution factor: 1
Moisture %:16

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/16/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethyl phthalate	390	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	390	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

FORM I

10/13/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 013
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g Date Received: 09/12/03
Work Order: FX94A1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/16/03
Moisture %:16

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	70	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	67	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 014
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.036 / g
Work Order: FX94C1AN
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 014
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.036 / g
Work Order: FX94C1AN
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	150	
129-00-0	Pyrene	140	
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

10/2/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 014
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.036 / g Date Received: 09/12/03
Work Order: FX94C1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:12

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	67	(19 - 115)
Phenol-d5	68	(27 - 115)
Nitrobenzene-d5	75	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	65	(10 - 115)

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.035 / g
Work Order: FX94E1AN
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-15

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.035 / g
Work Order: FX94E1AN
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-15

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	100	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	99	J
206-44-0	Fluoranthene	210	
129-00-0	Pyrene	200	
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	110	J
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.035 / g Date Received: 09/12/03
Work Order: FX94E1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:13

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-15

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	140	
50-32-8	Benzo(a)pyrene	96	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	67	(19 - 115)
Phenol-d5	68	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	80	(10 - 115)
2,4,6-Tribromophenol	68	(19 - 115)
Terphenyl-d14	63	(10 - 115)

10/18/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 016
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.027 / g
Work Order: FX94F1AN
Dilution factor: 1
Moisture %:8.9

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-16

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

Bro 10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 016
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.027 / g
Work Order: FX94F1AN
Dilution factor: 1
Moisture %:8.9

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-16

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 016
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.027 / g Date Received: 09/12/03
Work Order: FX94F1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:8.9

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-16

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	73	(27 - 115)
Nitrobenzene-d5	84	(10 - 115)
2-Fluorobiphenyl	89	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	75	(10 - 115)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 017
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g
Work Order: FX94G1AN
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-17

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 017
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g
Work Order: FX94G1AN
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-17

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 017
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.008 / g
Work Order: FX94G1AN
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-17

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	69	(19 - 115)
Phenol-d5	71	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	86	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	74	(10 - 115)

FORM I

10/18/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 018
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.051 / g
Work Order: FX94H1AN
Dilution factor: 1
Moisture %:4.2

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-18

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitrosodi-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	110	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	110	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 018
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX94H1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:4.2

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-18

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	110	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethyl phthalate	340	U
86-73-7	Fluorene	110	U
7005-72-3	4-Chlorophenyl phenyl ether	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl phenyl ether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butyl phthalate	340	U
206-44-0	Fluoranthene	110	U
129-00-0	Pyrene	110	U
85-68-7	Butyl benzyl phthalate	340	U
56-55-3	Benzo(a)anthracene	110	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	110	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 018
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX94H1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:4.2

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-18

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	340	U
117-84-0	Di-n-octyl phthalate	340	U
205-99-2	Benzo(b)fluoranthene	110	U
207-08-9	Benzo(k)fluoranthene	110	U
50-32-8	Benzo(a)pyrene	110	U
193-39-5	Indeno(1,2,3-cd)pyrene	110	U
191-24-2	Benzo(ghi)perylene	110	U
53-70-3	Dibenzo(a,h)anthracene	110	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	74	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	87	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	73	(10 - 115)

FORM I

10/17/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 019
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.073 / g
Work Order: FX94K1AN
Dilution factor: 1
Moisture %:6.9

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-19

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

Jw 10/2/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 019
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.073 / g
Work Order: FX94K1AN
Dilution factor: 1
Moisture %:6.9

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-19

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	75	J
129-00-0	Pyrene	83	J
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 019
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.073 / g
Work Order: FX94K1AN
Dilution factor: 1
Moisture %:6.9

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-19

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	67	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
2-Fluorobiphenyl	83	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	80	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 020
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g
Work Order: FX94L1AN
Dilution factor: 1
Moisture %: 6.7

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 020
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g Date Received: 09/12/03
Work Order: FX94L1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:6.7

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	77	J
129-00-0	Pyrene	82	J
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

10/12/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 020
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.025 / g Date Received: 09/12/03
Work Order: FX94L1AN Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:6.7

QC Batch: 3258447

Client Sample Id: LANL-WR-SS-20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	73	(27 - 115)
Nitrobenzene-d5	88	(10 - 115)
2-Fluorobiphenyl	92	(10 - 115)
2,4,6-Tribromophenol	77	(19 - 115)
Terphenyl-d14	79	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 021
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.003 / g Date Received: 09/12/03
Work Order: FX94M1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:12

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-21

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 021
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.003 / g Date Received: 09/12/03
Work Order: FX94M1AN Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %: 12

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-21

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 021
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.003 / g
Work Order: FX94M1AN
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-21

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	70	(27 - 115)
Nitrobenzene-d5	74	(10 - 115)
2-Fluorobiphenyl	80	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	65	(10 - 115)

10/3/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 022
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g
Work Order: FX94P1AN
Dilution factor: 1
Moisture %: 11

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-22

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	740	U
65794-96-9	3-Methylphenol & 4-Methylphe	740	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 022
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g
Work Order: FX94P1AN
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-22

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Lab Sample ID: F3I130129 022

Sample WT/Vol: 30.016 / g
Work Order: FX94P1AN
Dilution factor: 1
Moisture %: 11

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-22

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
218-01-9	Chrysene	120	U
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	77	(19 - 115)
Phenol-d5	70	(27 - 115)
Nitrobenzene-d5	85	(10 - 115)
2-Fluorobiphenyl	86	(10 - 115)
2,4,6-Tribromophenol	74	(19 - 115)
Terphenyl-d14	75	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 023
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g Date Received: 09/12/03
Work Order: FX94Q1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:7.9

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-23

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID

Lab Sample ID: F3I130129 023

Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX94Q1AN
Dilution factor: 1
Moisture %: 7.9

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-23

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	74	J
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

Pu 10/13/6

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 023
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX94Q1AN
Dilution factor: 1
Moisture %: 7.9

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-23

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	75	(19 - 115)
Phenol-d5	68	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	81	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	50	(10 - 115)

fw 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 024
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g
Work Order: FX94R1AN
Dilution factor: 1
Moisture %: 7.3

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-24

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 024
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g Date Received: 09/12/03
Work Order: FX94R1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:7.3

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-24

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

11/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 024
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.013 / g
Work Order: FX94R1AN
Dilution factor: 1
Moisture %:7.3

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-24

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	75	(19 - 115)
Phenol-d5	67	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	83	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	67	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 025
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g
Work Order: FX94T1AN
Dilution factor: 1
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

fw 11/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 025
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g
Work Order: FX94T1AN
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	150	
129-00-0	Pyrene	140	
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	81	J
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	94	J

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 025
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g Date Received: 09/12/03
Work Order: FX94T1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:10

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	79	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	69	(19 - 115)
Phenol-d5	67	(27 - 115)
Nitrobenzene-d5	73	(10 - 115)
2-Fluorobiphenyl	80	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	62	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 026
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX94V1AN
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-26

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 026
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g Date Received: 09/12/03
Work Order: FX94V1AN Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %: 12

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-26

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID

Lab Sample ID: F3I130129 026

Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX94V1AN
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-26

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	66	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	63	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 027
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.059 / g
Work Order: FX94W1AN
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-27

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 027
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.059 / g Date Received: 09/12/03
Work Order: FX94W1AN Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %: 14

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-27

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

Bw 10/31

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 027
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.059 / g
Work Order: FX94W1AN
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-27

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	80	(19 - 115)
Phenol-d5	73	(27 - 115)
Nitrobenzene-d5	84	(10 - 115)
2-Fluorobiphenyl	89	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	67	(10 - 115)

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 028
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.076 / g
Work Order: FX94X1AN
Dilution factor: 1
Moisture %: 17

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1900	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 028
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.076 / g Date Received: 09/12/03
Work Order: FX94X1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:17

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethyl phthalate	400	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butyl phthalate	400	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	400	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 028
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.076 / g Date Received: 09/12/03
Work Order: FX94X1AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:17

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	400	U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	84	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	89	(10 - 115)
2-Fluorobiphenyl	94	(10 - 115)
2,4,6-Tribromophenol	84	(19 - 115)
Terphenyl-d14	74	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 029
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9401AN
Dilution factor: 1
Moisture %:21

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-29

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl) ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	830	U
621-64-7	N-Nitrosodi-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	140	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	140	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2000	U

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 029
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9401AN
Dilution factor: 1
Moisture %:21

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-29

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	140	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethyl phthalate	420	U
86-73-7	Fluorene	140	U
7005-72-3	4-Chlorophenyl phenyl ether	420	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	420	U
101-55-3	4-Bromophenyl phenyl ether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-butyl phthalate	420	U
206-44-0	Fluoranthene	200	
129-00-0	Pyrene	120	J
85-68-7	Butyl benzyl phthalate	420	U
56-55-3	Benzo(a)anthracene	140	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
218-01-9	Chrysene	92	J

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 029
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g Date Received: 09/12/03
Work Order: FX9401AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %:21

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-29

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	420	U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo(b)fluoranthene	140	
207-08-9	Benzo(k)fluoranthene	94	J
50-32-8	Benzo(a)pyrene	85	J
193-39-5	Indeno(1,2,3-cd)pyrene	100	J
191-24-2	Benzo(ghi)perylene	140	U
53-70-3	Dibenzo(a,h)anthracene	140	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	79	(19 - 115)
Phenol-d5	74	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	90	(10 - 115)
2,4,6-Tribromophenol	84	(19 - 115)
Terphenyl-d14	48	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 030
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.014 / g
Work Order: FX9411AN
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U

10/3/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 030
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.014 / g Date Received: 09/12/03
Work Order: FX9411AN Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/19/03
Moisture %: 15

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethyl phthalate	390	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	390	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

fw 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID

Lab Sample ID: F3I130129 030

Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.014 / g
Work Order: FX9411AN
Dilution factor: 1
Moisture %: 15

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/19/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	62	(27 - 115)
Nitrobenzene-d5	71	(10 - 115)
2-Fluorobiphenyl	75	(10 - 115)
2,4,6-Tribromophenol	64	(19 - 115)
Terphenyl-d14	55	(10 - 115)

Jw 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 031
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.041 / g Date Received: 09/12/03
Work Order: FX9421AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:10

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 031
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.041 / g
Work Order: FX9421AN
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 067
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX9611A0
Dilution factor: 1
Moisture %:NA

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-67

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	11	B
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
191-24-2	Benzo(ghi)perylene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U

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SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	36	(10 - 115)
Phenol-d5	42	(10 - 115)
Nitrobenzene-d5	51	(13 - 115)
2-Fluorobiphenyl	52	(14 - 115)
2,4,6-Tribromophenol	43	(10 - 119)
Terphenyl-d14	60	(10 - 122)

FORM I

JB 10-16-03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 067
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX9611A0
Dilution factor: 1
Moisture %: NA

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-67

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethyl phthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
56-55-3	Benzo(a)anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 067
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX9611A0
Dilution factor: 1
Moisture %:NA

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-67

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	20	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
65794-96-9	3-Methylphenol & 4-Methylphe	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 066
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 09/12/03
Work Order: FX96X1AM Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:NA

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-66

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
117-81-7	bis(2-Ethylhexyl) phthalate	12	B
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
191-24-2	Benzo(ghi)perylene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U

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SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	58	(10 - 115)
Phenol-d5	65	(10 - 115)
Nitrobenzene-d5	83	(13 - 115)
2-Fluorobiphenyl	86	(14 - 115)
2,4,6-Tribromophenol	67	(10 - 119)
Terphenyl-d14	76	(10 - 122)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 066
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX96X1AM
Dilution factor: 1
Moisture %: NA

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-66

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethyl phthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
56-55-3	Benzo(a)anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
218-01-9	Chrysene	10	U

FORM I

fgo 10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 066
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX96X1AM
Dilution factor: 1
Moisture %: NA

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-66

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	20	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 065
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX96N1AA
Dilution factor: 1
Moisture %: NA

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-65

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
117-81-7	bis(2-Ethylhexyl) phthalate	78	B
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
191-24-2	Benzo(ghi)perylene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U

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SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	52	(10 - 115)
Phenol-d5	58	(10 - 115)
Nitrobenzene-d5	70	(13 - 115)
2-Fluorobiphenyl	70	(14 - 115)
2,4,6-Tribromophenol	63	(10 - 119)
Terphenyl-d14	65	(10 - 122)

FORM I

10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 065
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 09/12/03
Work Order: FX96N1AA Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:NA

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-65

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
131-11-3	Dimethyl phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethyl phthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butyl benzyl phthalate	10	U
56-55-3	Benzo(a)anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	50	U
218-01-9	Chrysene	10	U

10/12.

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 065
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL
Work Order: FX96N1AA
Dilution factor: 1
Moisture %:NA

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/18/03

QC Batch: 3258462

Client Sample Id: LANL-WR-SS-65

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	20	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	50	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U

FORM I

Bo 10/12/03

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 064
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.024 / g
Work Order: FX9591A1
Dilution factor: 1
Moisture %: 6.6

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	78	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	89	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	73	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 064
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.024 / g
Work Order: FX9591A1
Dilution factor: 1
Moisture %:6.6

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 064
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.024 / g
Work Order: FX9591A1
Dilution factor: 1
Moisture %: 6.6

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 063
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX9571A1 Date Extracted: 09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %: 12

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	69	(19 - 115)
Phenol-d5	76	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	73	(10 - 115)

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 063
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX9571A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:12

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	98	J
129-00-0	Pyrene	77	J
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 063
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX9571A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:12

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 062
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g Date Received: 09/12/03
Work Order: FX9561A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:13

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	72	(19 - 115)
Phenol-d5	76	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	87	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	70	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 062
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g Date Received: 09/12/03
Work Order: FX9561A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:13

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 062
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g Date Received: 09/12/03
Work Order: FX9561A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:13

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 061
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX9541A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.1

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	140	
50-32-8	Benzo(a)pyrene	130	
193-39-5	Indeno(1,2,3-cd)pyrene	100	J
191-24-2	Benzo(ghi)perylene	110	J
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	72	(19 - 115)
Phenol-d5	79	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	89	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	71	(10 - 115)

11/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 061
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g
Work Order: FX9541A1
Dilution factor: 1
Moisture %: 5.1

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	240	
129-00-0	Pyrene	230	
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	120	
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	150	

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 061
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX9541A1 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.1

QC Batch: 3265536

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Lab Sample ID: F3I130129 060
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX9521A1
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	67	(10 - 115)

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 060
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX9521A1
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 060
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.018 / g
Work Order: FX9521A1
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 059
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.007 / g Date Received: 09/12/03
Work Order: FX9511A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:13

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	72	(19 - 115)
Phenol-d5	76	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	86	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	68	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 059
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.007 / g
Work Order: FX9511A1
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 059
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.007 / g
Work Order: FX9511A1
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 058
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.083 / g Date Received: 09/12/03
Work Order: FX9501A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:10

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	65	(19 - 115)
Phenol-d5	72	(27 - 115)
Nitrobenzene-d5	70	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	69	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 058
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.083 / g
Work Order: FX9501A1
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 058
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.083 / g Date Received: 09/12/03
Work Order: FX9501A1 Date Extracted: 09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %: 10

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

11/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 057
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.061 / g
Work Order: FX95X1A1
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/24/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
117-81-7	bis(2-Ethylhexyl) phthalate	380	U	
117-84-0	Di-n-octyl phthalate	380	U	UJ, SV1a
205-99-2	Benzo(b)fluoranthene	130	U	UJ, SV1a
207-08-9	Benzo(k)fluoranthene	130	U	UJ, SV1a
50-32-8	Benzo(a)pyrene	130	U	UJ, SV1a
193-39-5	Indeno(1,2,3-cd)pyrene	130	U	UJ, SV1a
191-24-2	Benzo(ghi)perylene	130	U	UJ, SV1a
53-70-3	Dibenzo(a,h)anthracene	130	U	UJ, SV1a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	74	(27 - 115)
Nitrobenzene-d5	75	(10 - 115)
2-Fluorobiphenyl	80	(10 - 115)
2,4,6-Tribromophenol	66	(19 - 115)
Terphenyl-d14	77	(10 - 115)

10/19/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 057
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.061 / g Date Received: 09/12/03
Work Order: FX95X1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:13

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	130	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 057
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.061 / g Date Received: 09/12/03
Work Order: FX95X1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:13

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 056
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.004 / g
Work Order: FX95W1A1
Dilution factor: 1
Moisture %: 7.6

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	71	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	72	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 056
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.004 / g
Work Order: FX95W1A1
Dilution factor: 1
Moisture %:7.6

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 056
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.004 / g
Work Order: FX95W1A1
Dilution factor: 1
Moisture %: 7.6

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 055
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.011 / g Date Received: 09/12/03
Work Order: FX95V1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:24

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	440	U
117-84-0	Di-n-octyl phthalate	440	U
205-99-2	Benzo(b)fluoranthene	150	U
207-08-9	Benzo(k)fluoranthene	150	U
50-32-8	Benzo(a)pyrene	150	U
193-39-5	Indeno(1,2,3-cd)pyrene	150	U
191-24-2	Benzo(ghi)perylene	150	U
53-70-3	Dibenzo(a,h)anthracene	150	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	67	(19 - 115)
Phenol-d5	73	(27 - 115)
Nitrobenzene-d5	74	(10 - 115)
2-Fluorobiphenyl	81	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	69	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 055
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.011 / g
Work Order: FX95V1A1
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	150	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethyl phthalate	440	U
86-73-7	Fluorene	150	U
7005-72-3	4-Chlorophenyl phenyl ether	440	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	440	U
101-55-3	4-Bromophenyl phenyl ether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	440	U
86-74-8	Carbazole	440	U
84-74-2	Di-n-butyl phthalate	440	U
206-44-0	Fluoranthene	150	U
129-00-0	Pyrene	150	U
85-68-7	Butyl benzyl phthalate	440	U
56-55-3	Benzo(a)anthracene	150	U
91-94-1	3,3'-Dichlorobenzidine	2100	U
218-01-9	Chrysene	150	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 055
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.011 / g Date Received: 09/12/03
Work Order: FX95V1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:24

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl) ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440	U
106-44-5	4-Methylphenol	870	U
621-64-7	N-Nitrosodi-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	150	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	150	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2100	U

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 054
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.063 / g Date Received: 09/12/03
Work Order: FX95T1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:8.9

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	75	(19 - 115)
Phenol-d5	81	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	79	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 054
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.063 / g
Work Order: FX95T1A1
Dilution factor: 1
Moisture %: 8.9

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

UJ, SV7a

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 054
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.063 / g
Work Order: FX95T1A1
Dilution factor: 1
Moisture %: 8.9

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 053
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g Date Received: 09/12/03
Work Order: FX95R1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:21

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	420	U
117-84-0	Di-n-octyl phthalate	420	U
205-99-2	Benzo(b)fluoranthene	140	U
207-08-9	Benzo(k)fluoranthene	140	U
50-32-8	Benzo(a)pyrene	140	U
193-39-5	Indeno(1,2,3-cd)pyrene	140	U
191-24-2	Benzo(ghi)perylene	140	U
53-70-3	Dibenzo(a,h)anthracene	140	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	74	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
2-Fluorobiphenyl	86	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	83	(10 - 115)

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 053
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g Date Received: 09/12/03
Work Order: FX95R1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:21

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	420	U	
208-96-8	Acenaphthylene	420	U	
606-20-2	2,6-Dinitrotoluene	420	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	420	U	
51-28-5	2,4-Dinitrophenol	2000	U	UJ,SV7a
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	140	U	
121-14-2	2,4-Dinitrotoluene	420	U	
84-66-2	Diethyl phthalate	420	U	
86-73-7	Fluorene	140	U	
7005-72-3	4-Chlorophenyl phenyl ether	420	U	
100-01-6	4-Nitroaniline	2000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	
86-30-6	N-Nitrosodiphenylamine	420	U	
101-55-3	4-Bromophenyl phenyl ether	420	U	
118-74-1	Hexachlorobenzene	420	U	
87-86-5	Pentachlorophenol	2000	U	
85-01-8	Phenanthrene	420	U	
120-12-7	Anthracene	420	U	
86-74-8	Carbazole	420	U	
84-74-2	Di-n-butyl phthalate	420	U	
206-44-0	Fluoranthene	140	U	
129-00-0	Pyrene	140	U	
85-68-7	Butyl benzyl phthalate	420	U	
56-55-3	Benzo(a)anthracene	140	U	
91-94-1	3,3'-Dichlorobenzidine	2000	U	
218-01-9	Chrysene	140	U	

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 053
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g
Work Order: FX95R1A1
Dilution factor: 1
Moisture %:21

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl) ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	830	U
621-64-7	N-Nitrosodi-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	140	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	140	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2000	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 052
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.006 / g
Work Order: FX95Q1A1
Dilution factor: 1
Moisture %:18

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	400	U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

10/4/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	75	(19 - 115)
Phenol-d5	74	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
2-Fluorobiphenyl	81	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	73	(10 - 115)

FORM I

STL ST. LOUIS

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 052
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.006 / g
Work Order: FX95Q1A1
Dilution factor: 1
Moisture %:18

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethyl phthalate	400	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butyl phthalate	89	J
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	400	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
218-01-9	Chrysene	130	U

UJ, SV7a

10/14/03

FORM I

LOT# F3I130129

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 052
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.006 / g
Work Order: FX95Q1A1
Dilution factor: 1
Moisture %: 18

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	110	J
111-44-4	bis(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	810	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g
Work Order: FX95P1A1
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	440	U
117-84-0	Di-n-octyl phthalate	440	U
205-99-2	Benzo(b)fluoranthene	150	U
207-08-9	Benzo(k)fluoranthene	150	U
50-32-8	Benzo(a)pyrene	150	U
193-39-5	Indeno(1,2,3-cd)pyrene	150	U
191-24-2	Benzo(ghi)perylene	150	U
53-70-3	Dibenzo(a,h)anthracene	150	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	66	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	67	(10 - 115)
2-Fluorobiphenyl	73	(10 - 115)
2,4,6-Tribromophenol	63	(19 - 115)
Terphenyl-d14	64	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g
Work Order: FX95P1A1
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	150	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethyl phthalate	440	U
86-73-7	Fluorene	150	U
7005-72-3	4-Chlorophenyl phenyl ether	440	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	440	U
101-55-3	4-Bromophenyl phenyl ether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	440	U
86-74-8	Carbazole	440	U
84-74-2	Di-n-butyl phthalate	440	U
206-44-0	Fluoranthene	150	
129-00-0	Pyrene	150	
85-68-7	Butyl benzyl phthalate	440	U
56-55-3	Benzo(a)anthracene	150	U
91-94-1	3,3'-Dichlorobenzidine	2100	U
218-01-9	Chrysene	90	J

UJ, SV7a

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.033 / g Date Received: 09/12/03
Work Order: FX95P1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:24

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl) ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	440	U
106-44-5	4-Methylphenol	870	U
621-64-7	N-Nitrosodi-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	150	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	150	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2100	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 050
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.071 / g Date Received: 09/12/03
Work Order: FX95N1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:15

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	74	(19 - 115)
Phenol-d5	78	(27 - 115)
Nitrobenzene-d5	74	(10 - 115)
2-Fluorobiphenyl	83	(10 - 115)
2,4,6-Tribromophenol	77	(19 - 115)
Terphenyl-d14	74	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 050
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.071 / g Date Received: 09/12/03
Work Order: FX95N1A1 Date Extracted: 09/21/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %: 15

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethyl phthalate	390	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	130	U
129-00-0	Pyrene	130	U
85-68-7	Butyl benzyl phthalate	390	U
56-55-3	Benzo(a)anthracene	130	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	130	U

UJ, SV7a

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 050
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.071 / g
Work Order: FX95N1A1
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/23/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 049
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g Date Received: 09/12/03
Work Order: FX95M1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:8.3

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	74	(19 - 115)
Terphenyl-d14	73	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 049
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g
Work Order: FX95M1A1
Dilution factor: 1
Moisture %:8.3

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

UJ, SV 7a

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 049
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.06 / g
Work Order: FX95M1A1
Dilution factor: 1
Moisture %: 8.3

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U

16/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.04 / g
Work Order: FX95L1A1
Dilution factor: 1
Moisture %:8.9

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	74	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.04 / g Date Received: 09/12/03
Work Order: FX95L1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:8.9

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	360	U	
208-96-8	Acenaphthylene	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
99-09-2	3-Nitroaniline	1800	U	
83-32-9	Acenaphthene	360	U	
51-28-5	2,4-Dinitrophenol	1800	U	UJ, SV 7a
100-02-7	4-Nitrophenol	1800	U	
132-64-9	Dibenzofuran	120	U	
121-14-2	2,4-Dinitrotoluene	360	U	
84-66-2	Diethyl phthalate	360	U	
86-73-7	Fluorene	120	U	
7005-72-3	4-Chlorophenyl phenyl ether	360	U	
100-01-6	4-Nitroaniline	1800	U	
534-52-1	4,6-Dinitro-2-methylphenol	1800	U	
86-30-6	N-Nitrosodiphenylamine	360	U	
101-55-3	4-Bromophenyl phenyl ether	360	U	
118-74-1	Hexachlorobenzene	360	U	
87-86-5	Pentachlorophenol	1800	U	
85-01-8	Phenanthrene	360	U	
120-12-7	Anthracene	360	U	
86-74-8	Carbazole	360	U	
84-74-2	Di-n-butyl phthalate	360	U	
206-44-0	Fluoranthene	120	U	
129-00-0	Pyrene	120	U	
85-68-7	Butyl benzyl phthalate	360	U	
56-55-3	Benzo(a)anthracene	120	U	
91-94-1	3,3'-Dichlorobenzidine	1800	U	
218-01-9	Chrysene	120	U	

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.04 / g
Work Order: FX95L1A1
Dilution factor: 1
Moisture %:8.9

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 047
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.023 / g
Work Order: FX95K1A1
Dilution factor: 1
Moisture %: 19

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo(b)fluoranthene	140	U
207-08-9	Benzo(k)fluoranthene	140	U
50-32-8	Benzo(a)pyrene	140	U
193-39-5	Indeno(1,2,3-cd)pyrene	140	U
191-24-2	Benzo(ghi)perylene	140	U
53-70-3	Dibenzo(a,h)anthracene	140	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	75	(19 - 115)
Terphenyl-d14	74	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 047
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.023 / g Date Received: 09/12/03
Work Order: FX95K1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:19

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	410	U	
208-96-8	Acenaphthylene	410	U	
606-20-2	2,6-Dinitrotoluene	410	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	410	U	
51-28-5	2,4-Dinitrophenol	2000	U	UJ, SV7a
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	140	U	
121-14-2	2,4-Dinitrotoluene	410	U	
84-66-2	Diethyl phthalate	410	U	
86-73-7	Fluorene	140	U	
7005-72-3	4-Chlorophenyl phenyl ether	410	U	
100-01-6	4-Nitroaniline	2000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	
86-30-6	N-Nitrosodiphenylamine	410	U	
101-55-3	4-Bromophenyl phenyl ether	410	U	
118-74-1	Hexachlorobenzene	410	U	
87-86-5	Pentachlorophenol	2000	U	
85-01-8	Phenanthrene	410	U	
120-12-7	Anthracene	410	U	
86-74-8	Carbazole	410	U	
84-74-2	Di-n-butyl phthalate	410	U	
206-44-0	Fluoranthene	140	U	
129-00-0	Pyrene	140	U	
85-68-7	Butyl benzyl phthalate	88	J	
56-55-3	Benzo(a)anthracene	140	U	
91-94-1	3,3'-Dichlorobenzidine	2000	U	
218-01-9	Chrysene	140	U	

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FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 047
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.023 / g
Work Order: FX95K1A1
Dilution factor: 1
Moisture %: 19

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl) ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	810	U
621-64-7	N-Nitrosodi-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	140	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	140	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2000	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 046
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g Date Received: 09/12/03
Work Order: FX95J1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:11

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	74	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	73	(19 - 115)
Terphenyl-d14	70	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 046
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g Date Received: 09/12/03
Work Order: FX95J1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:11

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U UJ, SV7a
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethyl phthalate	370	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
86-74-8	Carbazole	370	U
84-74-2	Di-n-butyl phthalate	370	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	370	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
218-01-9	Chrysene	120	U

1/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 046
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g
Work Order: FX95J1A1
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g
Work Order: FX95H1A1
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	390	U
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo(b)fluoranthene	230	
207-08-9	Benzo(k)fluoranthene	300	
50-32-8	Benzo(a)pyrene	270	
193-39-5	Indeno(1,2,3-cd)pyrene	170	
191-24-2	Benzo(ghi)perylene	160	
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	64	(19 - 115)
Phenol-d5	70	(27 - 115)
Nitrobenzene-d5	65	(10 - 115)
2-Fluorobiphenyl	74	(10 - 115)
2,4,6-Tribromophenol	63	(19 - 115)
Terphenyl-d14	62	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g
Work Order: FX95H1A1
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethyl phthalate	390	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl phenyl ether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	630	
120-12-7	Anthracene	160	J
86-74-8	Carbazole	390	U
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	570	
129-00-0	Pyrene	560	
85-68-7	Butyl benzyl phthalate	390	U
56-55-3	Benzo(a)anthracene	280	
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	310	

UJ, SV 7a

for 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g
Work Order: FX95H1A1
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitrosodi-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 044
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g
Work Order: FX95G1A1
Dilution factor: 1
Moisture %:9.0

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	250	
207-08-9	Benzo(k)fluoranthene	310	
50-32-8	Benzo(a)pyrene	300	
193-39-5	Indeno(1,2,3-cd)pyrene	210	
191-24-2	Benzo(ghi)perylene	190	
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	84	(19 - 115)
Phenol-d5	86	(27 - 115)
Nitrobenzene-d5	81	(10 - 115)
2-Fluorobiphenyl	92	(10 - 115)
2,4,6-Tribromophenol	79	(19 - 115)
Terphenyl-d14	80	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 044
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g Date Received: 09/12/03
Work Order: FX95G1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:9.0

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	360	U	
208-96-8	Acenaphthylene	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
99-09-2	3-Nitroaniline	1800	U	
83-32-9	Acenaphthene	360	U	
51-28-5	2,4-Dinitrophenol	1800	U	UJ, SV7a
100-02-7	4-Nitrophenol	1800	U	
132-64-9	Dibenzofuran	120	U	
121-14-2	2,4-Dinitrotoluene	360	U	
84-66-2	Diethyl phthalate	360	U	
86-73-7	Fluorene	120	U	
7005-72-3	4-Chlorophenyl phenyl ether	360	U	
100-01-6	4-Nitroaniline	1800	U	
534-52-1	4,6-Dinitro-2-methylphenol	1800	U	
86-30-6	N-Nitrosodiphenylamine	360	U	
101-55-3	4-Bromophenyl phenyl ether	360	U	
118-74-1	Hexachlorobenzene	360	U	
87-86-5	Pentachlorophenol	1800	U	
85-01-8	Phenanthrene	300	J	
120-12-7	Anthracene	80	J	
86-74-8	Carbazole	360	U	
84-74-2	Di-n-butyl phthalate	360	U	
206-44-0	Fluoranthene	470		
129-00-0	Pyrene	560		
85-68-7	Butyl benzyl phthalate	360	U	
56-55-3	Benzo(a)anthracene	290		
91-94-1	3,3'-Dichlorobenzidine	1800	U	
218-01-9	Chrysene	320		

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 044
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.005 / g
Work Order: FX95G1A1
Dilution factor: 1
Moisture %:9.0

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U

10/4/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 043
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g
Work Order: FX95F1A1
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo(b)fluoranthene	400	
207-08-9	Benzo(k)fluoranthene	410	
50-32-8	Benzo(a)pyrene	420	
193-39-5	Indeno(1,2,3-cd)pyrene	250	
191-24-2	Benzo(ghi)perylene	230	
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	73	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	71	(19 - 115)
Terphenyl-d14	69	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 043
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g Date Received: 09/12/03
Work Order: FX95F1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:14

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	130	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethyl phthalate	380	U
86-73-7	Fluorene	130	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	490	
120-12-7	Anthracene	130	J
86-74-8	Carbazole	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	730	
129-00-0	Pyrene	780	
85-68-7	Butyl benzyl phthalate	380	U
56-55-3	Benzo(a)anthracene	420	
91-94-1	3,3'-Dichlorobenzidine	1900	U
218-01-9	Chrysene	470	

UJ, SV 7a

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 043
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.028 / g
Work Order: FX95F1A1
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 042
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g
Work Order: FX95E1A1
Dilution factor: 1
Moisture %:6.8

Date Received: 09/12/03
Date Extracted:09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	360	
207-08-9	Benzo(k)fluoranthene	550	
50-32-8	Benzo(a)pyrene	500	
193-39-5	Indeno(1,2,3-cd)pyrene	320	
191-24-2	Benzo(ghi)perylene	300	
53-70-3	Dibenzo(a,h)anthracene	120	U

10/4/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	74	(19 - 115)
Phenol-d5	80	(27 - 115)
Nitrobenzene-d5	75	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	72	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 042
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g Date Received: 09/12/03
Work Order: FX95E1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:6.8

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	350	U	
208-96-8	Acenaphthylene	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
99-09-2	3-Nitroaniline	1700	U	
83-32-9	Acenaphthene	78	J	
51-28-5	2,4-Dinitrophenol	1700	U	UJ, SV 7a
100-02-7	4-Nitrophenol	1700	U	
132-64-9	Dibenzofuran	120	U	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethyl phthalate	350	U	
86-73-7	Fluorene	120	U	
7005-72-3	4-Chlorophenyl phenyl ether	350	U	
100-01-6	4-Nitroaniline	1700	U	
534-52-1	4,6-Dinitro-2-methylphenol	1700	U	
86-30-6	N-Nitrosodiphenylamine	350	U	
101-55-3	4-Bromophenyl phenyl ether	350	U	
118-74-1	Hexachlorobenzene	350	U	
87-86-5	Pentachlorophenol	1700	U	
85-01-8	Phenanthrene	620		
120-12-7	Anthracene	170	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butyl phthalate	350	U	
206-44-0	Fluoranthene	990		
129-00-0	Pyrene	1000		
85-68-7	Butyl benzyl phthalate	350	U	
56-55-3	Benzo(a)anthracene	540		
91-94-1	3,3'-Dichlorobenzidine	1700	U	
218-01-9	Chrysene	600		

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 042
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g
Work Order: FX95E1A1
Dilution factor: 1
Moisture %: 6.8

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 041
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.002 / g Date Received: 09/12/03
Work Order: FX95D1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:18

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	400	U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo(b)fluoranthene	130	U
207-08-9	Benzo(k)fluoranthene	130	U
50-32-8	Benzo(a)pyrene	130	U
193-39-5	Indeno(1,2,3-cd)pyrene	130	U
191-24-2	Benzo(ghi)perylene	130	U
53-70-3	Dibenzo(a,h)anthracene	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	77	(19 - 115)
Phenol-d5	81	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	76	(19 - 115)
Terphenyl-d14	74	(10 - 115)

10/14/03

FORM I

STL ST. LOUIS

STL ST. LOUIS

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 041
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.002 / g Date Received: 09/12/03
Work Order: FX95D1A1 Date Extracted:09/21/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:18

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	400	U	
208-96-8	Acenaphthylene	400	U	
606-20-2	2,6-Dinitrotoluene	400	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	400	U	
51-28-5	2,4-Dinitrophenol	2000	U	UJ, SV7a
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	130	U	
121-14-2	2,4-Dinitrotoluene	400	U	
84-66-2	Diethyl phthalate	400	U	
86-73-7	Fluorene	130	U	
7005-72-3	4-Chlorophenyl phenyl ether	400	U	
100-01-6	4-Nitroaniline	2000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	
86-30-6	N-Nitrosodiphenylamine	400	U	
101-55-3	4-Bromophenyl phenyl ether	400	U	
118-74-1	Hexachlorobenzene	400	U	
87-86-5	Pentachlorophenol	2000	U	
85-01-8	Phenanthrene	400	U	
120-12-7	Anthracene	400	U	
86-74-8	Carbazole	400	U	
84-74-2	Di-n-butyl phthalate	400	U	
206-44-0	Fluoranthene	130	U	
129-00-0	Pyrene	130	U	
85-68-7	Butyl benzyl phthalate	400	U	
56-55-3	Benzo(a)anthracene	130	U	
91-94-1	3,3'-Dichlorobenzidine	2000	U	
218-01-9	Chrysene	130	U	

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 041
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.002 / g
Work Order: FX95D1A1
Dilution factor: 1
Moisture %: 18

Date Received: 09/12/03
Date Extracted: 09/21/03
Date Analyzed: 09/22/03

QC Batch: 3264138

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	810	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	130	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	130	U
77-47-4	Hexachlorocyclopentadiene	2000	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U

fpw 11/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 040
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.058 / g Date Received: 09/12/03
Work Order: FX95C1A1 Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.8

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	91	J
207-08-9	Benzo(k)fluoranthene	120	
50-32-8	Benzo(a)pyrene	120	
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	66	(19 - 115)
Terphenyl-d14	66	(10 - 115)

JB 10-10-03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 040
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.058 / g
Work Order: FX95C1A1
Dilution factor: 1
Moisture %: 5.8

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	190	
129-00-0	Pyrene	190	
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	110	J
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	

JB 10-16-03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 040
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.058 / g Date Received: 09/12/03
Work Order: FX95C1A1 Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.8

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

JB 10-16-03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g
Work Order: FX95A1A1
Dilution factor: 1
Moisture %:5.2

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	380	
207-08-9	Benzo(k)fluoranthene	450	
50-32-8	Benzo(a)pyrene	440	
193-39-5	Indeno(1,2,3-cd)pyrene	270	
191-24-2	Benzo(ghi)perylene	210	
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	68	(19 - 115)
Terphenyl-d14	73	(10 - 115)

JB 10-16 03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX95A1A1 Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.2

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	72	J
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	540	
120-12-7	Anthracene	85	J
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	800	
129-00-0	Pyrene	820	
85-68-7	Butyl benzyl phthalate	210	J
56-55-3	Benzo(a)anthracene	420	
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	490	

JB 10-16-03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.015 / g
Work Order: FX95A1A1
Dilution factor: 1
Moisture %:5.2

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

JB 10-16-03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 038
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g
Work Order: FX9491A1
Dilution factor: 1
Moisture %:5.5

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	140	
193-39-5	Indeno(1,2,3-cd)pyrene	120	
191-24-2	Benzo(ghi)perylene	120	
53-70-3	Dibenzo(a,h)anthracene	120	U

JB
10-16-03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	82	(10 - 115)
2-Fluorobiphenyl	84	(10 - 115)
2,4,6-Tribromophenol	67	(19 - 115)
Terphenyl-d14	75	(10 - 115)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 038
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g Date Received: 09/12/03
Work Order: FX9491A1 Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/22/03
Moisture %:5.5

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	220	
129-00-0	Pyrene	240	
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	130	
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	140	

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 038
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.038 / g
Work Order: FX9491A1
Dilution factor: 1
Moisture %:5.5

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 037
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.081 / g
Work Order: FX9481A1
Dilution factor: 1
Moisture %:4.0

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	340	U
117-84-0	Di-n-octyl phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	
207-08-9	Benzo(k)fluoranthene	330	
50-32-8	Benzo(a)pyrene	400	
193-39-5	Indeno(1,2,3-cd)pyrene	330	
191-24-2	Benzo(ghi)perylene	300	
53-70-3	Dibenzo(a,h)anthracene	85	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	86	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	91	(10 - 115)
2-Fluorobiphenyl	91	(10 - 115)
2,4,6-Tribromophenol	79	(19 - 115)
Terphenyl-d14	82	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 037
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.081 / g
Work Order: FX9481A1
Dilution factor: 1
Moisture %:4.0

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	110	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethyl phthalate	340	U
86-73-7	Fluorene	110	U
7005-72-3	4-Chlorophenyl phenyl ether	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl phenyl ether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	
120-12-7	Anthracene	110	J
86-74-8	Carbazole	340	U
84-74-2	Di-n-butyl phthalate	340	U
206-44-0	Fluoranthene	660	
129-00-0	Pyrene	740	
85-68-7	Butyl benzyl phthalate	340	U
56-55-3	Benzo(a)anthracene	430	
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	470	

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 037
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.081 / g
Work Order: FX9481A1
Dilution factor: 1
Moisture %: 4.0

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitrosodi-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	110	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	110	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U

Bw 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Lab Sample ID: F3I130129 036
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g
Work Order: FX9471AN
Dilution factor: 1
Moisture %: 5.4

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	94	J
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	81	(19 - 115)
Phenol-d5	75	(27 - 115)
Nitrobenzene-d5	87	(10 - 115)
2-Fluorobiphenyl	90	(10 - 115)
2,4,6-Tribromophenol	75	(19 - 115)
Terphenyl-d14	82	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 036
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g
Work Order: FX9471AN
Dilution factor: 1
Moisture %:5.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethyl phthalate	350	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	83	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butyl phthalate	350	U
206-44-0	Fluoranthene	160	
129-00-0	Pyrene	190	
85-68-7	Butyl benzyl phthalate	350	U
56-55-3	Benzo(a)anthracene	110	J
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	130	

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 036
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g
Work Order: FX9471AN
Dilution factor: 1
Moisture %: 5.4

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/22/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 035
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g Date Received: 09/12/03
Work Order: FX9461AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:23

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-35

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	430	U
117-84-0	Di-n-octyl phthalate	430	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
191-24-2	Benzo(ghi)perylene	140	U
53-70-3	Dibenzo(a,h)anthracene	140	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	68	(19 - 115)
Phenol-d5	63	(27 - 115)
Nitrobenzene-d5	71	(10 - 115)
2-Fluorobiphenyl	74	(10 - 115)
2,4,6-Tribromophenol	62	(19 - 115)
Terphenyl-d14	55	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 035
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g
Work Order: FX9461AN
Dilution factor: 1
Moisture %:23

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-35

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	430	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	140	U
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethyl phthalate	430	U
86-73-7	Fluorene	140	U
7005-72-3	4-Chlorophenyl phenyl ether	430	U
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine	430	U
101-55-3	4-Bromophenyl phenyl ether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	98	J
120-12-7	Anthracene	430	U
86-74-8	Carbazole	430	U
84-74-2	Di-n-butyl phthalate	430	U
206-44-0	Fluoranthene	160	
129-00-0	Pyrene	150	
85-68-7	Butyl benzyl phthalate	430	U
56-55-3	Benzo(a)anthracene	95	J
91-94-1	3,3'-Dichlorobenzidine	2100	U
218-01-9	Chrysene	110	J

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 035
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.057 / g
Work Order: FX9461AN
Dilution factor: 1
Moisture %: 23

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-35

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	430	U
111-44-4	bis(2-Chloroethyl) ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	430	U
106-44-5	4-Methylphenol	860	U
621-64-7	N-Nitrosodi-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	bis(2-Chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	140	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	140	U
77-47-4	Hexachlorocyclopentadiene	2100	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	2100	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 034
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g
Work Order: FX9451AN
Dilution factor: 1
Moisture %: 3.7

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	340	U
117-84-0	Di-n-octyl phthalate	340	U
205-99-2	Benzo(b)fluoranthene	670	
207-08-9	Benzo(k)fluoranthene	830	
50-32-8	Benzo(a)pyrene	940	
193-39-5	Indeno(1,2,3-cd)pyrene	660	
191-24-2	Benzo(ghi)perylene	600	
53-70-3	Dibenzo(a,h)anthracene	180	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	76	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	62	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 034
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g Date Received: 09/12/03
Work Order: FX9451AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:3.7

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	230	
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethyl phthalate	340	U
86-73-7	Fluorene	410	
7005-72-3	4-Chlorophenyl phenyl ether	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	340	U
101-55-3	4-Bromophenyl phenyl ether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	630	
86-74-8	Carbazole	290	J
84-74-2	Di-n-butyl phthalate	340	U
206-44-0	Fluoranthene	2200	
129-00-0	Pyrene	1800	
85-68-7	Butyl benzyl phthalate	340	U
56-55-3	Benzo(a)anthracene	930	
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	970	

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 034
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.075 / g
Work Order: FX9451AN
Dilution factor: 1
Moisture %: 3.7

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitrosodi-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	380	
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	110	
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 033
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g Date Received: 09/12/03
Work Order: FX9441AN Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:8.4

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	73	(19 - 115)
Phenol-d5	66	(27 - 115)
Nitrobenzene-d5	79	(10 - 115)
2-Fluorobiphenyl	82	(10 - 115)
2,4,6-Tribromophenol	69	(19 - 115)
Terphenyl-d14	60	(10 - 115)

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 033
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g
Work Order: FX9441AN
Dilution factor: 1
Moisture %:8.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	120	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethyl phthalate	360	U
86-73-7	Fluorene	120	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butyl phthalate	360	U
206-44-0	Fluoranthene	120	U
129-00-0	Pyrene	120	U
85-68-7	Butyl benzyl phthalate	360	U
56-55-3	Benzo(a)anthracene	120	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
218-01-9	Chrysene	120	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 033
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.02 / g
Work Order: FX9441AN
Dilution factor: 1
Moisture %:8.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	720	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1700	U

10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9432AN
Dilution factor: 4
Moisture %:6.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	1400	U
117-84-0	Di-n-octyl phthalate	1400	U
205-99-2	Benzo(b)fluoranthene	3500	D
207-08-9	Benzo(k)fluoranthene	5000	D
50-32-8	Benzo(a)pyrene	4900	D
193-39-5	Indeno(1,2,3-cd)pyrene	2000	D
191-24-2	Benzo(ghi)perylene	1600	D
53-70-3	Dibenzo(a,h)anthracene	600	D

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	74	(19 - 115)
Phenol-d5	77	(27 - 115)
Nitrobenzene-d5	78	(10 - 115)
2-Fluorobiphenyl	88	(10 - 115)
2,4,6-Tribromophenol	66	(19 - 115)
Terphenyl-d14	75	(10 - 115)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g Date Received: 09/12/03
Work Order: FX9432AN Date Extracted:09/18/03
Dilution factor: 4 Date Analyzed: 09/24/03
Moisture %:6.4

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
131-11-3	Dimethyl phthalate	1400	U
208-96-8	Acenaphthylene	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
99-09-2	3-Nitroaniline	6800	U
83-32-9	Acenaphthene	1400	U
51-28-5	2,4-Dinitrophenol	6800	U
100-02-7	4-Nitrophenol	6800	U
132-64-9	Dibenzofuran	470	U
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethyl phthalate	1400	U
86-73-7	Fluorene	470	U
7005-72-3	4-Chlorophenyl phenyl ether	1400	U
100-01-6	4-Nitroaniline	6800	U
534-52-1	4,6-Dinitro-2-methylphenol	6800	U
86-30-6	N-Nitrosodiphenylamine	1400	U
101-55-3	4-Bromophenyl phenyl ether	1400	U
118-74-1	Hexachlorobenzene	1400	U
87-86-5	Pentachlorophenol	6800	U
85-01-8	Phenanthrene	3200	D
120-12-7	Anthracene	1200	J D
86-74-8	Carbazole	1400	U
84-74-2	Di-n-butyl phthalate	1400	U
206-44-0	Fluoranthene	8500	D
129-00-0	Pyrene	9100	D
85-68-7	Butyl benzyl phthalate	1400	U
56-55-3	Benzo(a)anthracene	5300	D
91-94-1	3,3'-Dichlorobenzidine	6800	U
218-01-9	Chrysene	5500	D

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9432AN
Dilution factor: 4
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	1400	U
111-44-4	bis(2-Chloroethyl) ether	1400	U
95-57-8	2-Chlorophenol	1400	U
541-73-1	1,3-Dichlorobenzene	1400	U
106-46-7	1,4-Dichlorobenzene	1400	U
95-50-1	1,2-Dichlorobenzene	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1400	U
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitrosodi-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	bis(2-Chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
120-82-1	1,2,4-Trichlorobenzene	1400	U
91-20-3	Naphthalene	470	U
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	470	U
77-47-4	Hexachlorocyclopentadiene	6800	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	6800	U

fas 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g Date Received: 09/12/03
Work Order: FX9431AN Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %: 6.4

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
205-99-2	Benzo(b)fluoranthene	4300	
207-08-9	Benzo(k)fluoranthene	2900	
50-32-8	Benzo(a)pyrene	4500	
193-39-5	Indeno(1,2,3-cd)pyrene	3100	
191-24-2	Benzo(ghi)perylene	2500	
53-70-3	Dibenzo(a,h)anthracene	1000	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	70	(19 - 115)
Phenol-d5	64	(27 - 115)
Nitrobenzene-d5	77	(10 - 115)
2-Fluorobiphenyl	79	(10 - 115)
2,4,6-Tribromophenol	66	(19 - 115)
Terphenyl-d14	59	(10 - 115)

10/13/13

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9431AN
Dilution factor: 1
Moisture %:6.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
131-11-3	Dimethyl phthalate	350	U	
208-96-8	Acenaphthylene	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
99-09-2	3-Nitroaniline	1700	U	
83-32-9	Acenaphthene	150	J	
51-28-5	2,4-Dinitrophenol	1700	U	
100-02-7	4-Nitrophenol	1700	U	
132-64-9	Dibenzofuran	120	U	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethyl phthalate	350	U	
86-73-7	Fluorene	170		
7005-72-3	4-Chlorophenyl phenyl ether	350	U	
100-01-6	4-Nitroaniline	1700	U	
534-52-1	4,6-Dinitro-2-methylphenol	1700	U	
86-30-6	N-Nitrosodiphenylamine	350	U	
101-55-3	4-Bromophenyl phenyl ether	350	U	
118-74-1	Hexachlorobenzene	350	U	
87-86-5	Pentachlorophenol	1700	U	
85-01-8	Phenanthrene	2600		
120-12-7	Anthracene	1000		
86-74-8	Carbazole	84	J	
84-74-2	Di-n-butyl phthalate	350	U	
~~206-44-0~~	~~Fluoranthene~~	~~7700~~	~~E~~	Do Not Use, see dilution
~~129-00-0~~	~~Pyrene~~	~~8100~~	~~E~~	Do Not Use, See dilution
85-68-7	Butyl benzyl phthalate	350	U	
56-55-3	Benzo(a)anthracene	4900		
91-94-1	3,3'-Dichlorobenzidine	1700	U	
218-01-9	Chrysene	4800		

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 032
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.032 / g
Work Order: FX9431AN
Dilution factor: 1
Moisture %:6.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	120	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	120	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U

bw 10/13/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 031
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.041 / g
Work Order: FX9421AN
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/20/03

QC Batch: 3261273

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
205-99-2	Benzo(b)fluoranthene	120	U
207-08-9	Benzo(k)fluoranthene	120	U
50-32-8	Benzo(a)pyrene	120	U
193-39-5	Indeno(1,2,3-cd)pyrene	120	U
191-24-2	Benzo(ghi)perylene	120	U
53-70-3	Dibenzo(a,h)anthracene	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	75	(19 - 115)
Phenol-d5	69	(27 - 115)
Nitrobenzene-d5	80	(10 - 115)
2-Fluorobiphenyl	85	(10 - 115)
2,4,6-Tribromophenol	72	(19 - 115)
Terphenyl-d14	64	(10 - 115)

pw 10/13/03

FORM I

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10-14-03 Lab Code: PCB - 8082

Contract Laboratory Name: STL - St. Louis

Validator: Patrick Seccomb Organization: Portage Environmental, Inc.

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☒ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☐ Inorganics
- ☐ Radiochemistry

Other (describe): LANL Airport - Waste Removal Project; Post Removal Sampling Data; PCBs

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☒	☐	☐	8. Quantitation reports
☒	☐	☐	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☒	☐	☐	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

See Overall Assessment of Data (Attached)

(Attach additional comment sheets as necessary.)

Validator's signature: [signature] Date: 10/14/03

SOP-15.03, R1

Los Alamos National Laboratory
RRES-Remediation Program

PEST/PCB Data-Validation Checklist

Yes	No	n/a		Assign qualifier listed below if criteria = Yes: Detected analyte	Undetected analyte
☐	☐	☒	1. The breakdown performance check is not present.	N/A	
☐	☐	☒	2. The breakdown performance exceeds criteria for individual or combined.	N/A	
☐	☐	☒	3. The Breakdown performance exceeds criteria and the associated breakdown products are present in sample.	N/A	
☐	☒	☐	4. Initial calibration is not present.	Present	
☐	☒	☐	5. Initial calibration does not have 5 calibration points and/or low standard at or below the reporting limit.	Acceptable	
☐	☒	☐	6. Initial calibration analyte %RSD is >20% or RSD is <0.995.	Acceptable	
☐	☒	☐	7. The CCV is not present or analyzed at proper frequency.	Present	
☐	☒	☐	8. Continuing calibration analyte %D is >15%.	Acceptable	
☐	☒	☐	9. A multi-component analyte is reported with no standard being analyzed with in 72 h of the initial analysis.	N/A	
☐	☒	☐	10. The RT window information is not present.	Present	
☐	☒	☐	11. RT window for individual analytes in the CCV have shifted more than 0.05 minutes from the RT window from the initial calibration.	Acceptable	
☐	☒	☐	12. The method blank is not reported.	Present	
☐	☒	☐	13. The analyte detected in blank and sample result for analyte < 5x the amount in blank.	No detects	
☐	☒	☐	14. The analyte detected in blank and sample result for analyte > 5x the amount in blank.	No detects	
☐	☒	☐	15. The confirmation information is not present for positive results.	Present	
☐	☒	☐	16. The analyte reported was not confirmed on a second dissimilar column or detector.	Confirmed	
☐	☒	☐	17. The analyte reported exceeds the RT window but was confirmed.	RT Acceptable	
☐	☒	☐	18. The multi-component analyte is reported but does not match the pattern for the analyte in the associated standard.	Correct Pattern Used	
☐	☒	☐	19. Surrogate information is not present.	Present	
☐	☒	☐	20. Surrogate % recovery is > the UAL.	All Acceptable	
☐	☒	☐	21. Surrogate % recovery is < LAL but =10%.	All Acceptable	
☐	☒	☐	22. Surrogate % recovery is < 10%.	All Acceptable	
☐	☒	☐	23. One surrogate recovery is < LAL and one surrogate recovery is > UAL.	All Acceptable	
☐	☒	☐	24. The LCS information is not present.	Present	
☐	☒	☐	25. LCS % recovery is >130%.	All Acceptable	
☐	☒	☐	26. LCS % recovery is < 70% but =10%.	All Acceptable	
☐	☒	☐	27. LCS % recovery is < 10%.	All Acceptable	
☐	☒	☐	28. The sample was extracted outside of the appropriate hold time.	All Acceptable	
☐	☒	☐	29. The sample was extracted 2 times the appropriate holding time.	Not Applicable	
☐	☒	☐	30. The sample was analyzed outside the analytical holding time.	All Acceptable	
☐	☒	☐	31. The sample was diluted inappropriately.	Not Applicable	
☐	☒	☐	32. The other obvious data quality issues identified.	None	

[a] Qualify primary analytes R if breakdown analytes are present, qualify primary analytes UJ if breakdown analytes are absent. See the SOP for more complete explanation. [b] Apply the U qualifier if the RT is not within the initial calibration RT window. Reject any anomalies. [c] Apply the J qualifier if the peak is within the initial calibration RT window, but the data are not reported as detected. Reject any anomalies.

Overall Assessment of Data

There were two items of note identified during the validation of Post-Removal samples for PCB analysis. First, a number of samples showed sufficiently high PCB levels that they required dilution to bring them into the calibration range of the instrument. The analysis of the diluted result in all cases, found the surrogates to be diluted out. Per LANL-ER-SOP-15.03, Rev. 1, Section 6.9 – Note, "Surrogate percent recovery (%R) values that are out of specification as a result of sample dilution used to bring the detected analyte concentrations into the instrument calibration range, are not subject to the acceptance criteria listed in Table 6.9-1". As a result, no qualifications were assigned to diluted results, as all other QC indicators were within LANL specifications.

Surrogate recoveries were above the upper control limit for some of the Post-Removal samples on column#2. However, in all cases, the laboratory reported the result for these samples from column#1, as this result was the lower of the two values. This reporting practice is in keeping with USEPA method requirements for analytical results. None of the reported Aroclor results had associated surrogate recoveries that were outside of LANL requirements, therefore, none of the PCB results were qualified due to surrogate performance.

Finally, PCB quantitation deviated slightly from the pattern identification specifications in the analytical method. This occurred in samples containing high levels of Aroclors and / or high levels of other target compounds. In all cases, the quantitation identified the positive compounds as being "weathered Aroclors". The weathering process, in general, tends to degrade somewhat, the spectral output of natural samples. Weathering of the Aroclors is consistent with the period of operation for the site and the time-frame in which they would have been deposited in Drainages A, B, C, and D2. In the judgment of the validator, the identification of positive Aroclors as being weathered is consistent with actual site conditions. As a result, none of the PCBs were qualified based on pattern identification.

All PCB results are acceptable for use without restriction.

Attachment A

Form I's Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: F3I130129 001

Sample WT/Vol: 30.046 / g
Work Order: FX9251AD
Dilution factor: 1
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	35	U
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	112	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 002
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.057 / g
Work Order: FX93G1AP
Dilution factor: 1
Moisture %: 6.1

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	81	
11096-82-5	Aroclor 1260	35	U
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 003
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.067 / g
Work Order: FX93H1AP
Dilution factor: 1
Moisture %:9.4

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	117	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 004
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.04 / g
Work Order: FX93J1AP
Dilution factor: 1
Moisture %: 9.3

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	61	
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 005
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.025 / g
Work Order: FX93P1AP
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	130	
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 006
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.057 / g
Work Order: FX93T1AP
Dilution factor: 1
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 007
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.068 / g
Work Order: FX93V1AP
Dilution factor: 1
Moisture %:16

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	750	
11096-82-5	Aroclor 1260	39	U
37324-23-5	Aroclor 1262	39	U
11100-14-4	Aroclor 1268	39	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 008

Sample WT/Vol: 30.042 / g
Work Order: FX93X1AP
Dilution factor: 1
Moisture %:9.2

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	410	
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	129	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 009
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.064 / g
Work Order: FX9301AP
Dilution factor: 1
Moisture %: 19

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	41	U
11104-28-2	Aroclor 1221	41	U
11141-16-5	Aroclor 1232	41	U
53469-21-9	Aroclor 1242	41	U
12672-29-6	Aroclor 1248	41	U
11097-69-1	Aroclor 1254	41	U
11096-82-5	Aroclor 1260	41	U
37324-23-5	Aroclor 1262	41	U
11100-14-4	Aroclor 1268	41	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 010

Sample WT/Vol: 30.056 / g
Work Order: FX9311AP
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor 1016	37	U	
11104-28-2	Aroclor 1221	37	U	
11141-16-5	Aroclor 1232	37	U	
53469-21-9	Aroclor 1242	37	U	
12672-29-6	Aroclor 1248	37	U	
11097-69-1	Aroclor 1254	1100	E	DO NOT USE
11096-82-5	Aroclor 1260	37	U	
37324-23-5	Aroclor 1262	37	U	PES 10/13/03
11100-14-4	Aroclor 1268	37	U	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	129	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 010
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.056 / g Date Received: 09/12/03
Work Order: FX9312AP Date Extracted:09/16/03
Dilution factor: 5 Date Analyzed: 09/20/03
Moisture %:11

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-10 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	180	U
11104-28-2	Aroclor 1221	180	U
11141-16-5	Aroclor 1232	180	U
53469-21-9	Aroclor 1242	180	U
12672-29-6	Aroclor 1248	180	U
11097-69-1	Aroclor 1254	1300	D
11096-82-5	Aroclor 1260	180	U
37324-23-5	Aroclor 1262	180	U
11100-14-4	Aroclor 1268	180	U

use this result
PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	0.0	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 011
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.052 / g Date Received: 09/12/03
Work Order: FX9321AP Date Extracted:09/16/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:9.3

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	65	
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	128	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 012
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.008 / g Date Received: 09/12/03
Work Order: FX9331AP Date Extracted:09/16/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:12

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	117	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 013
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.014 / g
Work Order: FX94A1AP
Dilution factor: 1
Moisture %:16

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U
37324-23-5	Aroclor 1262	39	U
11100-14-4	Aroclor 1268	39	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	115	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 014
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.056 / g
Work Order: FX94C1AP
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	2500	E
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

Do Not use
PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	139	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 014
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.056 / g
Work Order: FX94C2AP
Dilution factor: 10
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/20/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-14 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	380	U
11104-28-2	Aroclor 1221	380	U
11141-16-5	Aroclor 1232	380	U
53469-21-9	Aroclor 1242	380	U
12672-29-6	Aroclor 1248	380	U
11097-69-1	Aroclor 1254	3500	D
11096-82-5	Aroclor 1260	380	U
37324-23-5	Aroclor 1262	380	U
11100-14-4	Aroclor 1268	380	U

USE THIS RESULT
PRS
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	0.0	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.023 / g Date Received: 09/12/03
Work Order: FX94E1AP Date Extracted:09/16/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:13

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-15

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor 1016	38	U	
11104-28-2	Aroclor 1221	38	U	
11141-16-5	Aroclor 1232	38	U	
53469-21-9	Aroclor 1242	38	U	
12672-29-6	Aroclor 1248	38	U	
11097-69-1	Aroclor 1254	5500	E	DO NOT USE
11096-82-5	Aroclor 1260	38	U	
37324-23-5	Aroclor 1262	38	U	YES 10/13/03
11100-14-4	Aroclor 1268	38	U	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	125	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 015
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.023 / g
Work Order: FX94E2AP
Dilution factor: 20
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/16/03
Date Analyzed: 09/23/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-15 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	760	U
11104-28-2	Aroclor 1221	760	U
11141-16-5	Aroclor 1232	760	U
53469-21-9	Aroclor 1242	760	U
12672-29-6	Aroclor 1248	760	U
11097-69-1	Aroclor 1254	12000	D
11096-82-5	Aroclor 1260	760	U
37324-23-5	Aroclor 1262	760	U
11100-14-4	Aroclor 1268	760	U

USE This result
RES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	0.0	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 016
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.055 / g Date Received: 09/12/03
Work Order: FX94F1AP Date Extracted:09/16/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:8.9

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-16

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	117	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 017
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.029 / g
Work Order: FX94G1AP
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-17

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 018
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.03 / g
Work Order: FX94H1AP
Dilution factor: 1
Moisture %:4.2

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-18

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34	U
11104-28-2	Aroclor 1221	34	U
11141-16-5	Aroclor 1232	34	U
53469-21-9	Aroclor 1242	34	U
12672-29-6	Aroclor 1248	34	U
11097-69-1	Aroclor 1254	34	U
11096-82-5	Aroclor 1260	34	U
37324-23-5	Aroclor 1262	34	U
11100-14-4	Aroclor 1268	34	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 019
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.073 / g
Work Order: FX94K1AP
Dilution factor: 1
Moisture %:6.9

Date Received: 09/12/03
Date Extracted:09/16/03
Date Analyzed: 09/18/03

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-19

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	35	U
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	123	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 020
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.03 / g Date Received: 09/12/03
Work Order: FX94L1AP Date Extracted:09/16/03
Dilution factor: 1 Date Analyzed: 09/18/03
Moisture %:6.7

QC Batch: 3259232

Client Sample Id: LANL-WR-SS-20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	35	U
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	117	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 021
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.022 / g
Work Order: FX94M1AP
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-21

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	115	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 022
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.041 / g Date Received: 09/12/03
Work Order: FX94P1AP Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:11

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-22

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 023
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.026 / g Date Received: 09/12/03
Work Order: FX94Q1AP Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:7.9

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-23

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	124	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 024
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX94R1AP Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:7.3

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-24

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	124	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 025
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX94T1AP Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/20/03
Moisture %:10

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 026
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.051 / g
Work Order: FX94V1AP
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-26

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	130	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 027
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.052 / g
Work Order: FX94W1AP
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-27

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	115	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: F3I130129 028

Sample WT/Vol: 30.029 / g
Work Order: FX94X1AP
Dilution factor: 1
Moisture %: 17

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	40	U
11104-28-2	Aroclor 1221	40	U
11141-16-5	Aroclor 1232	40	U
53469-21-9	Aroclor 1242	40	U
12672-29-6	Aroclor 1248	40	U
11097-69-1	Aroclor 1254	40	U
11096-82-5	Aroclor 1260	40	U
37324-23-5	Aroclor 1262	40	U
11100-14-4	Aroclor 1268	40	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	109	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 029
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.003 / g
Work Order: FX9401AP
Dilution factor: 1
Moisture %:21

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-29

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	42	U
11104-28-2	Aroclor 1221	42	U
11141-16-5	Aroclor 1232	42	U
53469-21-9	Aroclor 1242	42	U
12672-29-6	Aroclor 1248	42	U
11097-69-1	Aroclor 1254	42	U
11096-82-5	Aroclor 1260	42	U
37324-23-5	Aroclor 1262	42	U
11100-14-4	Aroclor 1268	42	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	127	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: F3I130129 030

Sample WT/Vol: 30.055 / g
Work Order: FX9411AP
Dilution factor: 1
Moisture %: 15

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	74	
37324-23-5	Aroclor 1262	39	U
11100-14-4	Aroclor 1268	39	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	148	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 031
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.01 / g
Work Order: FX9421AP
Dilution factor: 1
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	120	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 032
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.003 / g
Work Order: FX9431AP
Dilution factor: 1
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	140	
11096-82-5	Aroclor 1260	250	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	135	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 033
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.015 / g
Work Order: FX9441AP
Dilution factor: 1
Moisture %: 8.4

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	116	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 034
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.045 / g
Work Order: FX9451AP
Dilution factor: 1
Moisture %:3.7

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34	U
11104-28-2	Aroclor 1221	34	U
11141-16-5	Aroclor 1232	34	U
53469-21-9	Aroclor 1242	34	U
12672-29-6	Aroclor 1248	34	U
11097-69-1	Aroclor 1254	93	
11096-82-5	Aroclor 1260	180	
37324-23-5	Aroclor 1262	34	U
11100-14-4	Aroclor 1268	34	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	133	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 035
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.047 / g
Work Order: FX9461AP
Dilution factor: 1
Moisture %:23

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-35

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	43	U
11104-28-2	Aroclor 1221	43	U
11141-16-5	Aroclor 1232	43	U
53469-21-9	Aroclor 1242	43	U
12672-29-6	Aroclor 1248	43	U
11097-69-1	Aroclor 1254	120	
11096-82-5	Aroclor 1260	180	
37324-23-5	Aroclor 1262	43	U
11100-14-4	Aroclor 1268	43	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	131	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 036
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.003 / g
Work Order: FX9471AP
Dilution factor: 1
Moisture %: 5.4

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	67	
11096-82-5	Aroclor 1260	130	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	128	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 037

Sample WT/Vol: 30.042 / g
Work Order: FX9481A2
Dilution factor: 1
Moisture %:4.0

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34	U
11104-28-2	Aroclor 1221	34	U
11141-16-5	Aroclor 1232	34	U
53469-21-9	Aroclor 1242	34	U
12672-29-6	Aroclor 1248	34	U
11097-69-1	Aroclor 1254	86	
11096-82-5	Aroclor 1260	150	
37324-23-5	Aroclor 1262	34	U
11100-14-4	Aroclor 1268	34	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	115	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 038
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.056 / g
Work Order: FX9491A2
Dilution factor: 1
Moisture %: 5.5

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	110	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	135	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.029 / g
Work Order: FX95A1A2
Dilution factor: 1
Moisture %:5.2

Date Received: 09/12/03
Date Extracted:09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	91	
11096-82-5	Aroclor 1260	150	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	117	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 040
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.02 / g
Work Order: FX95C1A2
Dilution factor: 1
Moisture %: 5.8

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/20/03

QC Batch: 3260395

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	73	
11096-82-5	Aroclor 1260	210	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	145	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 041
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.04 / g
Work Order: FX95D1A2
Dilution factor: 1
Moisture %:18

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	40	U
11104-28-2	Aroclor 1221	40	U
11141-16-5	Aroclor 1232	40	U
53469-21-9	Aroclor 1242	40	U
12672-29-6	Aroclor 1248	40	U
11097-69-1	Aroclor 1254	40	U
11096-82-5	Aroclor 1260	40	U
37324-23-5	Aroclor 1262	40	U
11100-14-4	Aroclor 1268	40	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	118	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 042
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.002 / g
Work Order: FX95E1A2
Dilution factor: 1
Moisture %:6.8

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	86	
11096-82-5	Aroclor 1260	130	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	102	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 043
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.05 / g
Work Order: FX95F1A2
Dilution factor: 1
Moisture %:14

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	270	
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	106	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 044
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.015 / g
Work Order: FX95G1A2
Dilution factor: 1
Moisture %: 9.0

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	65	
11096-82-5	Aroclor 1260	110	
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	108	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.01 / g
Work Order: FX95H1A2
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	240	
11096-82-5	Aroclor 1260	240	
37324-23-5	Aroclor 1262	39	U
11100-14-4	Aroclor 1268	39	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	106	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: F3I130129 046

Sample WT/Vol: 30.003 / g
Work Order: FX95J1A2
Dilution factor: 1
Moisture %: 11

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	96	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 047

Sample WT/Vol: 30.076 / g
Work Order: FX95K1A2
Dilution factor: 1
Moisture %:19

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	41	U
11104-28-2	Aroclor 1221	41	U
11141-16-5	Aroclor 1232	41	U
53469-21-9	Aroclor 1242	41	U
12672-29-6	Aroclor 1248	41	U
11097-69-1	Aroclor 1254	41	U
11096-82-5	Aroclor 1260	41	U
37324-23-5	Aroclor 1262	41	U
11100-14-4	Aroclor 1268	41	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	108	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.014 / g
Work Order: FX95L1A2
Dilution factor: 1
Moisture %:8.9

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	114	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 049
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX95M1A2 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:8.3

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	124	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc.

SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 050

Sample WT/Vol: 30.054 / g
Work Order: FX95N1A2
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U
37324-23-5	Aroclor 1262	39	U
11100-14-4	Aroclor 1268	39	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	116	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.004 / g
Work Order: FX95P1A2
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	44	U
11104-28-2	Aroclor 1221	44	U
11141-16-5	Aroclor 1232	44	U
53469-21-9	Aroclor 1242	44	U
12672-29-6	Aroclor 1248	44	U
11097-69-1	Aroclor 1254	44	U
11096-82-5	Aroclor 1260	44	U
37324-23-5	Aroclor 1262	44	U
11100-14-4	Aroclor 1268	44	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	123	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 052
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.022 / g Date Received: 09/12/03
Work Order: FX95Q1A2 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:18

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	40	U
11104-28-2	Aroclor 1221	40	U
11141-16-5	Aroclor 1232	40	U
53469-21-9	Aroclor 1242	40	U
12672-29-6	Aroclor 1248	40	U
11097-69-1	Aroclor 1254	40	U
11096-82-5	Aroclor 1260	40	U
37324-23-5	Aroclor 1262	40	U
11100-14-4	Aroclor 1268	40	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	121	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 053
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.055 / g
Work Order: FX95R1A2
Dilution factor: 1
Moisture %: 21

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	42	U
11104-28-2	Aroclor 1221	42	U
11141-16-5	Aroclor 1232	42	U
53469-21-9	Aroclor 1242	42	U
12672-29-6	Aroclor 1248	42	U
11097-69-1	Aroclor 1254	42	U
11096-82-5	Aroclor 1260	42	U
37324-23-5	Aroclor 1262	42	U
11100-14-4	Aroclor 1268	42	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	113	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 054
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.023 / g
Work Order: FX95T1A2
Dilution factor: 1
Moisture %: 8.9

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/23/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	92	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 055
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.066 / g
Work Order: FX95V1A2
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	44	U
11104-28-2	Aroclor 1221	44	U
11141-16-5	Aroclor 1232	44	U
53469-21-9	Aroclor 1242	44	U
12672-29-6	Aroclor 1248	44	U
11097-69-1	Aroclor 1254	44	U
11096-82-5	Aroclor 1260	44	U
37324-23-5	Aroclor 1262	44	U
11100-14-4	Aroclor 1268	44	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 056

Sample WT/Vol: 30.033 / g
Work Order: FX95W1A2
Dilution factor: 1
Moisture %:7.6

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U
37324-23-5	Aroclor 1262	36	U
11100-14-4	Aroclor 1268	36	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	121	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 057
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.061 / g
Work Order: FX95X1A2
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	119	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 058
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.034 / g
Work Order: FX9501A2
Dilution factor: 1
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U
37324-23-5	Aroclor 1262	37	U
11100-14-4	Aroclor 1268	37	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	128	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 059
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.046 / g
Work Order: FX9511A2
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	114	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 060
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.008 / g
Work Order: FX9521A2
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/24/03

QC Batch: 3265495

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	128	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 061
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.019 / g
Work Order: FX9541A2
Dilution factor: 1
Moisture %:5.1

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/24/03

QC Batch: 3262297

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	140	
11096-82-5	Aroclor 1260	180	
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

Field Duplicate – LANL-WR-SS-32

PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	137	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 062
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.022 / g
Work Order: FX9561A2
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/24/03

QC Batch: 3262297

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

Field Duplicate LANL-WR-SS-47

PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	141	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 063
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.01 / g
Work Order: FX9571A2
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/24/03

QC Batch: 3262297

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U
37324-23-5	Aroclor 1262	38	U
11100-14-4	Aroclor 1268	38	U

Field Duplicate LANL-WR-SS-17

PRS
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	143	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 064
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 30.019 / g Date Received: 09/12/03
Work Order: FX9591A2 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:6.6

QC Batch: 3262297

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	35	U
37324-23-5	Aroclor 1262	35	U
11100-14-4	Aroclor 1268	35	U

Field Duplicate LANL-WR-SS-1

PKS
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	122	(14 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 065
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 1000 / mL
Work Order: FX96N1AC
Dilution factor: 1
Moisture %: NA

Date Received: 09/12/03
Date Extracted: 09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258491

Client Sample Id: LANL-WR-SS-65

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

LIQUID Field Blank

PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	73	(10 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER
Method: SW846 8082
PCBs (8082)

Lab Sample ID:F3I130129 066

Sample WT/Vol: 1000 / mL
Work Order: FX96X1AN
Dilution factor: 1
Moisture %:NA

Date Received: 09/12/03
Date Extracted:09/15/03
Date Analyzed: 09/17/03

QC Batch: 3258491

Client Sample Id: LANL-WR-SS-66

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

LIQUID Field Blank

PES
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	77	(10 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 067
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 1000 / mL Date Received: 09/12/03
Work Order: FX9611A1 Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:NA

QC Batch: 3258491

Client Sample Id: LANL-WR-SS-67

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor 1016	1.0	U
11104-28-2	Aroclor 1221	1.0	U
11141-16-5	Aroclor 1232	1.0	U
53469-21-9	Aroclor 1242	1.0	U
12672-29-6	Aroclor 1248	1.0	U
11097-69-1	Aroclor 1254	1.0	U
11096-82-5	Aroclor 1260	1.0	U

LIQUID Field BLANK

RCS
10/13/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Decachlorobiphenyl	57	(10 - 150)

FORM I

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10-14-03 Lab Code: Pesticides – 8081A

Contract Laboratory Name: STL – St. Louis

Validator: Patrick Seccomb Organization: Portage Environmental, Inc.

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☒ Organochlorine Pesticides
- ☐ High Explosives
- ☐ Inorganics
- ☐ Radiochemistry

Other (describe): LANL Airport – Waste Removal Project; Post Removal Sampling Data; Pesticides

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☒	☐	☐	8. Quantitation reports
☒	☐	☐	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☒	☐	☐	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

See Overall Assessment of Data

(Attach additional comment sheets as necessary.)

Validator's signature: [signature] Date: 10/14/03

SOP-15.03, R1

Los Alamos National Laboratory
RRES-Remediation Program

PEST/PCB Data-Validation Checklist

Yes	No	n/a		Assign qualifier listed below if criteria = Yes: Detected analyte	Undetected analyte
☐	☒	☐	1. The breakdown performance check is not present.	Present	
☐	☒	☐	2. The breakdown performance exceeds criteria for individual or combined.	Acceptable	
☐	☒	☐	3. The Breakdown performance exceeds criteria and the associated breakdown products are present in sample.	Acceptable	
☐	☒	☐	4. Initial calibration is not present.	Present	
☐	☒	☐	5. Initial calibration does not have 5 calibration points and/or low standard at or below the reporting_limit.	Acceptable	
☐	☒	☐	6. Initial calibration analyte %RSD is >20% or RSD is <0.995.	Acceptable	
☐	☒	☐	7. The CCV is not present or analyzed at proper frequency.	Acceptable	
☐	☒	☐	8. Continuing calibration analyte %D is >15%.	Acceptable	
☐	☒	☐	9. A multi-component analyte is reported with no standard being analyzed with in 72 h of the initial analysis.	Acceptable	
☐	☒	☐	10. The RT window information is not present.	Present	
☐	☒	☐	11. RT window for individual analytes in the CCV have shifted more than 0.05 minutes from the RT window from the initial calibration.	Acceptable	
☐	☒	☐	12. The method blank is not reported.	Present	
☐	☒	☐	13. The analyte detected in blank and sample result for analyte < 5x the amount in blank.	No detections	
☐	☒	☐	14. The analyte detected in blank and sample result for analyte > 5x the amount in blank.	No detections	
☐	☒	☐	15. The confirmation information is not present for positive results.	Present	
☐	☒	☐	16. The analyte reported was not confirmed on a second dissimilar column or detector.	All were confirmed; several results showed poor agreement between columns. Affected positive results are 'J' flagged.	
☐	☒	☐	17. The analyte reported exceeds the RT window but was confirmed.	Acceptable	
☒	☐	☐	18. The multi-component analyte is reported but does not match the pattern for the analyte in the associated standard.	Interferences are noted. Affected positive results flagged due to poor column agreement.	
☐	☒	☐	19. Surrogate information is not present.	Present	
☒	☐	☐	20. Surrogate % recovery is > the UAL.	Several are > UAL; affected samples are 'J' flagged.	
☐	☒	☐	21. Surrogate % recovery is < LAL but =10%.	None are < UAL	
☐	☒	☐	22. Surrogate % recovery is < 10%.	None are < 10%	
☐	☒	☐	23. One surrogate recovery is < LAL and one surrogate recovery is > UAL.	None meet this criteria	
☐	☒	☐	24. The LCS information is not present.	Present	
☒	☐	☐	25. LCS % recovery is >130%.	Heptachlor in LCS#1 is 137%; no Heptachlor detections in affected samples; therefore, no qualifications assigned.	
☒	☐	☐	26. LCS % recovery is < 70% but =10%.	Several LCS compounds < 70%; affected results are either 'J-' or 'UJ' flagged.	
☐	☒	☐	27. LCS % recovery is < 10%.	None are < 10%	
☐	☒	☐	28. The sample was extracted outside of the appropriate hold time.	Acceptable	
☐	☒	☐	29. The sample was extracted 2 times the appropriate holding time.	Acceptable	
☐	☒	☐	30. The sample was analyzed outside the analytical holding time.	Acceptable	
☐	☒	☐	31. The sample was diluted inappropriately.	Acceptable	
☒	☐	☐	32. The other obvious data quality issues identified.	See Overall Assessment	

Overall Assessment of Data

There were several QC issues affecting the pesticide data acquired during LANL Airport Waste Removal, Post Removal Sampling. Poor column agreement between the primary and confirmation columns was noted for many of the samples exhibiting positive pesticide detections. Table 1 outlines the verification completed for dual column confirmation and the resulting qualification of sample data.

High recoveries of the surrogate compound decachlorobiphenyl (DCB) were noted in samples:

- LANL-WR-SS-15 (165%);
- LANL-WR-SS-37 (331%);
- LANL-WR-SS-42 (272%); and
- LANL-WR-SS-43 (245%).

All other samples showed acceptable DCB performance and all samples showed acceptable surrogate recoveries for tetrachlor-m-xylene (TCX). The high recovery of DCB in these samples, indicates a high-bias in positive pesticide results. In all cases but one, the positive results in these samples have already been qualified 'J' due to poor column agreement exhibited during compound quantitation / confirmation. The exception is 4,4'-DDE in sample LANL-WR-SS-42. Because of the high surrogate recovery, this result has been qualified 'J+' to indicate that the reported result is likely biased high.

Each of the laboratory control samples had at least one compound that failed to meet the 70-130% recovery criteria. A summary of the LCS exceedances and their effect on the associated sample data is provided below. The sample data adjusted for validation qualifiers are provided in *Attachment A* of this report.

Heptachlor (137%) was recovered above the upper acceptance limit (UAL) in LCS - F0C9J1AC. The samples associated with this LCS are LANL-WR-SS-65 through LANL-WR-SS-67, which are the liquid field blanks. None of the samples showed positive Heptachlor detections, therefore, no qualification was necessary.

Endosulfan Sulfate (56%), Endrin Aldehyde (44%), and Endrin Ketone (66%) were recovered below the lower acceptance limit (LAL) of 70% for LCS F0G9H1AC. The affected samples are LANL-WR-SS-1 through LANL-WR-SS-20. All positive detections of these compounds, in the affected samples, have been qualified 'J-' to indicate that reported concentrations are likely biased low. All of the non-detects have been qualified 'UJ' to denote that the reported results are non-detects, and they are likely biased low due to low LCS recovery.

Beta-BHC (68%), Endosulfan I (67%), Endosulfan Sulfate (60%), and Endrin Aldehyde (46%) were recovered below the LAL of 70% for LCS F0Q9P1C. The affected samples are LANL-WR-SS-21 through LANL-WR-SS-40. All positive detections of these compounds, in the affected samples, have been qualified 'J-' to indicate that reported concentrations are likely biased low. All of the non-detects have been qualified 'UJ' to denote that the reported results are non-detects, and they are likely biased low due to low LCS recovery.

Endosulfan I (68%), Endosulfan Sulfate (60%), and Endrin Aldehyde (46%) were recovered below the LAL of 70% for LCS F0RF51AC. The affected samples are LANL-WR-SS-41 through LANL-WR-SS-60. All positive detections of these compounds, in the affected samples, have been qualified 'J-' to indicate that reported concentrations are likely biased low. All of the non-detects have been qualified 'UJ' to denote that the reported results are non-detects, and they are likely biased low due to low LCS recovery.

Endosulfan II (67%), Endosulfan Sulfate (50%), Endrin Aldehyde (48%), Endrin Ketone (60%), and Endosulfan I (68%) were recovered below the LAL of 70% for LCS F0WCJ1AC. The affected samples are LANL-WR-SS-61 through LANL-WR-SS-64. All positive detections of these compounds, in these samples, have been qualified 'J-' to indicate that reported concentrations are likely biased low. All of the non-detects have been qualified 'UJ' to denote that the reported results are non-detects, and they are likely biased low due to low LCS recovery.

Table 1. Sample Confirmation Summary

LANL Waste Removal - Pesticide Data

Field Sample Id#:	Positive Detection:	Column Agreement:	Retention Window:	Qualifier:
ANL-WR-SS-1	No Detections	n/a	within window	none
LANL-WR-SS-2	No Detections	n/a	within window	none
LANL-WR-SS-3	No Detections	n/a	within window	none
LANL-WR-SS-4	No Detections	n/a	within window	none
LANL-WR-SS-5	Endrin Ketone	%D = 504.3%	within window	PJ
LANL-WR-SS-6	No Detections	n/a	within window	none
LANL-WR-SS-7	Endrin Ketone & 4,4'DDE	%D = 13.0 ok; 50.5 out	within window	none, PJ
LANL-WR-SS-8	Endrin Ketone & 4,4'DDE	%D = 14.4 ok, 157.8 out	within window	J, PJ
LANL-WR-SS-9	No Detections	n/a	within window	none
LANL-WR-SS-10	g-Chlordane, Endrin Aldehyde	both > 25%	within window	PJ, PJ
	Endrin Ketone, 4,4' DDE	both > 25%	within window	PJ, PJ
LANL-WR-SS-11	No Detections	n/a	within window	none
LANL-WR-SS-12	No Detections	n/a	within window	none
LANL-WR-SS-13	No Detections	n/a	within window	none
LANL-WR-SS-14	g-Chlordane*, Endrin Aldehyde	both > 25%	within window	PJ, PJ
	Endrin Ketone, Methoxychlor	both > 25%	within window	PJ, PJ
	4,4' DDE*, Endosulfan I	both > 25%	within window	PJ, PJ
	Endosulfan Sulfate, Endrin	both > 25%	within window	PJ, PJ
LANL-WR-SS-15	g-Chlordane*, Endrin Ketone	both > 25%	within window	PJ, PJ
	Methoxychlor, 4,4' DDE*	both > 25%	within window	PJ, PJ
	Endosulfan Sulfate, Endrin	both > 25%	within window	PJ, PJ
ANL-WR-SS-16	No Detections	n/a	n/a	none
LANL-WR-SS-17	No Detections	n/a	n/a	none
LANL-WR-SS-18	No Detections	n/a	n/a	none
LANL-WR-SS-19	No Detections	n/a	n/a	none
LANL-WR-SS-20	No Detections	n/a	n/a	none
LANL-WR-SS-21	4,4' DDE, 4,4' DDT	%D = 7.9 ok; 79.1 out	within window	none, PJ
LANL-WR-SS-22	4,4' DDT	%D = 57.9 out	within window	PJ
LANL-WR-SS-23	4,4' DDE, 4,4' DDT	both < 25%	within window	none, none
LANL-WR-SS-24	No Detections	n/a	n/a	none
LANL-WR-SS-25	4,4' DDE, 4,4' DDT	both < 25%	within window	none, none
LANL-WR-SS-26	4,4' DDE, 4,4' DDT	%D = 11.0 ok; 89.9 out	within window	none, PJ
LANL-WR-SS-27	4,4' DDE, 4,4' DDT	both < 25%	within window	none, none
LANL-WR-SS-28	No Detections	n/a	n/a	none
LANL-WR-SS-29	4,4' DDE, 4,4' DDT	both < 25%	within window	none, none
	Dieldrin	%D < 25%	within window	none
LANL-WR-SS-30	4,4' DDE, 4,4' DDT	%D = 22.6 ok; 58.4 out	within window	none, PJ
LANL-WR-SS-31	No Detections	n/a	n/a	none
LANL-WR-SS-32	a-Chlordane, g-Chlordane	both > 25%	within window	PJ, PJ
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
ANL-WR-SS-33	No Detections	n/a	n/a	none
LANL-WR-SS-34	g-Chlordane, Endrin Ketone	both > 25%	within window	PJ, PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ

* *Use the diluted result*

Table 1. Sample Confirmation Summary

LANL Waste Removal - Pesticide Data

Field Sample Id#:	Positive Detection:	Column Agreement:	Retention Window:	Qualifier:
ANL-WR-SS-35	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	%D = 8.6 ok, 121.3 out	within window	none, PJ
LANL-WR-SS-36	a-Chlordane, g-Chlordane	both > 25%	within window	PJ, PJ
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
LANL-WR-SS-37	a-Chlordane, g-Chlordane	both > 25%	within window	PJ, PJ
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	%D = 14.5 ok; 108.8 out	within window	none, PJ
LANL-WR-SS-38	a-Chlordane, g-Chlordane	%D = 72.4 out; 15.3 ok	within window	PJ, none
	Endrin Ketone, 4,4' DDD	both > 25%	within window	PJ, PJ
	4,4' DDE, 4,4' DDT	%D = 4.4 ok, 23.0 ok	within window	none, none
LANL-WR-SS-39	g-Chlordane, Endrin Ketone	both > 25%	within window	PJ, PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
LANL-WR-SS-40	a-Chlordane, g-Chlordane	%D = 62.7 out; 22.6 ok	within window	PJ, none
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	%D = 15.4 ok; 100 out	within window	none, PJ
LANL-WR-SS-41	No Detections	n/a	within window	none
LANL-WR-SS-42	a-Chlordane, Endrin Ketone	both > 25%	within window	PJ, PJ
	4,4' DDE, 4,4' DDT	%D = 24.1 ok; 74.1 out	within window	none, PJ
	Dieldrin	%D > 25%	within window	PJ
ANL-WR-SS-43	a-Chlordane, g-Chlordane	both > 25%	within window	PJ, PJ
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
LANL-WR-SS-44	a-Chlordane, g-Chlordane	%D = 59.2 out; 10.2 ok	within window	PJ, none
	Endrin Ketone	%D > 25%	within window	PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
LANL-WR-SS-45	g-Chlordane, Endrin Ketone	both > 25%	within window	PJ, PJ
	4,4' DDE, 4,4' DDT	both > 25%	within window	PJ, PJ
LANL-WR-SS-46	No Detections	n/a	within window	none
LANL-WR-SS-47	4,4' DDE, 4,4' DDT	%D = 1.3 ok; 26.2 out	within window	none, PJ
LANL-WR-SS-48	No Detections	n/a	within window	none
LANL-WR-SS-49	4,4' DDE, 4,4' DDT	%D = 93.6 out; 16.9 ok	within window	PJ, none
LANL-WR-SS-50	No Detections	n/a	within window	none
LANL-WR-SS-51	4,4' DDE, 4,4' DDT	both < 25%	within window	none, none
LANL-WR-SS-52	No Detections	n/a	within window	none
LANL-WR-SS-53	No Detections	n/a	within window	none
LANL-WR-SS-54	No Detections	n/a	within window	none
LANL-WR-SS-55	4,4' DDE	%D = 5.8 ok	within window	none
LANL-WR-SS-56	No Detections	n/a	within window	none
LANL-WR-SS-57	Endrin Ketone	%D > 25%	within window	PJ
NL-WR-SS-58	No Detections	n/a	within window	none
ANL-WR-SS-59	No Detections	n/a	within window	none
LANL-WR-SS-60	No Detections	n/a	within window	none

Table 1. Sample Confirmation Summary

LANL Waste Removal - Pesticide Data

Field Sample Id#:	Positive Detection:	Column Agreement:	Retention Window:	Qualifier:
ANL-WR-SS-61	g-Chlordane, Endrin Ketone	both > 25%	within window	PJ, PJ
	4,4' DDE	%D > 25%	within window	PJ
LANL-WR-SS-62	4,4' DDE, 4,4' DDT	%D = 27.1 out; 13.7 ok	within window	PJ, none
LANL-WR-SS-63	No Detections	n/a	within window	none
LANL-WR-SS-64	No Detections	n/a	within window	none
LANL-WR-SS-65	No Detections	n/a	within window	none
LANL-WR-SS-66	No Detections	n/a	within window	none
LANL-WR-SS-67	No Detections	n/a	within window	none

Attachment A

Form I's Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 001
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.046 / g Date Received: 09/12/03
Work Order: FX9251AE Date Extracted: 09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %: 6.4

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	96	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 002
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.046 / g Date Received: 09/12/03
Work Order: FX93G1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:6.1

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	71	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	80	(18 - 150)
Decachlorobiphenyl	97	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 003
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.048 / g Date Received: 09/12/03
Work Order: FX93H1AQ Date Extracted: 09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %: 9.4

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	J
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	81	(18 - 150)
Decachlorobiphenyl	91	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 004
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.072 / g Date Received: 09/12/03
Work Order: FX93J1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:9.3

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	J
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	105	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 005
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX93P1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:11

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	2.1	P	J-
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	75	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	95	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 006
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.06 / g Date Received: 09/12/03
Work Order: FX93T1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:10

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	J
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	75	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	91	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 007
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.061 / g Date Received: 09/12/03
Work Order: FX93V1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:16

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	7.2	~~P~~ PES J-	< 25% D
72-43-5	Methoxychlor	3.9	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	80	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	9.2	P J	> 25% D
50-29-3	4,4'-DDT	2.0	PES U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	74	(18 - 150)
Decachlorobiphenyl	98	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 008
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.065 / g Date Received: 09/12/03
Work Order: FX93X1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:9.2

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	6.0	~~P~~ PES J	< 25% D
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	5.4	P J	> 25% D
50-29-3	4,4'-DDT	1.9	PES U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	102	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 009
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.043 / g Date Received: 09/12/03
Work Order: FX9301AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:19

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	J
72-43-5	Methoxychlor	4.1	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	83	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	2.1	U	
50-29-3	4,4'-DDT	2.1	U	
60-57-1	Dieldrin	2.1	U	
959-98-8	Endosulfan I	2.1	U	
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	87	(18 - 150)
Decachlorobiphenyl	101	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 010
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX9311AQ Date Extracted: 09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %: 11

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9		U
5103-74-2	gamma-Chlordane	5.3	P	J
7421-93-4	Endrin aldehyde	3.3	P	J
53494-70-5	Endrin ketone	7.8	P	J
72-43-5	Methoxychlor	3.7		U
76-44-8	Heptachlor	1.9		U
1024-57-3	Heptachlor epoxide	1.9		U
8001-35-2	Toxaphene	75		U
309-00-2	Aldrin	1.9		U
319-84-6	alpha-BHC	1.9		U
319-85-7	beta-BHC	1.9		U
319-86-8	delta-BHC	1.9		U
58-89-9	gamma-BHC (Lindane)	1.9		U
72-54-8	4,4'-DDD	1.9		U
72-55-9	4,4'-DDE	11	P	J
50-29-3	4,4'-DDT	1.9		U
60-57-1	Dieldrin	1.9		U
959-98-8	Endosulfan I	1.9		U
33213-65-9	Endosulfan II	1.9		U
1031-07-8	Endosulfan sulfate	1.9		U J
72-20-8	Endrin	1.9		U

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	83	(18 - 150)
Decachlorobiphenyl	111	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 011
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.066 / g Date Received: 09/12/03
Work Order: FX9321AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:9.3

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	J
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	116	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 012
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.017 / g Date Received: 09/12/03
Work Order: FX9331AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:12

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	hh
53494-70-5	Endrin ketone	1.9	U	hh
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	76	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

BES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	73	(18 - 150)
Decachlorobiphenyl	95	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 013
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.008 / g Date Received: 09/12/03
Work Order: FX94A1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:16

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	J
72-43-5	Methoxychlor	3.9	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	80	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

RGS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	78	(18 - 150)
Decachlorobiphenyl	100	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 014
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.011 / g Date Received: 09/12/03
Work Order: FX94C1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:12

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-14

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q		
5103-71-9	alpha-Chlordane	1.9		U	
5103-74-2	gamma-Chlordane	16	P	J	Do not use
7421-93-4	Endrin aldehyde	8.5	P	J-	
53494-70-5	Endrin ketone	12	P	J-	
72-43-5	Methoxychlor	8.6	P	J	
76-44-8	Heptachlor	1.9		U	
1024-57-3	Heptachlor epoxide	1.9		U	
8001-35-2	Toxaphene	76		U	
309-00-2	Aldrin	1.9		U	
319-84-6	alpha-BHC	1.9		U	
319-85-7	beta-BHC	1.9		U	
319-86-8	delta-BHC	1.9		U	
58-89-9	gamma-BHC (Lindane)	1.9		U	
72-54-8	4,4'-DDD	1.9		U	
72-55-9	4,4'-DDE	41	EP	J	Do not use
50-29-3	4,4'-DDT	1.9		U	
60-57-1	Dieldrin	1.9		U	
959-98-8	Endosulfan I	2.5	P	J	
33213-65-9	Endosulfan II	1.9		U	
1031-07-8	Endosulfan sulfate	2.0	P	J-	
72-20-8	Endrin	2.4	P	J	

PKS
10/19/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	73	(18 - 150)
Decachlorobiphenyl	114	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 014
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.011 / g Date Received: 09/12/03
Work Order: FX94C2AQ Date Extracted:09/17/03
Dilution factor: 10 Date Analyzed: 09/25/03
Moisture %:12

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-14 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q		
5103-71-9	alpha-Chlordane	19		U	Do not use
5103-74-2	gamma-Chlordane	25	DP	J	use This result
7421-93-4	Endrin aldehyde	19		U	J Do not use
53494-70-5	Endrin ketone	19		U	J Do not use
72-43-5	Methoxychlor	38		U	
76-44-8	Heptachlor	19		U	
1024-57-3	Heptachlor epoxide	19		U	
8001-35-2	Toxaphene	760		U	
309-00-2	Aldrin	19		U	
319-84-6	alpha-BHC	19		U	
319-85-7	beta-BHC	19		U	
319-86-8	delta-BHC	19		U	
58-89-9	gamma-BHC (Lindane)	19		U	
72-54-8	4,4'-DDD	19		U	Do not use
72-55-9	4,4'-DDE	49	DP	J	use This result
50-29-3	4,4'-DDT	19		U	Do not use
60-57-1	Dieldrin	19		U	
959-98-8	Endosulfan I	19		U	
33213-65-9	Endosulfan II	19		U	
1031-07-8	Endosulfan sulfate	19		U	J
72-20-8	Endrin	19		U	Do not use

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	0.0	(18 - 150)
Decachlorobiphenyl	0.0	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX94E1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:13

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-15

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q		
5103-71-9	alpha-Chlordane	2.0		U	
5103-74-2	gamma-Chlordane	53	EP	J	DO NOT USE
7421-93-4	Endrin aldehyde	2.0		U	J
53494-70-5	Endrin ketone	12	P	J-	
72-43-5	Methoxychlor	11	P	J	
76-44-8	Heptachlor	2.0		U	
1024-57-3	Heptachlor epoxide	2.0		U	
8001-35-2	Toxaphene	77		U	
309-00-2	Aldrin	2.0		U	
319-84-6	alpha-BHC	2.0		U	
319-85-7	beta-BHC	2.0		U	
319-86-8	delta-BHC	2.0		U	
58-89-9	gamma-BHC (Lindane)	2.0		U	
72-54-8	4,4'-DDD	2.0		U	
72-55-9	4,4'-DDE	120	EP	J	DO NOT USE
50-29-3	4,4'-DDT	2.0		U	
60-57-1	Dieldrin	2.0		U	
959-98-8	Endosulfan I	2.0		U	
33213-65-9	Endosulfan II	2.0		U	
1031-07-8	Endosulfan sulfate	5.9	P	J-	
72-20-8	Endrin	6.8	P	J	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	165	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 015
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX94E2AQ Date Extracted:09/17/03
Dilution factor: 10 Date Analyzed: 09/25/03
Moisture %:13

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-15 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q		
5103-71-9	alpha-Chlordane	20		U	Do not use
5103-74-2	gamma-Chlordane	72	DP	J	use This result
7421-93-4	Endrin aldehyde	20		U	Do not use
53494-70-5	Endrin ketone	20		U	Do not use
72-43-5	Methoxychlor	38		U	
76-44-8	Heptachlor	20		U	
1024-57-3	Heptachlor epoxide	20		U	
8001-35-2	Toxaphene	770		U	
309-00-2	Aldrin	20		U	
319-84-6	alpha-BHC	20		U	
319-85-7	beta-BHC	20		U	
319-86-8	delta-BHC	20		U	
58-89-9	gamma-BHC (Lindane)	20		U	
72-54-8	4,4'-DDD	20		U	Do not use
72-55-9	4,4'-DDE	150	DP	J	Use this result
50-29-3	4,4'-DDT	20		U	Do not use
60-57-1	Dieldrin	20		U	
959-98-8	Endosulfan I	20		U	
33213-65-9	Endosulfan II	20		U	
1031-07-8	Endosulfan sulfate	20		U	
72-20-8	Endrin	20		U	Do not use

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	0.0	(18 - 150)
Decachlorobiphenyl	0.0	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 016
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.069 / g Date Received: 09/12/03
Work Order: FX94F1AQ Date Extracted: 09/17/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %: 8.9

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-16

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	J
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/19/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	78	(18 - 150)
Decachlorobiphenyl	89	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 017
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.022 / g
Work Order: FX94G1AQ
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/25/03

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-17

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	J
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	78	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PGS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	111	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 018
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.027 / g Date Received: 09/12/03
Work Order: FX94H1AQ Date Extracted:09/17/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:4.2

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-18

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.4	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	70	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES 10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	80	(18 - 150)
Decachlorobiphenyl	99	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 019
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.021 / g Date Received: 09/12/03
Work Order: FX94K1AQ Date Extracted: 09/17/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %: 6.9

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-19

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	81	(18 - 150)
Decachlorobiphenyl	103	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 020
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.02 / g
Work Order: FX94L1AQ
Dilution factor: 1
Moisture %: 6.7

Date Received: 09/12/03
Date Extracted: 09/17/03
Date Analyzed: 09/25/03

QC Batch: 3260294

Client Sample Id: LANL-WR-SS-20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

RES 10/19/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	98	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 021
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.015 / g Date Received: 09/12/03
Work Order: FX94M1AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:12

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-21

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	76	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	3.0		
50-29-3	4,4'-DDT	2.5	P J	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/4/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	106	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 022
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.025 / g Date Received: 09/12/03
Work Order: FX94P1AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:11

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-22

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	75	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	2.6	P J	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

BES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	96	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 023
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.057 / g
Work Order: FX94Q1AQ
Dilution factor: 1
Moisture %: 7.9

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-23

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	73	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	4.2		
50-29-3	4,4'-DDT	3.5		
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PKS 10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	72	(18 - 150)
Decachlorobiphenyl	83	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 024
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.019 / g Date Received: 09/12/03
Work Order: FX94R1AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:7.3

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-24

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	83	(18 - 150)
Decachlorobiphenyl	104	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 025
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.018 / g Date Received: 09/12/03
Work Order: FX94T1AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:10

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	7.3		
50-29-3	4,4'-DDT	13		
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

YES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	88	(18 - 150)
Decachlorobiphenyl	91	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 026
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.031 / g
Work Order: FX94V1AQ
Dilution factor: 1
Moisture %: 12

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-26

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	4.1		
50-29-3	4,4'-DDT	2.1	P J	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	75	(18 - 150)
Decachlorobiphenyl	101	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.

SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8081A
Pesticides (8081A)

Lab Sample ID: F3I130129 027

Sample WT/Vol: 30.074 / g
Work Order: FX94W1AQ
Dilution factor: 1
Moisture %: 14

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

Client Sample Id: LANL-WR-SS-27

QC Batch: 3262487

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	78	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	J
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	33		
50-29-3	4,4'-DDT	9.7		
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	89	(18 - 150)
Decachlorobiphenyl	103	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 028
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.02 / g Date Received: 09/12/03
Work Order: FX94X1AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:17

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-28

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	4.0	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	81	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	J
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

BES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	76	(18 - 150)
Decachlorobiphenyl	92	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 029
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.067 / g Date Received: 09/12/03
Work Order: FX9401AQ Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:21

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-29

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	
72-43-5	Methoxychlor	4.2	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	85	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	J
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	21		
50-29-3	4,4'-DDT	16		
60-57-1	Dieldrin	2.9		
959-98-8	Endosulfan I	2.1	U	J
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	100	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 030
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.057 / g
Work Order: FX9411AQ
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-30

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	3.9	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	79	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	J
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	3.8		
50-29-3	4,4'-DDT	4.0	P	J
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	96	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 031
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.053 / g
Work Order: FX9421AQ
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

RES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	82	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 032
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.047 / g
Work Order: FX9431AQ
Dilution factor: 1
Moisture %: 6.4

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	3.3	P J	
5103-74-2	gamma-Chlordane	4.0	P J	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	5.6	P J	
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	2.3	P J	
50-29-3	4,4'-DDT	6.9	P J	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PBS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	144	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 033
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.018 / g
Work Order: FX9441AQ
Dilution factor: 1
Moisture %: 8.4

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	73	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	J
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PGS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	72	(18 - 150)
Decachlorobiphenyl	80	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 034
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.06 / g
Work Order: FX9451AQ
Dilution factor: 1
Moisture %: 3.7

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	2.2	P J	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	6.8	P J	
72-43-5	Methoxychlor	3.4	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	70	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.9	P J	
50-29-3	4,4'-DDT	10	P J	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	128	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc.
SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8081A
Pesticides (8081A)

Lab Sample ID: F3I130129 035

Sample WT/Vol: 30.021 / g
Work Order: FX9461AQ
Dilution factor: 1
Moisture %: 23

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

Client Sample Id: LANL-WR-SS-35

QC Batch: 3262487

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.2	U	
5103-74-2	gamma-Chlordane	2.2	U	
7421-93-4	Endrin aldehyde	2.2	U	
53494-70-5	Endrin ketone	2.2	U	J
72-43-5	Methoxychlor	3.8	P J	
76-44-8	Heptachlor	4.3	U	
1024-57-3	Heptachlor epoxide	2.2	U	
8001-35-2	Toxaphene	2.2	U	
309-00-2	Aldrin	87	U	
319-84-6	alpha-BHC	2.2	U	
319-85-7	beta-BHC	2.2	U	
319-86-8	delta-BHC	2.2	U	J
58-89-9	gamma-BHC (Lindane)	2.2	U	
72-54-8	4,4'-DDD	2.2	U	
72-55-9	4,4'-DDE	2.2	U	
50-29-3	4,4'-DDT	5.9	U	
60-57-1	Dieldrin	7.8	P J	
959-98-8	Endosulfan I	2.2	U	
33213-65-9	Endosulfan II	2.2	U	J
1031-07-8	Endosulfan sulfate	2.2	U	
72-20-8	Endrin	2.2	U	J
		2.2	U	

PGS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	85	(18 - 150)
Decachlorobiphenyl	99	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID
Method: SW846 8081A
Pesticides (8081A)

Lab Sample ID: F3I130129 036

Sample WT/Vol: 30.046 / g
Work Order: FX9471AQ
Dilution factor: 1
Moisture %: 5.4

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	3.3	P	J
5103-74-2	gamma-Chlordane	3.1	P	J
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	5.1	P	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	71	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	J
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	3.3	P	J
50-29-3	4,4'-DDT	5.2	P	J
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	
33213-65-9	Endosulfan II	1.8	U	J
1031-07-8	Endosulfan sulfate	1.8	U	
72-20-8	Endrin	1.8	U	J

RES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	103	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 037
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.057 / g Date Received: 09/12/03
Work Order: FX9481A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:4.0

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	3.3	P J	
5103-74-2	gamma-Chlordane	3.4	P J	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	12	P J	
72-43-5	Methoxychlor	3.4	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	70	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	3.7		
50-29-3	4,4'-DDT	12	P J	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	89	(18 - 150)
Decachlorobiphenyl	331	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 038
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.055 / g
Work Order: FX9491A3
Dilution factor: 1
Moisture %: 5.5

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/23/03

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q		
5103-71-9	alpha-Chlordane	3.5	P	J	
5103-74-2	gamma-Chlordane	4.8			
7421-93-4	Endrin aldehyde	1.8		U	J
53494-70-5	Endrin ketone	3.6	P	J	
72-43-5	Methoxychlor	3.5		U	
76-44-8	Heptachlor	1.8		U	
1024-57-3	Heptachlor epoxide	1.8		U	
8001-35-2	Toxaphene	71		U	
309-00-2	Aldrin	1.8		U	
319-84-6	alpha-BHC	1.8		U	
319-85-7	beta-BHC	1.8		U	J
319-86-8	delta-BHC	1.8		U	
58-89-9	gamma-BHC (Lindane)	1.8		U	
72-54-8	4,4'-DDD	2.2	P	J	%D = 35.2% PES
72-55-9	4,4'-DDE	4.1			
50-29-3	4,4'-DDT	22			
60-57-1	Dieldrin	1.8		U	
959-98-8	Endosulfan I	1.8		U	J
33213-65-9	Endosulfan II	1.8		U	
1031-07-8	Endosulfan sulfate	1.8		U	J
72-20-8	Endrin	1.8		U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	88	(18 - 150)
Decachlorobiphenyl	137	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.08 / g Date Received: 09/12/03
Work Order: FX95A1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %:5.2

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	2.3	P J	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	3.9	P J	
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	71	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	3.0	P J	%D = 31% PES
50-29-3	4,4'-DDT	6.6	P J	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	123	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 040
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.027 / g Date Received: 09/12/03
Work Order: FX95C1A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/23/03
Moisture %: 5.8

QC Batch: 3262487

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.5	P J	
5103-74-2	gamma-Chlordane	3.5		
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	5.1	P J	
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	71	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	J
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8		
50-29-3	4,4'-DDT	7.3	P J	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	83	(18 - 150)
Decachlorobiphenyl	104	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 041
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.031 / g
Work Order: FX95D1A3
Dilution factor: 1
Moisture %: 18

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/25/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	
72-43-5	Methoxychlor	4.0	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	82	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	2.1	U	
50-29-3	4,4'-DDT	2.1	U	
60-57-1	Dieldrin	2.1	U	
959-98-8	Endosulfan I	2.1	U	J
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	89	(18 - 150)
Decachlorobiphenyl	110	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 042
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.015 / g
Work Order: FX95E1A3
Dilution factor: 1
Moisture %:6.8

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/25/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.3	P J	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	10	P J	
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	4.7	J+	
50-29-3	4,4'-DDT	23	P J	
60-57-1	Dieldrin	3.8	P J	% D = 28.0 %
959-98-8	Endosulfan I	1.8	U	J PES
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	10/14/03

PES

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	72	(18 - 150)
Decachlorobiphenyl	272	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 043
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.054 / g Date Received: 09/12/03
Work Order: FX95F1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:14

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	3.2	P J	
5103-74-2	gamma-Chlordane	4.8	P J	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	12	P J	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	7.6	P J	
50-29-3	4,4'-DDT	19	P J	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	245	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 044
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.04 / g Date Received: 09/12/03
Work Order: FX95G1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:9.0

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.4	P J	
5103-74-2	gamma-Chlordane	3.2		
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	4.9	P J	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	2.0	P J	
50-29-3	4,4'-DDT	15	P J	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/19/05

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	87	(18 - 150)
Decachlorobiphenyl	128	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.014 / g Date Received: 09/12/03
Work Order: FX95H1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:15

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.9	P J	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	8.8	P J	
72-43-5	Methoxychlor	3.9	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	79	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	6.7	P J	%D = 33.6% PES
50-29-3	4,4'-DDT	26	P J	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/19/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	76	(18 - 150)
Decachlorobiphenyl	107	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 046
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.065 / g Date Received: 09/12/03
Work Order: FX95J1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/25/03
Moisture %:11

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	75	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PKS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	93	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 047
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.044 / g
Work Order: FX95K1A3
Dilution factor: 1
Moisture %: 19

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/26/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	
72-43-5	Methoxychlor	4.1	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	82	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	3.8		
50-29-3	4,4'-DDT	3.2	P J	%D = 26.2%
60-57-1	Dieldrin	2.1	U	PES
959-98-8	Endosulfan I	2.1	U	J
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	76	(18 - 150)
Decachlorobiphenyl	89	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.048 / g Date Received: 09/12/03
Work Order: FX95L1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:8.9

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	88	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 049
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.061 / g Date Received: 09/12/03
Work Order: FX95M1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:8.3

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	73	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	2.0	P J	
50-29-3	4,4'-DDT	3.3		
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	77	(18 - 150)
Decachlorobiphenyl	87	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 050
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.068 / g Date Received: 09/12/03
Work Order: FX95N1A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %: 15

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	3.9	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	79	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	94	(18 - 150)
Decachlorobiphenyl	105	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.007 / g
Work Order: FX95P1A3
Dilution factor: 1
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/19/03
Date Analyzed: 09/26/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.2	U	
5103-74-2	gamma-Chlordane	2.2	U	
7421-93-4	Endrin aldehyde	2.2	U	J
53494-70-5	Endrin ketone	2.2	U	
72-43-5	Methoxychlor	4.4	U	
76-44-8	Heptachlor	2.2	U	
1024-57-3	Heptachlor epoxide	2.2	U	
8001-35-2	Toxaphene	89	U	
309-00-2	Aldrin	2.2	U	
319-84-6	alpha-BHC	2.2	U	
319-85-7	beta-BHC	2.2	U	
319-86-8	delta-BHC	2.2	U	
58-89-9	gamma-BHC (Lindane)	2.2	U	
72-54-8	4,4'-DDD	2.2	U	
72-55-9	4,4'-DDE	11		
50-29-3	4,4'-DDT	9.8		
60-57-1	Dieldrin	2.2	U	
959-98-8	Endosulfan I	2.2	U	J
33213-65-9	Endosulfan II	2.2	U	
1031-07-8	Endosulfan sulfate	2.2	U	J
72-20-8	Endrin	2.2	U	

PBS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	92	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 052
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.016 / g Date Received: 09/12/03
Work Order: FX95Q1A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %: 18

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	
72-43-5	Methoxychlor	4.0	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	82	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	2.1	U	
50-29-3	4,4'-DDT	2.1	U	
60-57-1	Dieldrin	2.1	U	
959-98-8	Endosulfan I	2.1	U	J
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	74	(18 - 150)
Decachlorobiphenyl	78	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 053
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.057 / g
Work Order: FX95R1A3
Dilution factor: 1
Moisture %: 21

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/26/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
7421-93-4	Endrin aldehyde	2.1	U	J
53494-70-5	Endrin ketone	2.1	U	
72-43-5	Methoxychlor	4.2	U	
76-44-8	Heptachlor	2.1	U	
1024-57-3	Heptachlor epoxide	2.1	U	
8001-35-2	Toxaphene	85	U	
309-00-2	Aldrin	2.1	U	
319-84-6	alpha-BHC	2.1	U	
319-85-7	beta-BHC	2.1	U	
319-86-8	delta-BHC	2.1	U	
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	2.1	U	
72-55-9	4,4'-DDE	2.1	U	
50-29-3	4,4'-DDT	2.1	U	
60-57-1	Dieldrin	2.1	U	
959-98-8	Endosulfan I	2.1	U	J
33213-65-9	Endosulfan II	2.1	U	
1031-07-8	Endosulfan sulfate	2.1	U	J
72-20-8	Endrin	2.1	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	75	(18 - 150)
Decachlorobiphenyl	70	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 054
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.029 / g Date Received: 09/12/03
Work Order: FX95T1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:8.9

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	74	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	95	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 055
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.088 / g Date Received: 09/12/03
Work Order: FX95V1A3 Date Extracted:09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:24

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.2	U	
5103-74-2	gamma-Chlordane	2.2	U	
7421-93-4	Endrin aldehyde	2.2	U	J
53494-70-5	Endrin ketone	2.2	U	
72-43-5	Methoxychlor	4.4	U	
76-44-8	Heptachlor	2.2	U	
1024-57-3	Heptachlor epoxide	2.2	U	
8001-35-2	Toxaphene	88	U	
309-00-2	Aldrin	2.2	U	
319-84-6	alpha-BHC	2.2	U	
319-85-7	beta-BHC	2.2	U	
319-86-8	delta-BHC	2.2	U	
58-89-9	gamma-BHC (Lindane)	2.2	U	
72-54-8	4,4'-DDD	2.2	U	
72-55-9	4,4'-DDE	3.2		
50-29-3	4,4'-DDT	2.2	U	
60-57-1	Dieldrin	2.2	U	
959-98-8	Endosulfan I	2.2	U	J
33213-65-9	Endosulfan II	2.2	U	
1031-07-8	Endosulfan sulfate	2.2	U	J
72-20-8	Endrin	2.2	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	83	(18 - 150)
Decachlorobiphenyl	101	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 056
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.009 / g Date Received: 09/12/03
Work Order: FX95W1A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %: 7.6

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	
72-43-5	Methoxychlor	3.6	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	90	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 057
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.065 / g Date Received: 09/12/03
Work Order: FX95X1A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %: 13

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	2.6	P J	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	81	(18 - 150)
Decachlorobiphenyl	95	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 058
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.003 / g
Work Order: FX9501A3
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/26/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	J
53494-70-5	Endrin ketone	1.9	U	
72-43-5	Methoxychlor	3.7	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	75	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	J
33213-65-9	Endosulfan II	1.9	U	
1031-07-8	Endosulfan sulfate	1.9	U	J
72-20-8	Endrin	1.9	U	

PRS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	82	(18 - 150)
Decachlorobiphenyl	86	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 059
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.053 / g
Work Order: FX9511A3
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/19/03
Date Analyzed: 09/26/03

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	85	(18 - 150)
Decachlorobiphenyl	98	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 060
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.069 / g Date Received: 09/12/03
Work Order: FX9521A3 Date Extracted: 09/19/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %: 13

QC Batch: 3262515

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.0	U	
50-29-3	4,4'-DDT	2.0	U	
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PBS
10/29/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	93	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 061
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.019 / g
Work Order: FX9541A3
Dilution factor: 1
Moisture %:5.1

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265272

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	2.0	P J	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	3.5	P J	
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	71	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	2.3	P J	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	J
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

BES
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(18 - 150)
Decachlorobiphenyl	98	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 062
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.026 / g
Work Order: FX9561A3
Dilution factor: 1
Moisture %: 13

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265272

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	2.0	U	
5103-74-2	gamma-Chlordane	2.0	U	
7421-93-4	Endrin aldehyde	2.0	U	J
53494-70-5	Endrin ketone	2.0	U	J
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	2.0	U	
1024-57-3	Heptachlor epoxide	2.0	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	2.0	U	
319-84-6	alpha-BHC	2.0	U	
319-85-7	beta-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.0	U	
72-55-9	4,4'-DDE	2.8	P J	TOD = 29.1 % PKS
50-29-3	4,4'-DDT	2.1		
60-57-1	Dieldrin	2.0	U	
959-98-8	Endosulfan I	2.0	U	J
33213-65-9	Endosulfan II	2.0	U	J
1031-07-8	Endosulfan sulfate	2.0	U	J
72-20-8	Endrin	2.0	U	

PKS 10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	88	(18 - 150)
Decachlorobiphenyl	101	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 063
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.061 / g Date Received: 09/12/03
Work Order: FX9571A3 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:12

QC Batch: 3265272

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.9	U	
5103-74-2	gamma-Chlordane	1.9	U	
7421-93-4	Endrin aldehyde	1.9	U	UJ
53494-70-5	Endrin ketone	1.9	U	UJ
72-43-5	Methoxychlor	3.8	U	
76-44-8	Heptachlor	1.9	U	
1024-57-3	Heptachlor epoxide	1.9	U	
8001-35-2	Toxaphene	77	U	
309-00-2	Aldrin	1.9	U	
319-84-6	alpha-BHC	1.9	U	
319-85-7	beta-BHC	1.9	U	
319-86-8	delta-BHC	1.9	U	
58-89-9	gamma-BHC (Lindane)	1.9	U	
72-54-8	4,4'-DDD	1.9	U	
72-55-9	4,4'-DDE	1.9	U	
50-29-3	4,4'-DDT	1.9	U	
60-57-1	Dieldrin	1.9	U	
959-98-8	Endosulfan I	1.9	U	UJ
33213-65-9	Endosulfan II	1.9	U	UJ
1031-07-8	Endosulfan sulfate	1.9	U	UJ
72-20-8	Endrin	1.9	U	

PFS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	79	(18 - 150)
Decachlorobiphenyl	85	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 064
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 30.051 / g Date Received: 09/12/03
Work Order: FX9591A3 Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:6.6

QC Batch: 3265272

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
5103-71-9	alpha-Chlordane	1.8	U	
5103-74-2	gamma-Chlordane	1.8	U	
7421-93-4	Endrin aldehyde	1.8	U	J
53494-70-5	Endrin ketone	1.8	U	J
72-43-5	Methoxychlor	3.5	U	
76-44-8	Heptachlor	1.8	U	
1024-57-3	Heptachlor epoxide	1.8	U	
8001-35-2	Toxaphene	72	U	
309-00-2	Aldrin	1.8	U	
319-84-6	alpha-BHC	1.8	U	
319-85-7	beta-BHC	1.8	U	
319-86-8	delta-BHC	1.8	U	
58-89-9	gamma-BHC (Lindane)	1.8	U	
72-54-8	4,4'-DDD	1.8	U	
72-55-9	4,4'-DDE	1.8	U	
50-29-3	4,4'-DDT	1.8	U	
60-57-1	Dieldrin	1.8	U	
959-98-8	Endosulfan I	1.8	U	J
33213-65-9	Endosulfan II	1.8	U	J
1031-07-8	Endosulfan sulfate	1.8	U	J
72-20-8	Endrin	1.8	U	

PKS
10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	84	(18 - 150)
Decachlorobiphenyl	83	(30 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 065
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 500 / mL Date Received: 09/12/03
Work Order: FX96N1AD Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:NA

QC Batch: 3258451

Client Sample Id: LANL-WR-SS-65

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
76-44-8	Heptachlor	0.10	U
1024-57-3	Heptachlor epoxide	0.10	U
8001-35-2	Toxaphene	4.0	U
309-00-2	Aldrin	0.10	U
319-84-6	alpha-BHC	0.10	U
319-85-7	beta-BHC	0.10	U
319-86-8	delta-BHC	0.10	U
58-89-9	gamma-BHC (Lindane)	0.10	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.10	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
72-43-5	Methoxychlor	0.20	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	86	(27 - 150)
Decachlorobiphenyl	112	(10 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) WATER Lab Sample ID: F3I130129 066
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 500 / mL Date Received: 09/12/03
Work Order: FX96X1AP Date Extracted: 09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %: NA

QC Batch: 3258451

Client Sample Id: LANL-WR-SS-66

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
76-44-8	Heptachlor	0.10	U
1024-57-3	Heptachlor epoxide	0.10	U
8001-35-2	Toxaphene	4.0	U
309-00-2	Aldrin	0.10	U
319-84-6	alpha-BHC	0.10	U
319-85-7	beta-BHC	0.10	U
319-86-8	delta-BHC	0.10	U
58-89-9	gamma-BHC (Lindane)	0.10	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.10	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
72-43-5	Methoxychlor	0.20	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	78	(27 - 150)
Decachlorobiphenyl	99	(10 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) WATER Lab Sample ID:F3I130129 067
Method: SW846 8081A
Pesticides (8081A)

Sample WT/Vol: 500 / mL Date Received: 09/12/03
Work Order: FX9611A2 Date Extracted:09/15/03
Dilution factor: 1 Date Analyzed: 09/17/03
Moisture %:NA

QC Batch: 3258451

Client Sample Id: LANL-WR-SS-67

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
76-44-8	Heptachlor	0.10	U
1024-57-3	Heptachlor epoxide	0.10	U
8001-35-2	Toxaphene	4.0	U
309-00-2	Aldrin	0.10	U
319-84-6	alpha-BHC	0.10	U
319-85-7	beta-BHC	0.10	U
319-86-8	delta-BHC	0.10	U
58-89-9	gamma-BHC (Lindane)	0.10	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.10	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
53494-70-5	Endrin ketone	0.10	U
72-43-5	Methoxychlor	0.20	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Tetrachloro-m-xylene	90	(27 - 150)
Decachlorobiphenyl	100	(10 - 150)

FORM I

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10/14/2003 Lab Code: TPH

Contract Laboratory Name: STL St. Louis

Validator: Berta Oates Organization: Portage Environmental

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☐ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☐ Inorganics
- ☐ Radiochemistry

Other (describe): TPH

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☐	☐	☒	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☒	☐	☐	8. Quantitation reports
☒	☐	☐	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☒	☐	☐	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

(Attach additional comment sheets as necessary.)

Validator's signature: Jm H. [illegible] Date: 10/14/2003

SOP-15.03, R1

Los Alamos National Laboratory
RRES-Remediation Program

TPH Data-Validation Checklist

Yes	No	n/a	(check one)	Comment
☐	☐	☒	1. The breakdown performance check is not present.	
☐	☐	☒	2. The breakdown performance exceeds criteria for individual or combined.	
☐	☐	☒	3. The Breakdown performance exceeds criteria and the associated breakdown products are present in sample.	
☐	☒	☐	4. Initial calibration is not present.	
☐	☒	☐	5. Initial calibration does not have 5 calibration points and/or low standard at or below the reporting limit.	
☐	☒	☐	6. Initial calibration analyte %RSD is >20% or RSD is <0.995.	
☐	☒	☐	7. The CCV is not present or analyzed at proper frequency.	
☐	☒	☐	8. Continuing calibration analyte %D is >15%.	
☐	☒	☐	9. A multicomponent analyte is reported with no standard being analyzed with in 72 h of the initial analysis.	
☐	☐	☒	10. The RT window information is not present.	
☐	☐	☒	11. RT window for individual analytes in the CCV have shifted more than 0.05 minutes from the RT window from the initial calibration.	
☐	☒	☐	12. The method blank is not reported.	
☐	☒	☐	13. The analyte detected in blank and sample result for analyte < 5x the amount in blank.	
☐	☒	☐	14. The analyte detected in blank and sample result for analyte > 5x the amount in blank.	
☐	☐	☒	15. The confirmation information is not present for positive results.	
☐	☐	☒	16. The analyte reported was not confirmed on a second dissimilar column or detector.	
☐	☐	☒	17. The analyte reported exceeds the RT window but was confirmed.	
☐	☒	☐	18. The multicomponent analyte is reported but does not match the pattern for the analyte in the associated standard.	
☐	☒	☐	19. Surrogate information is not present.	
☐	☒	☐	20. Surrogate % recovery is > the UAL.	
☒	☐	☐	21. Surrogate % recovery is < LAL but =10%.	Surrogate recoveries low. See Overall Assessment of Data.
☐	☒	☐	22. Surrogate % recovery is < 10%.	
☐	☐	☒	23. One surrogate recovery is < LAL and one surrogate recovery is > UAL.	
☐	☒	☐	24. The LCS information is not present.	
☐	☒	☐	25. LCS % recovery is >130%.	
☐	☒	☐	26. LCS % recovery is < 70% but =10%.	
☐	☒	☐	27. LCS % recovery is < 10%.	
☒	☐	☐	28. The sample was extracted outside of the appropriate hold time.	2 reanalysis samples were analyzed outside of hold time. See Overall Assessment of Data.
☐	☒	☐	29. The sample was extracted 2 times the appropriate holding time.	
☐	☒	☐	30. The sample was analyzed outside the analytical holding time.	
☐	☒	☐	31. The sample was diluted inappropriately.	
☐	☒	☐	32. The other obvious data quality issues identified.	

[a] Qualify primary analytes R if breakdown analytes are present, qualify primary analytes UJ if breakdown analytes are absent. See the SOP for more complete explanation. [b] Apply the U qualifier if the RT is not within the initial calibration RT window. Reject any anomalies. [c] Apply the J qualifier if the peak is within the initial calibration RT window, but the data are not reported as detected. Reject any anomalies.

Overall Assessment of Data

Batch 3265375 (samples LANL-WR-SS-50 through LANL-WR-SS-64)

TPH surrogate recoveries for samples LANL-WR-SS-39RE1 and LANL-WR-SS-51RE1 were below the 70-130% acceptance criteria. Also, the samples were extracted 15 days following sample collection (1 day past hold time). Therefore, these results have been qualified "J-" to indicate a possible low bias in reported results. Matrix spike/matrix spike duplicate recoveries were outside the acceptance limits for accuracy and precision, adding further merit to the data qualifications.

Surrogate recoveries for ten of the other samples in the batch were also below the 70-130% acceptance criteria. Positive detections have been qualified "J-," and non-detects have been qualified "UJ" for the following samples: LANL-WR-SS-50, -52, -53, -55, -56, -58, -59, -62, -63, and -64.

Batch 3261308 (samples LANL-WR-SS-25, and LANL-WR-SS-31 through LANL-WR-SS-64)

Surrogate recoveries for seven samples in the batch were below the 70-130% acceptance criteria. Positive detections have been qualified "J-," and non-detects have been qualified "UJ" for the following samples: LANL-WR-SS-31, -33, -41, and -46 through -49.

Attachment A

Form I's Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 025
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.025 / g
Work Order: FX94T1CF
Dilution factor: 10
Moisture %:10

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	56	U
Q797	TPH (as Diesel)	60	

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

Rao 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 031
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.015 / g
Work Order: FX9421CF
Dilution factor: 1
Moisture %: 10

Date Received: 09/12/03
Date Extracted: 09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-31

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	16		J-, P3a
Q797	TPH (as Diesel)	5.6	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	39	(10 - 150)

Bw 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 032
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.053 / g
Work Order: FX9431CF
Dilution factor: 10
Moisture %:6.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-32

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	53	U
Q797	TPH (as Diesel)	53	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 033
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.012 / g
Work Order: FX9441CF
Dilution factor: 1
Moisture %:8.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-33

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	41		J-, P3a
Q797	TPH (as Diesel)	5.5	U	UJ, P3C

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	30	(10 - 150)

fw 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 034
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.006 / g
Work Order: FX9451CF
Dilution factor: 10
Moisture %:3.7

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-34

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	52	U
Q797	TPH (as Diesel)	52	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 035
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.024 / g
Work Order: FX9461CF
Dilution factor: 10
Moisture %:23

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-35

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	65	U
Q797	TPH (as Diesel)	65	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 036
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.013 / g
Work Order: FX9471CF
Dilution factor: 10
Moisture %:5.4

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-36

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	53	U
Q797	TPH (as Diesel)	53	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

6/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 037
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.019 / g
Work Order: FX9481CF
Dilution factor: 10
Moisture %:4.0

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-37

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	52	U
Q797	TPH (as Diesel)	52	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 038
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.011 / g
Work Order: FX9491CF
Dilution factor: 10
Moisture %:5.5

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-38

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	53	U
Q797	TPH (as Diesel)	53	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.036 / g
Work Order: FX95A1CF
Dilution factor: 10
Moisture %:5.2

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/23/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-39

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	53	U
Q797	TPH (as Diesel)	53	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 040
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.043 / g Date Received: 09/12/03
Work Order: FX95C1CF Date Extracted:09/18/03
Dilution factor: 10 Date Analyzed: 09/23/03
Moisture %:5.8

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	53	U
Q797	TPH (as Diesel)	53	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 041
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.03 / g Date Received: 09/12/03
Work Order: FX95D1CF Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:18

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-41

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	55		J-, P3a
Q797	TPH (as Diesel)	6.1	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	29	(10 - 150)

Bas 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 042
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.055 / g
Work Order: FX95E1CF
Dilution factor: 10
Moisture %:6.8

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-42

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	54	U
Q797	TPH (as Diesel)	54	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 043
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.035 / g Date Received: 09/12/03
Work Order: FX95F1CF Date Extracted:09/18/03
Dilution factor: 10 Date Analyzed: 09/24/03
Moisture %:14

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-43

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	93	
Q797	TPH (as Diesel)	58	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

Rev 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 044
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.004 / g
Work Order: FX95G1CF
Dilution factor: 10
Moisture %:9.0

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-44

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	55	U
Q797	TPH (as Diesel)	55	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 045
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.032 / g
Work Order: FX95H1CF
Dilution factor: 10
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-45

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	59	U
Q797	TPH (as Diesel)	59	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(10 - 150)

Rev 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 046
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.031 / g
Work Order: FX95J1CF
Dilution factor: 1
Moisture %:11

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-46

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	17		J-, P3a
Q797	TPH (as Diesel)	5.6	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	32	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 047
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.039 / g Date Received: 09/12/03
Work Order: FX95K1CF Date Extracted: 09/18/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %: 19

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-47

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	16		J-, P3a
Q797	TPH (as Diesel)	6.1	U	UJ, P3C

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	11	(10 - 150)

fa 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 048
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.026 / g Date Received: 09/12/03
Work Order: FX95L1CF Date Extracted:09/18/03
Dilution factor: 1 Date Analyzed: 09/24/03
Moisture %:8.9

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-48

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	12		J-, P3a
Q797	TPH (as Diesel)	5.5	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	37	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 049
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.016 / g
Work Order: FX95M1CF
Dilution factor: 1
Moisture %:8.3

Date Received: 09/12/03
Date Extracted:09/18/03
Date Analyzed: 09/24/03

QC Batch: 3261308

Client Sample Id: LANL-WR-SS-49

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	18		J-, P3a
Q797	TPH (as Diesel)	5.5	U	UJ, P3C

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	40	(10 - 150)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 050
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.01 / g
Work Order: FX95N1CF
Dilution factor: 1
Moisture %:15

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	12		J-, P3a
Q797	TPH (as Diesel)	11		J-, P3a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	32	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.03 / g
Work Order: FX95P1CF
Dilution factor: 20
Moisture %:24

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-51

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	840	D
Q797	TPH (as Diesel)	130	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 052
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.017 / g
Work Order: FX95Q1CF
Dilution factor: 1
Moisture %:18

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-52

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	32		J-, P3a
Q797	TPH (as Diesel)	8.4		J-, P3a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	32	(70 - 130)

fw 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 053
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.005 / g Date Received: 09/12/03
Work Order: FX95R1CF Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:21

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	21		J, P3a
Q797	TPH (as Diesel)	6.3	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	38	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 054
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.019 / g Date Received: 09/12/03
Work Order: FX95T1CF Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/26/03
Moisture %:8.9

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-54

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	5.5	U
Q797	TPH (as Diesel)	5.5	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 055
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.022 / g
Work Order: FX95V1CF
Dilution factor: 1
Moisture %: 24

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-55

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	21		J-, P3a
Q797	TPH (as Diesel)	20		J- - P3a

Pw 10/14/03

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	37	(70 - 130)

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 056
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.023 / g
Work Order: FX95W1CF
Dilution factor: 1
Moisture %: 7.6

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/26/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-56

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	7.0		J-, P3a
Q797	TPH (as Diesel)	5.4	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	41	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 057
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.03 / g
Work Order: FX95X1CF
Dilution factor: 20
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-57

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	710	D
Q797	TPH (as Diesel)	640	D

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 058
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.029 / g Date Received: 09/12/03
Work Order: FX9501CF Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/27/03
Moisture %:10

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-58

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	15		J-, P3a
Q797	TPH (as Diesel)	5.6	U	UJ, P3c

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	37	(70 - 130)

fw 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 059
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.046 / g
Work Order: FX9511CF
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-59

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	48		J-, P3a
Q797	TPH (as Diesel)	47		J-, P3a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	32	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 060
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.042 / g
Work Order: FX9521CF
Dilution factor: 20
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	120	U
Q797	TPH (as Diesel)	120	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(70 - 130)

Fw 10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: F3I130129

Matrix: (soil/water) SOLID Lab Sample ID: F3I130129 061
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.01 / g
Work Order: FX9541CF
Dilution factor: 20
Moisture %: 5.1

Date Received: 09/12/03
Date Extracted: 09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-61

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q908	TPH (as Motor Oil)	110	U
Q797	TPH (as Diesel)	110	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	0.0	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 062
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.04 / g
Work Order: FX9561CF
Dilution factor: 1
Moisture %:13

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-62

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	30		J-, P3a
Q797	TPH (as Diesel)	5.7	U	UJ, P3C

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	59	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 063
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.032 / g
Work Order: FX9571CF
Dilution factor: 1
Moisture %:12

Date Received: 09/12/03
Date Extracted:09/22/03
Date Analyzed: 09/27/03

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-63

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	30		J-, P3a
Q797	TPH (as Diesel)	30		J-, P3a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	41	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 064
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.028 / g Date Received: 09/12/03
Work Order: FX9591CF Date Extracted:09/22/03
Dilution factor: 1 Date Analyzed: 09/27/03
Moisture %:6.6

QC Batch: 3265375

Client Sample Id: LANL-WR-SS-64

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	5.6		J-, P3a
Q797	TPH (as Diesel)	11		J-, P3a

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	32	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 039
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.019 / g Date Received: 09/12/03
Work Order: FX95A2CF Date Extracted:09/24/03
Dilution factor: 1 Date Analyzed: 09/27/03
Moisture %:5.2
QC Batch: 3267285
Client Sample Id: LANL-WR-SS-39 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	15		J-, P3a, P9
Q797	TPH (as Diesel)	14		J-, P3a, P9

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	49	(70 - 130)

10/14/03

FORM I

PORTAGE ENVIRONMENTAL INC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:F3I130129

Matrix: (soil/water) SOLID Lab Sample ID:F3I130129 051
Method: SW846 8015 MOD
Hydrocarbons, Extractable Petroleum (8015 MOD)

Sample WT/Vol: 30.039 / g Date Received: 09/12/03
Work Order: FX95P2CF Date Extracted:09/24/03
Dilution factor: 1 Date Analyzed: 09/27/03
Moisture %:24

QC Batch: 3267285

Client Sample Id: LANL-WR-SS-51 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q	
Q908	TPH (as Motor Oil)	80		J-, P3a, P9
Q797	TPH (as Diesel)	76		J-, P3a, P9

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
o-Terphenyl	45	(10 - 150)

10/14/03

FORM I

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10-14-03 Lab Code: Gamma parameters

Contract Laboratory Name: STL – St. Louis

Validator: James Britton Organization: Portage Environmental, Inc.

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☐ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☐ Inorganics
- ☒ Radiochemistry

Other (describe):

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☐	☐	☒	8. Quantitation reports
☐	☐	☒	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☐	☐	☒	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact): Gamma spectrum pages for samples LANL-WR-SS-44, LANL-WR-SS-45, and LANL-WR-SS-47 were present in the data package, but were out of order (i.e. they were not with the remaining sample raw data). Likewise, the first page of raw data for sample LANL-WR-SS-48 was present, but out of order. These discrepancies had no effect on data validation

(Attach additional comment sheets as necessary.)

Validator's signature: Jm H. [illegible] Date: 10-16-03

SOP-15.06, R1

Los Alamos National Laboratory
RRES-Remediation Program

Gamma Spectroscopy Data-Validation Checklist

Yes	No	n/a	(check one)	Comment
☐	☒	☐	1. MDC and/or TPU were not stated for each radionuclide in each batch for each sample.	MDCs/TPUs are acceptable
☐	☒	☐	2. All sample results are <MDC.	21 of 67 are <MDC
☐	☒	☐	3. All sample results are <3 times the TPU calculation.	20 of 67 are <3x TPU.
☐	☒	☐	4. Sample results are tentative because of spectral interference.	No interference noted.
☐	☒	☐	5. Preparation/method blank is not reported.	Blanks properly reported.
☐	☒	☐	6. Analyte detected in blank <u>and</u> sample result for analyte =5x the amount in blank.	No activity in any of the blanks.
☐	☒	☐	7. Duplicate analysis information is not present.	Duplicates properly reported.
☐	☒	☐	8. All DERs for detected analytes are =2 but =4.	DERs for two batches are between 2 and 4.
☐	☒	☐	9. All DERs for detected analytes are >4.	No DERs >4.
☐	☒	☐	10. Laboratory Control Sample (LCS) information is not present.	LCSs reported properly.
☐	☒	☐	11. LCS % recovery is >120%.	All LCS recoveries are within 80-120%.
☐	☒	☐	12. LCS % recovery is <80 but =10%.	
☐	☒	☐	13. LCS % recovery is <10%.	
☐	☒	☐	14. Sample was extracted outside of the appropriate hold time.	All samples were analyzed within the 180-day holding time.
☐	☒	☐	15. Sample was extracted >2 times the appropriate holding time.	
☒	☐	☐	16. Other obvious data quality issues identified.	See discussion in Overall Assessment of Data.

[a] If the laboratory cannot provide the missing MDC, an estimated MDC can be calculated using 3 times the TPU.

Overall Assessment of Data

For Cs-137, 21 results were less than the MDC, and 46 were greater than the MDC. Forty-seven results were greater than 3x the TPU. Two results were greater than 3x the TPU, but were less than the MDC.

Samples LANL-WR-SS-12, LANL-WR-SS-17, LANL-WR-SS-20, and LANL-WR-SS-63 were solid samples that exhibited MDCs greater than the Cs-137 CRDL listed in the Table 5 of the SAP. However, in the judgment of the validator, this does not affect the usability of this data, as the results were all non-detect, and the MDCs were all well below the Screening Action Level (SAL).

Samples LANL-WR-SS-65, LANL-WR-SS-66, and LANL-WR-SS-67 were water (field blank) samples that exhibited MDCs greater than the Cs-137 CRDL listed in the Table 5 of the SAP. However, in the judgment of the validator, this does not affect the usability of this data, as the results were all non-detect.

The Duplicate Error Ratio (DER) for duplicate # LANL-WR-SS-44 DUP (batch 3261178) was 3.6, indicating duplicate imprecision. Therefore, all Cs-137 results in the batch have been qualified "J," to indicate that the DER was between 2 and 4. The affected samples are LANL-WR-SS-41 through LANL-WR-SS-60.

The Duplicate Error Ratio (DER) for duplicate # LANL-WR-SS-65 DUP (batch 3261231) was 2.1, indicating duplicate imprecision. Therefore, all results in the batch have been qualified "J." The affected samples are LANL-WR-SS-65, LANL-WR-SS-66, and LANL-WR-SS-67.

Attachment A
Form Is Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-1

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-001
Work Order: FX97H
Matrix: SOLID

Date Collected: 09/09/03 0750
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.748		0.077		0.10	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.169		0.030		0.014	09/19/03	09/23/03	3262237	40
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.05	U	0.17		0.58	09/18/03	09/25/03	3261100	94

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-2

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-002
Work Order: FX97L
Matrix: SOLID

Date Collected: 09/09/03 0805
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	1.16		0.11	0.13	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.173		0.031	0.015	09/19/03	09/23/03	3262237	38
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.47	U	0.21	0.66	09/18/03	09/26/03	3261100	92

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-3

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-003
Work Order: FX97M
Matrix: SOLID

Date Collected: 09/09/03 0815
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.258		0.052		0.078	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.071		0.020		0.029	09/19/03	09/23/03	3262237	42
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.18	U	0.19		0.63	09/18/03	09/26/03	3261100	93

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-4

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-004
Work Order: FX97Q
Matrix: SOLID

Date Collected: 09/09/03 0820
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.534		0.067		0.098	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.061		0.016		0.011	09/19/03	09/23/03	3262237	51
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.17	U	0.19		0.63	09/18/03	09/26/03	3261100	94

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-5

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-005
Work Order: FX97T
Matrix: SOLID

Date Collected: 09/09/03 0830
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.625		0.075	0.11	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.064		0.017	0.011	09/19/03	09/23/03	3262237	49
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.11	U	0.18	0.59	09/18/03	09/26/03	3261100	94

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-6

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-006
Work Order: FX97W
Matrix: SOLID

Date Collected: 09/09/03 0835
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.147		0.033		0.079	09/17/03	09/22/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.030	J	0.012		0.012	09/19/03	09/23/03	3262237	45
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.38	U	0.21		0.67	09/18/03	09/26/03	3261100	86

JB 10-16-03

NOTE(S)

ata are incomplete without the case narrative.

DC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-7

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-007
Work Order: FX97X
Matrix: SOLID

Date Collected: 09/09/03 0850
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.838		0.094	0.11	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.127		0.027	0.030	09/19/03	09/23/03	3262237	39
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.18	U	0.19	0.62	09/18/03	09/26/03	3261100	94

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-8

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-008
Work Order: FX970
Matrix: SOLID

Date Collected: 09/09/03 0855
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.793		0.094		0.13	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.122		0.025		0.014	09/19/03	09/23/03	3262237	41
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.28	U	0.19		0.61	09/18/03	09/26/03	3261100	97

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-9

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-009
Work Order: FX971
Matrix: SOLID

Date Collected: 09/09/03 0905
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.121		0.037		0.098	09/17/03	09/22/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0045	U	0.0045		0.012	09/19/03	09/23/03	3262237	47
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.24	U	0.19		0.64	09/18/03	09/26/03	3261100	90

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-10

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-010
Work Order: FX972
Matrix: SOLID

Date Collected: 09/09/03 0910
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**	**901.1 MOD**			
Cesium 137	0.634		0.073	0.12	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**	**A-01-R MOD**			
Plutonium 239/40	0.336		0.041	0.012	09/19/03	09/23/03	3262237	44
SR-90 BY GFPC EPA-905 MOD				**pCi/g**	**905 MOD**			
Strontium 90	-0.05	U	0.17	0.59	09/18/03	09/26/03	3261100	96

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-11

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-011
Work Order: FX973
Matrix: SOLID

Date Collected: 09/09/03 0915
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.678		0.077		0.12	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.088		0.023		0.035	09/19/03	09/23/03	3262237	41
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.47	U	0.19		0.60	09/18/03	09/26/03	3261100	92

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-12

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-012
Work Order: FX974
Matrix: SOLID

Date Collected: 09/09/03 0925
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	-0.040	U	0.039		0.13	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.020	U	0.012		0.031	09/19/03	09/23/03	3262237	37
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.15	U	0.19		0.62	09/18/03	09/26/03	3261100	91

JB 10-16-03

NOTE(S)

ts are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U **Result is less than the sample detection limit.**

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-13

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-013
Work Order: FX975
Matrix: SOLID

Date Collected: 09/09/03 0930
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Nits by EPA 901.1 MOD				**pCi/g**	**901.1 MOD**			
Cesium 137	0.069	U	0.030	0.088	09/17/03	09/22/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**	**A-01-R MOD**			
Plutonium 239/40	**0.033**	**J**	**0.013**	**0.013**	**09/19/03**	**09/23/03**	**3262237**	**41**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**	**905 MOD**			
Strontium 90	0.33	U	0.19	0.61	09/18/03	09/26/03	3261100	92

JB 10-16-03

NOTE(S)

ata are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-14

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-014
Work Order: FX976
Matrix: SOLID

Date Collected: 09/09/03 0933
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.99		0.11	0.12	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.241		0.033	0.012	09/19/03	09/23/03	3262237	48
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.42	U	0.21	0.65	09/18/03	09/26/03	3261100	92

JB 10-16-03

NOTE(S)

ts are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-15

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-015
Work Order: FX977
Matrix: SOLID

Date Collected: 09/09/03 0940
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.577		0.082	0.14	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.212		0.032	0.012	09/19/03	09/23/03	3262237	46
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.42	U	0.20	0.64	09/18/03	09/26/03	3261100	88

JB 10-16-03

NOTE(S)

ata are incomplete without the case narrative.
DC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-16

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-016
Work Order: FX978
Matrix: SOLID

Date Collected: 09/09/03 1015
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.146		0.033		0.076	09/17/03	09/23/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.161		0.031		0.016	09/19/03	09/23/03	3262237	37
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.21	U	0.18		0.60	09/18/03	09/26/03	3261100	96

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-17

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-017
Work Order: FX979
Matrix: SOLID

Date Collected: 09/09/03 1020
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.043	U	0.038		0.15	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0126	J	0.0073		0.011	09/19/03	09/23/03	3262238	49
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.18	U	0.21		0.71	09/18/03	09/26/03	3261101	86

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-18

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-018
Work Order: FX98C
Matrix: SOLID

Date Collected: 09/09/03 1023
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.240		0.035		0.066	09/17/03	09/23/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.038	J	0.015		0.032	09/19/03	09/23/03	3262238	49
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.18	U	0.19		0.64	09/18/03	09/26/03	3261101	93

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-19

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-019
Work Order: FX98J
Matrix: SOLID

Date Collected: 09/09/03 1040
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.0007	U	0.027		0.099	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0	U	0.0		0.03	09/19/03	09/23/03	3262238	42
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.38	U	0.20		0.66	09/18/03	09/26/03	3261101	92

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

X C is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-20

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-020
Work Order: FX98L
Matrix: SOLID

Date Collected: 09/09/03 1045
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.107	U	0.037		0.15	09/17/03	09/18/03	3261174	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.0235**	**J**	**0.0096**		**0.011**	**09/19/03**	**09/23/03**	**3262238**	**54**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.09	U	0.20		0.68	09/18/03	09/26/03	3261101	90

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-21

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-021
Work Order: FX98M
Matrix: SOLID

Date Collected: 09/09/03 1055
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.670		0.096		0.14	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.119		0.022		0.010	09/19/03	09/23/03	3262238	54
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.55	U	0.24		0.74	09/18/03	09/26/03	3261101	85

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-22

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-022
Work Order: FX98P
Matrix: SOLID

Date Collected: 09/09/03 1105
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.97		0.10		0.12	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.138		0.025		0.024	09/19/03	09/23/03	3262238	47
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.40	U	0.22		0.70	09/18/03	09/26/03	3261101	87

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-23

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-023
Work Order: FX98Q
Matrix: SOLID

Date Collected: 09/09/03 1110
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.409		0.065		0.14	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.101		0.020		0.011	09/19/03	09/23/03	3262238	51
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.24	U	0.21		0.71	09/18/03	09/26/03	3261101	86

JB 10-16-03

NOTE(S)

ats are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-24

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-024
Work Order: FX98R
Matrix: SOLID

Date Collected: 09/09/03 1120
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.147		0.040		0.084	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.017	U	0.013		0.039	09/19/03	09/23/03	3262238	32
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.21	U	0.19		0.63	09/18/03	09/26/03	3261101	93

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-25

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-025
Work Order: FX98T
Matrix: SOLID

Date Collected: 09/09/03 1130
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.150		0.029		0.066	09/17/03	09/23/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0266	J	0.0094		0.0090	09/19/03	09/23/03	3262238	62
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.10	U	0.20		0.69	09/18/03	09/26/03	3261101	90

JB 10-16-03

NOTE(S)

ata are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

LOT# F3I130138

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-26

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-026
Work Order: FX98V
Matrix: SOLID

Date Collected: 09/09/03 1135
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.540		0.068		0.12	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.078		0.018		0.011	09/19/03	09/23/03	3262238	53
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.32	U	0.21		0.67	09/18/03	09/26/03	3261101	88

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-27

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-027
Work Order: FX98W
Matrix: SOLID

Date Collected: 09/09/03 1145
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.505		0.061		0.094	09/17/03		3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.232		0.034		0.013	09/19/03	09/23/03	3262238	40
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.15	U	0.21		0.70	09/18/03	09/26/03	3261101	93

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

LOT# F3I130138

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-28

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-028
Work Order: FX980
Matrix: SOLID

Date Collected: 09/09/03 1150
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.420		0.066		0.12	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.141		0.024		0.022	09/19/03	09/23/03	3262238	53
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.21	U	0.23		0.76	09/18/03	09/26/03	3261101	85

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-29

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-029
Work Order: FX981
Matrix: SOLID

Date Collected: 09/09/03 1155
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.418		0.092		0.13	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.087	J	0.020		0.012	09/19/03	09/24/03	3262239	49
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	-0.04	U	0.23		0.78	09/18/03	09/26/03	3261101	86

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-30

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-030
Work Order: FX982
Matrix: SOLID

Date Collected: 09/09/03 1200
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.343		0.061		0.13	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.038	J	0.011		0.009	09/19/03	09/24/03	3262239	65
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.27	U	0.22		0.74	09/18/03	09/26/03	3261101	88

JB
10-16-03

NOTE(S)

ts are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

LOT# F3I130138

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-31

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-031
Work Order: FX983
Matrix: SOLID

Date Collected: 09/09/03 1415
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.252		0.048	0.13	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.043	J	0.015	0.014	09/19/03	09/23/03	3262238	39
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.22	U	0.22	0.72	09/18/03	09/26/03	3261101	90

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-32

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-032
Work Order: FX984
Matrix: SOLID

Date Collected: 09/09/03 1418
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**	**901.1 MOD**			
Cesium 137	0.032	U	0.023	0.092	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**	**A-01-R MOD**			
Plutonium 239/40	**0.031**	**J**	**0.012**	**0.012**	**09/19/03**	**09/23/03**	**3262238**	**48**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**	**905 MOD**			
Strontium 90	0.03	U	0.20	0.68	09/18/03	09/26/03	3261101	91

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-33

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-033
Work Order: FX985
Matrix: SOLID

Date Collected: 09/09/03 1423
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.481		0.074		0.14	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.201	J	0.026		0.018	09/19/03	09/24/03	3262239	66
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	-0.05	U	0.22		0.74	09/18/03	09/27/03	3261102	88

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

: is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-34

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-034
Work Order: FX987
Matrix: SOLID

Date Collected: 09/09/03 1430
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.037	U	0.024		0.096	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0124	U J	0.0065		0.015	09/19/03	09/24/03	3262239	81
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.16	U	0.20		0.67	09/18/03	09/27/03	3261102	92

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

C is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-35

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-035
Work Order: FX988
Matrix: SOLID

Date Collected: 09/09/03 1442
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	.	901.1 MOD			
Cesium 137	0.091	U	0.029		0.12	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.242	J	0.026		0.007	09/19/03	09/24/03	3262239	77
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.17	U	0.27		0.91	09/18/03	09/27/03	3261102	71

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.

; is determined by instrument performance only.

old results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-36

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-036
Work Order: FX989
Matrix: SOLID

Date Collected: 09/09/03 1450
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.046	U	0.021		0.090	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.0116**	**J**	**0.0058**		**0.0078**	**09/19/03**	**09/24/03**	**3262239**	**71**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.06	U	0.21		0.71	09/18/03	09/27/03	3261102	91

JB
10-16-03

NOTE(S)

ts are incomplete without the case narrative.
DC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-37

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-037
Work Order: FX99A
Matrix: SOLID

Date Collected: 09/09/03 1500
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.061	U	0.026		0.11	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.063	J	0.014		0.008	09/19/03	09/24/03	3262239	69
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.07	U	0.22		0.74	09/18/03	09/27/03	3261102	86

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-38

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-038
Work Order: FX99C
Matrix: SOLID

Date Collected: 09/09/03 1510
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.043	U	0.024		0.099	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.139	J	0.021		0.016	09/19/03	09/24/03	3262239	70
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.15	U	0.18		0.62	09/18/03	09/27/03	3261102	98

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-39

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-039
Work Order: FX99D
Matrix: SOLID

Date Collected: 09/09/03 1415
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.002	U	0.022		0.080	09/17/03	09/18/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.0092**	**J**	**0.0053**		**0.0083**	**09/19/03**	**09/24/03**	**3262239**	**68**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.16	U	0.18		0.62	09/18/03	09/27/03	3261102	100

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-40

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-040
Work Order: FX99E
Matrix: SOLID

Date Collected: 09/09/03 1520
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	-0.013	U	0.021		0.074	09/17/03	09/19/03	3261175	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.0082**	J	0.0047		0.0074	09/19/03	09/24/03	3262239	75
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.24	U	0.20		0.64	09/18/03	09/27/03	3261102	97

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-41

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-041
Work Order: FX99G
Matrix: SOLID

Date Collected: 09/09/03 1525
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	**0.220**	J	**0.049**		**0.12**	**09/17/03**	**09/19/03**	**3261178**	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.072**	J	**0.015**		**0.008**	**09/19/03**	**09/24/03**	**3262239**	**68**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.04	U	0.19		0.65	09/18/03	09/27/03	3261102	97

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-42

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-042
Work Order: FX99H
Matrix: SOLID

Date Collected: 09/09/03 1535
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.026	U J	0.030	0.12	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	**0.332**	J	**0.039**	**0.028**	**09/19/03**	**09/24/03**	**3262239**	**51**
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	-0.24	U	0.19	0.67	09/18/03	09/27/03	3261102	92

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-43

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-043
Work Order: FX99J
Matrix: SOLID

Date Collected: 09/09/03 1540
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.101	U J	0.030	0.13	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	**0.068**	J	0.014	0.016	09/19/03	09/24/03	3262239	72
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.17	U	0.20	0.67	09/18/03	09/27/03	3261102	87

JB
10-16-03

NOTE(S)

ts are incomplete without the case narrative.
C is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-44

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-044
Work Order: FX99K
Matrix: SOLID

Date Collected: 09/09/03 1555
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**	**901.1 MOD**			
Cesium 137	0.017	U J	0.028	0.10	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**	**A-01-R MOD**			
Plutonium 239/40	**0.039**	**J**	**0.011**	**0.008**	**09/19/03**	**09/24/03**	**3262239**	**65**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**	**905 MOD**			
Strontium 90	0.07	U	0.20	0.67	09/18/03	09/27/03	3261102	87

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J **Result is greater than sample detection limit but less than stated reporting limit.**

U **Result is less than the sample detection limit.**

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-45

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-045
Work Order: FX99L
Matrix: SOLID

Date Collected: 09/09/03 1600
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.160	J	0.038		0.10	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.097	J	0.018		0.008	09/19/03	09/24/03	3262239	68
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.25	U	0.20		0.64	09/18/03	09/27/03	3261102	92

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-46

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-046
Work Order: FX99M
Matrix: SOLID

Date Collected: 09/09/03 1650
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g	901.1 MOD			
Cesium 137	0.738	J	0.091	0.12	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g	A-01-R MOD			
Plutonium 239/40	0.563	J	0.046	0.009	09/19/03	09/24/03	3262239	66
SR-90 BY GFPC EPA-905 MOD				pCi/g	905 MOD			
Strontium 90	0.36	U	0.20	0.65	09/18/03	09/27/03	3261102	91

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-47

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-047
Work Order: FX99N
Matrix: SOLID

Date Collected: 09/09/03 1655
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.817	J	0.093		0.12	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.235	J	0.028		0.008	09/19/03	09/24/03	3262239	68
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.52	U	0.28		0.90	09/18/03	09/28/03	3261102	91

JB
10-16-03

NOTE(S)

ata are incomplete without the case narrative.

C is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-48

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-048
Work Order: FX99P
Matrix: SOLID

Date Collected: 09/09/03 1700
Date Received: 09/12/03 0930

Parameter	Result	Qual		Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD					**pCi/g**		**901.1 MOD**			
Cesium 137	0.190		J	0.047		0.10	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD					**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.022	U	J	0.010		0.022	09/19/03	09/24/03	3262239	51
SR-90 BY GFPC EPA-905 MOD					**pCi/g**		**905 MOD**			
Strontium 90	0.03	U		0.24		0.83	09/18/03	09/28/03	3261102	97

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-49

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-049
Work Order: FX99R
Matrix: SOLID

Date Collected: 09/09/03 1710
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	**0.202**	J	**0.050**		**0.13**	**09/17/03**	**09/19/03**	**3261178**	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.021	U	0.011		0.028	09/19/03	09/24/03	3262240	64
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	-0.16	U	0.21		0.74	09/18/03	09/27/03	3261103	87

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-50

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-050
Work Order: FX99T
Matrix: SOLID

Date Collected: 09/09/03 1720
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.366	J	0.062		0.12	09/17/03	09/19/03	3261178	
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	-0.12	U	0.20		0.71	09/18/03	09/27/03	3261103	88
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.028	J	0.016		0.006	09/25/03	09/28/03	3268539	59

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-51

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-051
Work Order: FX99V
Matrix: SOLID

Date Collected: 09/09/03 1725
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.533	J	0.090		0.14	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.128		0.021		0.009	09/19/03	09/24/03	3262240	65
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.09	U	0.20		0.69	09/18/03	09/27/03	3261103	86

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-52

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-052
Work Order: FX99W
Matrix: SOLID

Date Collected: 09/09/03 1735
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.158	J	0.042		0.14	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0233	J	0.0088		0.0090	09/19/03	09/24/03	3262240	63
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.38	U	0.26		0.85	09/18/03	09/27/03	3261103	72

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-53

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-053
Work Order: FX990
Matrix: SOLID

Date Collected: 09/09/03 1740
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.865	J	0.096		0.12	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.319		0.038		0.023	09/19/03	09/24/03	3262240	51
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.06	U	0.27		0.92	09/18/03	09/27/03	3261103	67

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-54

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-054
Work Order: FX991
Matrix: SOLID

Date Collected: 09/09/03 1745
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.922	J	0.096		0.14	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.250		0.031		0.01	09/19/03	09/24/03	3262240	57
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.30	U	0.24		0.81	09/18/03	09/27/03	3261103	78

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-55

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-055
Work Order: FX992
Matrix: SOLID

Date Collected: 09/09/03 1750
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.528	J	0.079		0.14	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.063		0.015		0.019	09/19/03	09/24/03	3262240	65
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.16	U	0.27		0.89	09/18/03	09/27/03	3261103	68

JB 10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-56

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-056
Work Order: FX994
Matrix: SOLID

Date Collected: 09/09/03 1753
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.184	J	0.042		0.088	09/17/03	09/23/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.066		0.016		0.01	09/19/03	09/24/03	3262240	56
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.19	U	0.22		0.74	09/18/03	09/27/03	3261103	80

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-57

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-057
Work Order: FX995
Matrix: SOLID

Date Collected: 09/09/03 1755
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.741	J	0.078		0.090	09/17/03	09/23/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.199		0.026		0.009	09/19/03	09/24/03	3262240	65
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.41	U	0.23		0.74	09/18/03	09/27/03	3261103	80

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-58

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-058
Work Order: FX997
Matrix: SOLID

Date Collected: 09/09/03 1805
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.040	U J	0.024		0.091	09/17/03	09/23/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.095**		**0.017**		**0.008**	**09/19/03**	**09/24/03**	**3262240**	**64**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	-0.15	U	0.27		0.94	09/18/03	09/27/03	3261103	65

JB
10-16-03

NOTE(S)

ata are incomplete without the case narrative.
DC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-59

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-059
Work Order: FX998
Matrix: SOLID

Date Collected: 09/09/03 1808
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.158	J	0.055		0.12	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.136		0.021		0.017	09/19/03	09/24/03	3262240	68
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.35	U	0.21		0.69	09/18/03	09/27/03	3261103	88

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-60

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-060
Work Order: F0AAA
Matrix: SOLID

Date Collected: 09/09/03 1812
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Unceart. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.250	J	0.050		0.13	09/17/03	09/19/03	3261178	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.080		0.016		0.009	09/19/03	09/24/03	3262240	65
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.03	U	0.21		0.72	09/18/03	09/27/03	3261103	82

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-61

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-061
Work Order: F0AAC
Matrix: SOLID

Date Collected: 09/09/03 1830
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.012	U	0.025		0.096	09/18/03	09/19/03	3261179	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0121	J	0.0061		0.0082	09/19/03	09/24/03	3262240	68
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.18	U	0.19		0.63	09/18/03	09/27/03	3261103	91

JB
10-16-03

NOTE(S)

Hits are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

J **Result is greater than sample detection limit but less than stated reporting limit.**

U **Result is less than the sample detection limit.**

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-62

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-062
Work Order: F0AAD
Matrix: SOLID

Date Collected: 09/09/03 1856
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	**1.15**		**0.12**		**0.14**	**09/18/03**	**09/19/03**	**3261179**	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	**0.180**		**0.030**		**0.013**	**09/19/03**	**09/24/03**	**3262240**	**42**
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.54	U	0.20		0.61	09/18/03	09/27/03	3261103	92

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-63

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-063
Work Order: F0AAE
Matrix: SOLID

Date Collected: 09/09/03 1835
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/g**		**901.1 MOD**			
Cesium 137	0.036	U	0.037		0.14	09/18/03	09/19/03	3261179	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/g**		**A-01-R MOD**			
Plutonium 239/40	0.0035	U	0.0060		0.023	09/19/03	09/24/03	3262240	60
SR-90 BY GFPC EPA-905 MOD				**pCi/g**		**905 MOD**			
Strontium 90	0.32	U	0.25		0.82	09/18/03	09/27/03	3261103	72

JB
10-16-03

NOTE(S)

ts are incomplete without the case narrative.
C is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-64

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-064
Work Order: F0AAF
Matrix: SOLID

Date Collected: 09/09/03 1840
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/g		901.1 MOD			
Cesium 137	0.47		0.13		0.09	09/18/03	09/19/03	3261179	
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				pCi/g		A-01-R MOD			
Plutonium 239/40	0.089		0.018		0.019	09/19/03	09/24/03	3262240	59
SR-90 BY GFPC EPA-905 MOD				pCi/g		905 MOD			
Strontium 90	0.14	U	0.18		0.62	09/18/03	09/27/03	3261103	92

JB
10-16-03

NOTE(S)

ts are incomplete without the case narrative.
C is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-65

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-065
Work Order: F0AAG
Matrix: WATER

Date Collected: 09/09/03 1850
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**		**901.1 MOD**			
Cesium 137	10.0	U J	4.2		18	09/18/03	09/19/03	3261231	
SR-90 BY GFPC EPA-905 MOD				**pCi/L**		**905 MOD**			
Strontium 90	-0.11	U	0.21		0.74	09/15/03	09/24/03	3258365	88
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/L**		**A-01-R MOD**			
Plutonium 239/40	0.0	U	0.0		0.02	09/19/03	09/23/03	3262257	78

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.
MDC is determined by instrument performance only.
Bold results are greater than the MDC
U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-66

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-066
Work Order: F0AAH
Matrix: WATER

Date Collected: 09/09/03 1630
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**		**901.1 MOD**			
Cesium 137	2.4	U J	3.7		15	09/18/03	09/19/03	3261231	
SR-90 BY GFPC EPA-905 MOD				**pCi/L**		**905 MOD**			
Strontium 90	0.28	U	0.18		0.60	09/15/03	09/24/03	3258365	93
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/L**		**A-01-R MOD**			
Plutonium 239/40	0.0031	U	0.0031		0.0084	09/19/03	09/23/03	3262257	77

JB
10-16-03

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-67

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3I130138-067
Work Order: F0AAJ
Matrix: WATER

Date Collected: 09/09/03 1015
Date Received: 09/12/03 0930

Parameter	Result	Qual	Total Uncert. (1 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**			
Cesium 137	2.2	U J	4.1	16	09/18/03	09/19/03	3261231	
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	0.45	U	0.21	0.66	09/15/03	09/24/03	3258365	92
Iso PLUTONIUM (LONG CT) DOE A-01-R MOD				**pCi/L**	**A-01-R MOD**			
Plutonium 239/40	0.0035	U	0.0035	0.0093	09/19/03	09/23/03	3262257	76

JB
10-16-03

NOTE(S)

\ts are incomplete without the case narrative.

DC is determined by instrument performance only.

Bold results are greater than the MDC

J **Result is greater than sample detection limit but less than stated reporting limit.**

U **Result is less than the sample detection limit.**

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10-17-03 Lab Code: TAL Metals

Contract Laboratory Name: STL – St. Louis

Validator: Brienne Funston Organization: Portage Environmental, Inc.

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☐ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☒ Inorganics
- ☐ Radiochemistry

Other (describe): LANL Airport Waste Removal Project; Post Removal Sampling Data; TAL metals

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☐	☐	☒	8. Quantitation reports
☐	☐	☒	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☐	☐	☒	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

(Attach additional comment sheets as necessary.)

Validator's signature: [signature] Date: 10/17/2003

SOP-15.05, R1

Los Alamos National Laboratory
RRES-Remediation Program

Inorganic Data-Validation Checklist

Yes	No	n/a	(check one)	Assign qualifier listed below if criteria = Yes: Detected analyte	Undetected analyte
☐	☒	☐	1. The preparation Blank (PB), ICB, or CCB was not analyzed with the samples.	Present	
☒	☐	☐	2. The analyte detected in PB and the sample result for the analyte =5x the amount in PB.	Al in CCB (waters)	
☐	☒	☐	3. The initial or continuing calibration verification (ICV or CCV) was not analyzed with the samples.	Present	
☐	☒	☐	4. The ICV or CCV recovery is >UAL.	Acceptable	
☐	☒	☐	5. The ICV or CCV recovery is >UWL and =UAL.	Acceptable	
☐	☒	☐	6. The ICV or CCV recovery is <LWL but ≐LAL.	Acceptable	
☐	☒	☐	7. The ICV or CCV recovery is <LAL.	Acceptable	
☐	☒	☐	8. For ICPMS and CN analyses: The correlation coefficient is <0.995?	Acceptable	
☐	☒	☐	9. The interference check sample (ICS) was not analyzed with the samples.	Present	
☐	☒	☐	10. The ICS recovery is >120%.	Acceptable	
☐	☒	☐	11. The ICS recovery is =50% and <80%.	Acceptable	
☐	☒	☐	12. The ICS recovery is <50%.	Acceptable	
☐	☒	☐	13. The MS was not analyzed with the sample without explanation.	Present	
☐	☒	☐	14. Insufficient sample volume for MS analyses was provided.	Sufficient Sample Provided	
☐	☒	☐	15. An MS analyses was performed on a non-LANL sample.	Performed on LANL Samples	
☐	☒	☐	16. The MS recovery was > 150%.*	None > 150%	
☐	☒	☐	17. The MS recovery was >125% and =150%.	None > 125%	
☒	☐	☐	18. The MS recovery was =30% and <75%.	Several metals were < 75% and > 30%. All associated results qualified 'J-' or 'UJ'	
☐	☒	☐	19. The MS recovery was <30%.	None < 30%	
☐	☒	☐	20. A duplicate sample was not analyzed without explanation.	Present	
☐	☒	☐	21. Insufficient sample volume for duplicate sample analysis was provided.	Sufficient Sample Provided	
☐	☒	☐	22. A duplicate sample was performed on a non-LANL sample.	Performed on LANL Samples	
☒	☐	☐	23. Both the sample and the duplicate are =5x RL, and the RPD is >20 for water samples or >35 for soil samples.	Several duplicates showed RPD > 35% for soils. Affected results are qualified 'J' or 'UJ'	
☐	☒	☐	24. Either the sample or Dup is =5x the RL and the sample and Dup results are not within ±1x the RL for water or ±2x the RL for soil.	Acceptable	
☐	☒	☐	25. The LCS was not analyzed with the samples.	Present	
☐	☒	☐	26. The LCS recovery was >the UWL.	None > UWL	
☒	☐	☐	27. The LCS recovery was =LAL and <LWL.	Several metals were < LWL and > LAL. All associated results are qualified 'J-' or 'UJ'	
☐	☒	☐	28. The LCS recovery was <the LAL.	None were < LAL	
☐	☒	☐	29. The serial dilution sample was not analyzed with the samples.	Present	
☐	☒	☐	30. The serial dilution sample was performed on a non-LANL sample.	Performed on LANL Samples	
☒	☐	☐	31. The RPD between the sample and the serial dilution sample is >10, and the undiluted sample result is >50x the RL(>100x for ICPMS).	Several metals had RPD > 10%; Associated samples are qualified 'J' or 'UJ'	
☐	☒	☐	32. The sample was analyzed past the appropriate hold time.	Acceptable	
☐	☒	☐	33. The sample was analyzed past double the hold time.	Acceptable	
☐	☒	☐	34. B-flagged sample results are present.	Present	
☐	☒	☐	35. Other obvious data quality issues are identified.	All are listed above. See Overall Assessment of Data for details	

Overall Assessment of Data

A total of 64 soils and 3 liquid field blanks were analyzed from the Los Alamos Airport, Waste Removal Project Post Removal Sampling effort. The results of data validation for this data set are outlined below.

LANL-WR-SS-1 through LANL-WR-SS-20 [Soils]
The laboratory control sample (LCS) was below the lower warning limit of 75% for aluminum (79.7%). All aluminum results for this batch have been qualified 'J-' or 'UJ' to denote that reported results are likely biased slightly low. The matrix spike (MS) was below the lower acceptance limit of 75% for antimony (63.9%) and zinc (74.6%). All of the antimony and zinc results from this batch have also been qualified 'J-' or 'UJ' to denote that the reported results are likely biased low. All of the remaining metals are acceptable for use without limitation for this group of samples.

LANL-WR-SS-21 through LANL-WR-SS-40 [Soils]
The laboratory control sample (LCS) was below the lower warning limit of 75% for aluminum (76.8%). All aluminum results for this batch have been qualified 'J-' or 'UJ' to denote that reported results are likely biased slightly low. The matrix spike (MS) was below the lower acceptance limit of 75% for antimony (66.3%). All of the antimony results from this batch have also been qualified 'J-' or 'UJ' to denote that the reported results are likely biased low. All of the remaining metals are acceptable for use without limitation for this group of samples.

LANL-WR-SS-41 through LANL-WR-SS-60 [Soils]
The laboratory control sample (LCS) was below the lower warning limit of 75% for aluminum (72.8%). All aluminum results for this batch have been qualified 'J-' or 'UJ' to denote that reported results are likely biased slightly low. The serial dilution sample (SDS) was outside of the +/- 10% agreement limit for magnesium (20.3%). The associated sample result was greater than 50 times the instrument detection limit. As a result, all magnesium results have been qualified 'J' or 'UJ' to denote that reported results are estimates due to SDS imprecision. All of the remaining metals are acceptable for use without limitation for this group of samples.

LANL-WR-SS-61 through LANL-WR-SS-64 [Field Duplicates - Soils]
The laboratory control sample (LCS) was below the lower warning limit of 75% for aluminum (79.7%). All aluminum results for this batch have been qualified 'J-' or 'UJ' to denote that reported results are likely biased slightly low. The matrix spike was below the lower acceptance limit of 75% for antimony (72.7%), lead (68.2%), and zinc (73.9%). All of the reported results for these metals have been qualified 'J-' or 'UJ' to denote that the reported results are likely biased low. The laboratory duplicate sample fell outside of the +/- 35% agreement requirment for lead (50.3%), chromium (61.7%), and nickel (84.0%). Results for all of these metals have been qualified 'J' or 'UJ' due to duplicate imprecision, with the exception of lead, which has already been qualified in this way due to poor matrix spike performance. The poor duplicate performance adds further merit to this qualificaton. Finally, the SDS failed to meet the +/- 10% agreement requirement for magnesium (14.1%). All magnesium results in this batch have been qualified 'J' or 'UJ' to reflect the SDS imprecision. All of the remaining metals are acceptable for use without limitation for this group of samples.

LANL-WR-SS-65 through LANL-WR-SS-67 [Liquid Field Blanks]
Aluminum was detected in the continuing calibration blank (CCB) at 39.5 ug/L, which was greater than twice the instrument detection limit for aluminum. Sample results that are less than 5 times the blank value, or 197.5 ug/L are considered non-detects. In this case, sample LANL-WR-SS-65 fell below this level and has, therefore, been assigned a 'U' flag to denote the reported results are non-detects due to positive blank detections. All of the remaining metals are acceptable for use without limitation for this group of samples.

Attachment A

Form I's Corrected for Qualification

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX925 **Client ID:** LANL-WR-SS-1

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/16/2003	19:05
Arsenic	**75**	**0.20**	**0.53**	**0.75**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Barium	**135**	**0.028**	**2.1**	**25.0**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Beryllium	**9**	**0.013**	**0.11**	**0.26**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Cadmium	**111**	**0.017**	**0.11**	**0.11**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Chromium	**52**	**0.31**	**1.1**	**2.8**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Cobalt	**59**	**0.031**	**1.1**	**1.7**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Copper	**65**	**0.53**	**1.1**	**2.8**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Lead	**208**	**0.075**	**0.32**	**10.9**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Magnesium	**24**	**3.5**	**53.4**	**441**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Nickel	**60**	**0.20**	**1.1**	**2.0**		**5**	**ICPMS**	**9/16/2003**	**19:05**
Selenium	82	0.14	0.53	0.14	U	5	ICPMS	9/16/2003	19:05
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/16/2003	19:05
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	19:05
Zinc	**66**	**0.69**	**2.1**	**41.2**		**5**	**ICPMS**	**9/16/2003**	**19:05**

Comments: Lot #: F3I130129 Sample #: 1

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93G **Client ID:** LANL-WR-SS-2

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.22	BN	5	ICPMS	9/16/2003	19:52
Arsenic	75	0.20	0.53	0.65		5	ICPMS	9/16/2003	19:52
Barium	135	0.028	2.1	21.4		5	ICPMS	9/16/2003	19:52
Beryllium	9	0.013	0.11	0.25		5	ICPMS	9/16/2003	19:52
Cadmium	111	0.017	0.11	0.086	B	5	ICPMS	9/16/2003	19:52
Chromium	52	0.31	1.1	1.9		5	ICPMS	9/16/2003	19:52
Cobalt	59	0.031	1.1	1.1		5	ICPMS	9/16/2003	19:52
Copper	65	0.53	1.1	2.4		5	ICPMS	9/16/2003	19:52
Lead	208	0.075	0.32	9.1		5	ICPMS	9/16/2003	19:52
Magnesium	24	3.5	53.3	327		5	ICPMS	9/16/2003	19:52
Nickel	60	0.20	1.1	1.5		5	ICPMS	9/16/2003	19:52
Selenium	82	0.14	0.53	0.14	B	5	ICPMS	9/16/2003	19:52
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/16/2003	19:52
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	19:52
Zinc	66	0.69	2.1	25.3	N	5	ICPMS	9/16/2003	19:52

Comments: Lot #: F3I130129 Sample #: 2

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93H **Client ID:** LANL-WR-SS-3

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.39

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UNJ	5	ICPMS	9/16/2003	19:58
Arsenic	75	0.20	0.55	1.2		5	ICPMS	9/16/2003	19:58
Barium	135	0.029	2.2	44.6		5	ICPMS	9/16/2003	19:58
Beryllium	9	0.013	0.11	0.44		5	ICPMS	9/16/2003	19:58
Cadmium	111	0.017	0.11	0.084	B	5	ICPMS	9/16/2003	19:58
Chromium	52	0.32	1.1	3.4		5	ICPMS	9/16/2003	19:58
Cobalt	59	0.032	1.1	2.0		5	ICPMS	9/16/2003	19:58
Copper	65	0.55	1.1	3.5		5	ICPMS	9/16/2003	19:58
Lead	208	0.077	0.33	10.4		5	ICPMS	9/16/2003	19:58
Magnesium	24	3.6	55.2	600		5	ICPMS	9/16/2003	19:58
Nickel	60	0.21	1.1	2.8		5	ICPMS	9/16/2003	19:58
Selenium	82	0.14	0.55	0.14	U	5	ICPMS	9/16/2003	19:58
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	19:58
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	19:58
Zinc	66	0.72	2.2	30.0	NJ	5	ICPMS	9/16/2003	19:58

Comments: Lot #: F3I130129 Sample #: 3

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93J **Client ID:** LANL-WR-SS-4

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.16	BN	5	ICPMS	9/16/2003	20:04
Arsenic	75	0.20	0.55	1.2		5	ICPMS	9/16/2003	20:04
Barium	135	0.029	2.2	30.2		5	ICPMS	9/16/2003	20:04
Beryllium	9	0.013	0.11	0.35		5	ICPMS	9/16/2003	20:04
Cadmium	111	0.017	0.11	0.11		5	ICPMS	9/16/2003	20:04
Chromium	52	0.32	1.1	3.5		5	ICPMS	9/16/2003	20:04
Cobalt	59	0.032	1.1	1.8		5	ICPMS	9/16/2003	20:04
Copper	65	0.55	1.1	3.6		5	ICPMS	9/16/2003	20:04
Lead	208	0.077	0.33	12.6		5	ICPMS	9/16/2003	20:04
Magnesium	24	3.6	55.1	587		5	ICPMS	9/16/2003	20:04
Nickel	60	0.21	1.1	2.4		5	ICPMS	9/16/2003	20:04
Selenium	82	0.14	0.55	0.14	U	5	ICPMS	9/16/2003	20:04
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:04
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	20:04
Zinc	66	0.72	2.2	37.0	N	5	ICPMS	9/16/2003	20:04

Comments: Lot #: F3I130129 Sample #: 4

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93P **Client ID:** LANL-WR-SS-5

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.58

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.24	BN	5	ICPMS	9/16/2003	20:11
Arsenic	75	0.21	0.56	1.0		5	ICPMS	9/16/2003	20:11
Barium	135	0.029	2.2	32.3		5	ICPMS	9/16/2003	20:11
Beryllium	9	0.013	0.11	0.38		5	ICPMS	9/16/2003	20:11
Cadmium	111	0.017	0.11	0.17		5	ICPMS	9/16/2003	20:11
Chromium	52	0.32	1.1	3.1		5	ICPMS	9/16/2003	20:11
Cobalt	59	0.032	1.1	1.6		5	ICPMS	9/16/2003	20:11
Copper	65	0.56	1.1	4.2		5	ICPMS	9/16/2003	20:11
Lead	208	0.078	0.34	15.4		5	ICPMS	9/16/2003	20:11
Magnesium	24	3.6	55.9	578		5	ICPMS	9/16/2003	20:11
Nickel	60	0.21	1.1	2.4		5	ICPMS	9/16/2003	20:11
Selenium	82	0.15	0.56	0.15	U	5	ICPMS	9/16/2003	20:11
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:11
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/16/2003	20:11
Zinc	66	0.73	2.2	45.1	N	5	ICPMS	9/16/2003	20:11

Comments: Lot #: F3I130129 Sample #: 5

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93T **Client ID:** LANL-WR-SS-6

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.24	BN	5	ICPMS	9/16/2003	20:17
Arsenic	75	0.21	0.56	2.1		5	ICPMS	9/16/2003	20:17
Barium	135	0.029	2.2	48.7		5	ICPMS	9/16/2003	20:17
Beryllium	9	0.013	0.11	0.42		5	ICPMS	9/16/2003	20:17
Cadmium	111	0.017	0.11	0.28		5	ICPMS	9/16/2003	20:17
Chromium	52	0.32	1.1	4.5		5	ICPMS	9/16/2003	20:17
Cobalt	59	0.032	1.1	2.4		5	ICPMS	9/16/2003	20:17
Copper	65	0.56	1.1	6.9		5	ICPMS	9/16/2003	20:17
Lead	208	0.078	0.34	28.3		5	ICPMS	9/16/2003	20:17
Magnesium	24	3.6	55.9	786		5	ICPMS	9/16/2003	20:17
Nickel	60	0.21	1.1	3.2		5	ICPMS	9/16/2003	20:17
Selenium	82	0.15	0.56	0.15	U	5	ICPMS	9/16/2003	20:17
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:17
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/16/2003	20:17
Zinc	66	0.73	2.2	55.9	N	5	ICPMS	9/16/2003	20:17

Comments: Lot #: F3I130129 Sample #: 6

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93V **Client ID:** LANL-WR-SS-7

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 15.96

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.35	BN	5	ICPMS	9/16/2003	20:23
Arsenic	75	0.22	0.60	0.67		5	ICPMS	9/16/2003	20:23
Barium	135	0.031	2.4	37.0		5	ICPMS	9/16/2003	20:23
Beryllium	9	0.014	0.12	0.42		5	ICPMS	9/16/2003	20:23
Cadmium	111	0.018	0.12	0.30		5	ICPMS	9/16/2003	20:23
Chromium	52	0.35	1.2	3.2		5	ICPMS	9/16/2003	20:23
Cobalt	59	0.035	1.2	1.6		5	ICPMS	9/16/2003	20:23
Copper	65	0.60	1.2	4.9		5	ICPMS	9/16/2003	20:23
Lead	208	0.083	0.36	17.7		5	ICPMS	9/16/2003	20:23
Magnesium	24	3.9	59.5	497		5	ICPMS	9/16/2003	20:23
Nickel	60	0.23	1.2	2.5		5	ICPMS	9/16/2003	20:23
Selenium	82	0.16	0.60	0.37	B	5	ICPMS	9/16/2003	20:23
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/16/2003	20:23
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/16/2003	20:23
Zinc	66	0.77	2.4	57.3	N	5	ICPMS	9/16/2003	20:23

Comments: Lot #: F3I130129 Sample #: 7

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93X **Client ID:** LANL-WR-SS-8

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.18

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	1.2	NJ	5	ICPMS	9/16/2003	20:29
Arsenic	75	0.20	0.55	1.2		5	ICPMS	9/16/2003	20:29
Barium	135	0.029	2.2	40.9		5	ICPMS	9/16/2003	20:29
Beryllium	9	0.013	0.11	0.49		5	ICPMS	9/16/2003	20:29
Cadmium	111	0.017	0.11	0.53		5	ICPMS	9/16/2003	20:29
Chromium	52	0.32	1.1	3.6		5	ICPMS	9/16/2003	20:29
Cobalt	59	0.032	1.1	1.9		5	ICPMS	9/16/2003	20:29
Copper	65	0.55	1.1	8.3		5	ICPMS	9/16/2003	20:29
Lead	208	0.077	0.33	48.0		5	ICPMS	9/16/2003	20:29
Magnesium	24	3.6	55.1	586		5	ICPMS	9/16/2003	20:29
Nickel	60	0.21	1.1	4.6		5	ICPMS	9/16/2003	20:29
Selenium	82	0.14	0.55	0.14	U	5	ICPMS	9/16/2003	20:29
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:29
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	20:29
Zinc	66	0.72	2.2	82.3	NJ	5	ICPMS	9/16/2003	20:29

Comments: Lot #: F3I130129 Sample #: 8

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX930 **Client ID:** LANL-WR-SS-9

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 19.3

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.20	BN	5	ICPMS	9/16/2003	20:35
Arsenic	75	0.23	0.62	0.96		5	ICPMS	9/16/2003	20:35
Barium	135	0.032	2.5	43.2		5	ICPMS	9/16/2003	20:35
Beryllium	9	0.015	0.12	0.88		5	ICPMS	9/16/2003	20:35
Cadmium	111	0.019	0.12	0.14		5	ICPMS	9/16/2003	20:35
Chromium	52	0.36	1.2	1.8		5	ICPMS	9/16/2003	20:35
Cobalt	59	0.036	1.2	0.64	B	5	ICPMS	9/16/2003	20:35
Copper	65	0.62	1.2	7.9		5	ICPMS	9/16/2003	20:35
Lead	208	0.087	0.37	14.0		5	ICPMS	9/16/2003	20:35
Magnesium	24	4.0	62.0	328		5	ICPMS	9/16/2003	20:35
Nickel	60	0.24	1.2	1.8		5	ICPMS	9/16/2003	20:35
Selenium	82	0.16	0.62	0.47	B	5	ICPMS	9/16/2003	20:35
Silver	107	0.016	1.2	0.016	U	5	ICPMS	9/16/2003	20:35
Thallium	205	0.29	1.2	0.29	U	5	ICPMS	9/16/2003	20:35
Zinc	66	0.81	2.5	43.1	N	5	ICPMS	9/16/2003	20:35

Comments: Lot #: F3I130129 Sample #: 9

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX931 **Client ID:** LANL-WR-SS-10

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.62

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	3.4	N	5	ICPMS	9/16/2003	20:42
Arsenic	75	0.21	0.56	1.0		5	ICPMS	9/16/2003	20:42
Barium	135	0.029	2.2	29.9		5	ICPMS	9/16/2003	20:42
Beryllium	9	0.013	0.11	0.46		5	ICPMS	9/16/2003	20:42
Cadmium	111	0.017	0.11	0.53		5	ICPMS	9/16/2003	20:42
Chromium	52	0.32	1.1	3.5		5	ICPMS	9/16/2003	20:42
Cobalt	59	0.032	1.1	1.7		5	ICPMS	9/16/2003	20:42
Copper	65	0.56	1.1	5.7		5	ICPMS	9/16/2003	20:42
Lead	208	0.078	0.34	27.0		5	ICPMS	9/16/2003	20:42
Magnesium	24	3.6	55.9	470		5	ICPMS	9/16/2003	20:42
Nickel	60	0.21	1.1	3.0		5	ICPMS	9/16/2003	20:42
Selenium	82	0.15	0.56	0.48	B	5	ICPMS	9/16/2003	20:42
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:42
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/16/2003	20:42
Zinc	66	0.73	2.2	130	N	5	ICPMS	9/16/2003	20:42

Comments: Lot #: F3I130129 Sample #: 10

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX932 **Client ID:** LANL-WR-SS-11

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.72	BN	5	ICPMS	9/16/2003	20:48
Arsenic	75	0.20	0.55	0.86		5	ICPMS	9/16/2003	20:48
Barium	135	0.029	2.2	27.3		5	ICPMS	9/16/2003	20:48
Beryllium	9	0.013	0.11	0.54		5	ICPMS	9/16/2003	20:48
Cadmium	111	0.017	0.11	0.20		5	ICPMS	9/16/2003	20:48
Chromium	52	0.32	1.1	2.8		5	ICPMS	9/16/2003	20:48
Cobalt	59	0.032	1.1	1.2		5	ICPMS	9/16/2003	20:48
Copper	65	0.55	1.1	4.1		5	ICPMS	9/16/2003	20:48
Lead	208	0.077	0.33	17.2		5	ICPMS	9/16/2003	20:48
Magnesium	24	3.6	55.1	394		5	ICPMS	9/16/2003	20:48
Nickel	60	0.21	1.1	2.1		5	ICPMS	9/16/2003	20:48
Selenium	82	0.14	0.55	0.22	B	5	ICPMS	9/16/2003	20:48
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	20:48
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	20:48
Zinc	66	0.72	2.2	62.7	N	5	ICPMS	9/16/2003	20:48

Comments: Lot #: F3I130129 Sample #: 11

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX933 **Client ID:** LANL-WR-SS-12

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.4

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.19	BN	5	ICPMS	9/16/2003	21:10
Arsenic	75	0.21	0.57	0.27	B	5	ICPMS	9/16/2003	21:10
Barium	135	0.030	2.3	11.1		5	ICPMS	9/16/2003	21:10
Beryllium	9	0.014	0.11	0.46		5	ICPMS	9/17/2003	19:22
Cadmium	111	0.018	0.11	0.052	B	5	ICPMS	9/16/2003	21:10
Chromium	52	0.33	1.1	1.3		5	ICPMS	9/17/2003	19:22
Cobalt	59	0.033	1.1	0.49	B	5	ICPMS	9/16/2003	21:10
Copper	65	0.57	1.1	2.1		5	ICPMS	9/16/2003	21:10
Lead	208	0.080	0.34	10.6		5	ICPMS	9/16/2003	21:10
Magnesium	24	3.7	57.1	263		5	ICPMS	9/16/2003	21:10
Nickel	60	0.22	1.1	1.1	B	5	ICPMS	9/16/2003	21:10
Selenium	82	0.15	0.57	0.31	B	5	ICPMS	9/16/2003	21:10
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	21:10
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/16/2003	21:10
Zinc	66	0.74	2.3	57.4	N	5	ICPMS	9/16/2003	21:10

Comments: Lot #: F3I130129 Sample #: 12

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94A **Client ID:** LANL-WR-SS-13

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 16.06

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.27	BN	5	ICPMS	9/16/2003	21:16
Arsenic	75	0.22	0.60	0.38	B	5	ICPMS	9/16/2003	21:16
Barium	135	0.031	2.4	10.4		5	ICPMS	9/16/2003	21:16
Beryllium	9	0.014	0.12	0.46		5	ICPMS	9/17/2003	19:27
Cadmium	111	0.019	0.12	0.067	B	5	ICPMS	9/16/2003	21:16
Chromium	52	0.35	1.2	0.94	B	5	ICPMS	9/17/2003	19:27
Cobalt	59	0.035	1.2	0.38	B	5	ICPMS	9/16/2003	21:16
Copper	65	0.60	1.2	2.5		5	ICPMS	9/16/2003	21:16
Lead	208	0.083	0.36	12.6		5	ICPMS	9/16/2003	21:16
Magnesium	24	3.9	59.6	206		5	ICPMS	9/16/2003	21:16
Nickel	60	0.23	1.2	1.1	B	5	ICPMS	9/16/2003	21:16
Selenium	82	0.16	0.60	0.16	U	5	ICPMS	9/16/2003	21:16
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/16/2003	21:16
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/16/2003	21:16
Zinc	66	0.77	2.4	65.0	N	5	ICPMS	9/16/2003	21:16

Comments: Lot #: F3I130129 Sample #: 13

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94C **Client ID:** LANL-WR-SS-14

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.16

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	2.3	N	5	ICPMS	9/16/2003	21:22
Arsenic	75	0.21	0.57	1.4		5	ICPMS	9/16/2003	21:22
Barium	135	0.030	2.3	55.6		5	ICPMS	9/16/2003	21:22
Beryllium	9	0.014	0.11	0.44		5	ICPMS	9/17/2003	19:33
Cadmium	111	0.018	0.11	0.61		5	ICPMS	9/16/2003	21:22
Chromium	52	0.33	1.1	4.3		5	ICPMS	9/17/2003	19:33
Cobalt	59	0.033	1.1	2.5		5	ICPMS	9/16/2003	21:22
Copper	65	0.57	1.1	8.0		5	ICPMS	9/16/2003	21:22
Lead	208	0.080	0.34	33.9		5	ICPMS	9/16/2003	21:22
Magnesium	24	3.7	56.9	830		5	ICPMS	9/16/2003	21:22
Nickel	60	0.22	1.1	4.2		5	ICPMS	9/16/2003	21:22
Selenium	82	0.15	0.57	0.23	B	5	ICPMS	9/16/2003	21:22
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	21:22
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/16/2003	21:22
Zinc	66	0.74	2.3	111	N	5	ICPMS	9/16/2003	21:22

Comments: Lot #: F3I130129 Sample #: 14

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94E **Client ID:** LANL-WR-SS-15

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.44

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	26.8	N	5	ICPMS	9/16/2003	21:28
Arsenic	75	0.21	0.58	4.0		5	ICPMS	9/16/2003	21:28
Barium	135	0.030	2.3	127		5	ICPMS	9/16/2003	21:28
Beryllium	9	0.014	0.12	0.63		5	ICPMS	9/17/2003	19:39
Cadmium	111	0.018	0.12	49.3		5	ICPMS	9/16/2003	21:28
Chromium	52	0.34	1.2	7.4		5	ICPMS	9/17/2003	19:39
Cobalt	59	0.034	1.2	5.7		5	ICPMS	9/16/2003	21:28
Copper	65	0.58	1.2	35.6		5	ICPMS	9/16/2003	21:28
Lead	208	0.081	0.35	114		5	ICPMS	9/16/2003	21:28
Magnesium	24	3.8	57.8	1280		5	ICPMS	9/16/2003	21:28
Nickel	60	0.22	1.2	14.7		5	ICPMS	9/16/2003	21:28
Selenium	82	0.15	0.58	0.27	B	5	ICPMS	9/16/2003	21:28
Silver	107	0.014	1.2	0.024	B	5	ICPMS	9/16/2003	21:28
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/16/2003	21:28
Zinc	66	0.75	2.3	2030	N	5	ICPMS	9/16/2003	21:28

Comments: Lot #: F3I130129 Sample #: 15

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94F **Client ID:** LANL-WR-SS-16

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/16/2003	21:35
Arsenic	75	0.20	0.55	1.2		5	ICPMS	9/16/2003	21:35
Barium	135	0.029	2.2	50.5		5	ICPMS	9/16/2003	21:35
Beryllium	9	0.013	0.11	0.47		5	ICPMS	9/17/2003	19:44
Cadmium	111	0.017	0.11	0.075	B	5	ICPMS	9/16/2003	21:35
Chromium	52	0.32	1.1	2.9		5	ICPMS	9/17/2003	19:44
Cobalt	59	0.032	1.1	2.0		5	ICPMS	9/16/2003	21:35
Copper	65	0.55	1.1	3.8		5	ICPMS	9/16/2003	21:35
Lead	208	0.077	0.33	16.3		5	ICPMS	9/16/2003	21:35
Magnesium	24	3.6	54.9	644		5	ICPMS	9/16/2003	21:35
Nickel	60	0.21	1.1	3.1		5	ICPMS	9/16/2003	21:35
Selenium	82	0.14	0.55	0.19	B	5	ICPMS	9/16/2003	21:35
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/16/2003	21:35
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	21:35
Zinc	66	0.71	2.2	31.0	N	5	ICPMS	9/16/2003	21:35

Comments: Lot #: F3I130129 Sample #: 16

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94G **Client ID:** LANL-WR-SS-17

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.83

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	UNJ	5	ICPMS	9/16/2003	21:41
Arsenic	75	0.22	0.58	0.22	U	5	ICPMS	9/16/2003	21:41
Barium	**135**	**0.030**	**2.3**	**22.2**		**5**	**ICPMS**	**9/16/2003**	**21:41**
Beryllium	**9**	**0.014**	**0.12**	**0.38**		**5**	**ICPMS**	**9/17/2003**	**19:50**
Cadmium	**111**	**0.018**	**0.12**	**0.040**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:41**
Chromium	**52**	**0.34**	**1.2**	**1.6**		**5**	**ICPMS**	**9/17/2003**	**19:50**
Cobalt	**59**	**0.034**	**1.2**	**0.94**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:41**
Copper	**65**	**0.58**	**1.2**	**2.0**		**5**	**ICPMS**	**9/16/2003**	**21:41**
Lead	**208**	**0.081**	**0.35**	**15.0**		**5**	**ICPMS**	**9/16/2003**	**21:41**
Magnesium	**24**	**3.8**	**58.0**	**335**		**5**	**ICPMS**	**9/16/2003**	**21:41**
Nickel	**60**	**0.22**	**1.2**	**1.8**		**5**	**ICPMS**	**9/16/2003**	**21:41**
Selenium	82	0.15	0.58	0.15	U	5	ICPMS	9/16/2003	21:41
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/16/2003	21:41
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/16/2003	21:41
Zinc	**66**	**0.75**	**2.3**	**25.2**	**NJ**	**5**	**ICPMS**	**9/16/2003**	**21:41**

Comments: Lot #: F3I130129 Sample #: 17

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94H **Client ID:** LANL-WR-SS-18

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 4.17

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.0	0.15	UN	5	ICPMS	9/16/2003	21:47
Arsenic	**75**	**0.19**	**0.52**	**0.22**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:47**
Barium	**135**	**0.027**	**2.1**	**23.0**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Beryllium	**9**	**0.013**	**0.10**	**0.38**		**5**	**ICPMS**	**9/17/2003**	**19:56**
Cadmium	**111**	**0.016**	**0.10**	**0.055**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:47**
Chromium	**52**	**0.30**	**1.0**	**1.9**		**5**	**ICPMS**	**9/17/2003**	**19:56**
Cobalt	**59**	**0.030**	**1.0**	**1.2**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Copper	**65**	**0.52**	**1.0**	**2.1**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Lead	**208**	**0.073**	**0.31**	**9.4**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Magnesium	**24**	**3.4**	**52.2**	**343**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Nickel	**60**	**0.20**	**1.0**	**1.9**		**5**	**ICPMS**	**9/16/2003**	**21:47**
Selenium	82	0.14	0.52	0.14	U	5	ICPMS	9/16/2003	21:47
Silver	107	0.013	1.0	0.013	U	5	ICPMS	9/16/2003	21:47
Thallium	205	0.24	1.0	0.24	U	5	ICPMS	9/16/2003	21:47
Zinc	**66**	**0.68**	**2.1**	**30.4**	**N**	**5**	**ICPMS**	**9/16/2003**	**21:47**

Comments: Lot #: F3I130129 Sample #: 18

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94K **Client ID:** LANL-WR-SS-19

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/16/2003	21:53
Arsenic	75	0.20	0.54	0.20	U	5	ICPMS	9/16/2003	21:53
Barium	**135**	**0.028**	**2.2**	**20.6**		**5**	**ICPMS**	**9/16/2003**	**21:53**
Beryllium	**9**	**0.013**	**0.11**	**0.44**		**5**	**ICPMS**	**9/17/2003**	**20:16**
Cadmium	**111**	**0.017**	**0.11**	**0.039**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:53**
Chromium	**52**	**0.31**	**1.1**	**1.2**		**5**	**ICPMS**	**9/17/2003**	**20:16**
Cobalt	**59**	**0.031**	**1.1**	**0.78**	**B**	**5**	**ICPMS**	**9/16/2003**	**21:53**
Copper	**65**	**0.54**	**1.1**	**1.7**		**5**	**ICPMS**	**9/16/2003**	**21:53**
Lead	**208**	**0.075**	**0.32**	**36.0**		**5**	**ICPMS**	**9/16/2003**	**21:53**
Magnesium	**24**	**3.5**	**53.7**	**334**		**5**	**ICPMS**	**9/16/2003**	**21:53**
Nickel	**60**	**0.20**	**1.1**	**1.4**		**5**	**ICPMS**	**9/16/2003**	**21:53**
Selenium	82	0.14	0.54	0.14	U	5	ICPMS	9/16/2003	21:53
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/16/2003	21:53
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	21:53
Zinc	**66**	**0.70**	**2.2**	**32.0**	**N**	**5**	**ICPMS**	**9/16/2003**	**21:53**

Comments: Lot #: F3I130129 Sample #: 19

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94L **Client ID:** LANL-WR-SS-20

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258186

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.74

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/16/2003	21:59
Arsenic	**75**	**0.20**	**0.54**	**1.7**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Barium	**135**	**0.028**	**2.1**	**22.1**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Beryllium	**9**	**0.013**	**0.11**	**0.28**		**5**	**ICPMS**	**9/17/2003**	**20:21**
Cadmium	**111**	**0.017**	**0.11**	**0.59**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Chromium	**52**	**0.31**	**1.1**	**2.6**		**5**	**ICPMS**	**9/17/2003**	**20:21**
Cobalt	**59**	**0.031**	**1.1**	**2.3**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Copper	**65**	**0.54**	**1.1**	**8.0**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Lead	**208**	**0.075**	**0.32**	**9.7**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Magnesium	**24**	**3.5**	**53.6**	**311**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Nickel	**60**	**0.20**	**1.1**	**5.2**		**5**	**ICPMS**	**9/16/2003**	**21:59**
Selenium	82	0.14	0.54	0.14	U	5	ICPMS	9/16/2003	21:59
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/16/2003	21:59
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/16/2003	21:59
Zinc	**66**	**0.70**	**2.1**	**202**	N	**5**	**ICPMS**	**9/16/2003**	**21:59**

Comments: Lot #: F3I130129 Sample #: 20

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX925 **Client ID:** LANL-WR-SS-1

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.4	2240	N	1	ICP	9/16/2003	15:38
Calcium	317.93	2.7	534	512	BE	1	ICP	9/16/2003	15:38
Iron	259.94	1.3	10.7	7670	N	1	ICP	9/16/2003	15:38
Manganese	257.61	0.067	1.6	250	N	1	ICP	9/16/2003	15:38
Potassium	766.49	131	534	476	B	1	ICP	9/16/2003	15:38
Sodium	589	7.0	534	39.6	B	1	ICP	9/16/2003	15:38
Vanadium	292.40	0.27	2.1	6.8		1	ICP	9/16/2003	15:38

Comments: Lot #: F3I130129 Sample #: 1

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX925 **Client ID:** LANL-WR-SS-1

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	10:57

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93G **Client ID:** LANL-WR-SS-2

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.3	1780	N	1	ICP	9/16/2003	16:03
Calcium	317.93	2.7	533	522	BE	1	ICP	9/16/2003	16:03
Iron	259.94	1.3	10.7	4250	N	1	ICP	9/16/2003	16:03
Manganese	257.61	0.067	1.6	225	N	1	ICP	9/16/2003	16:03
Potassium	766.49	131	533	442	B	1	ICP	9/16/2003	16:03
Sodium	589	7.0	533	41.2	B	1	ICP	9/16/2003	16:03
Vanadium	292.40	0.27	2.1	3.7		1	ICP	9/16/2003	16:03

Comments: Lot #: F3I130129 Sample #: 2

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93G **Client ID:** LANL-WR-SS-2

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.020	B	1	CVAA	9/16/2003	11:04

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93H **Client ID:** LANL-WR-SS-3

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.39

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.1	3200	N	1	ICP	9/16/2003	16:07
Calcium	317.93	2.8	552	1210	E	1	ICP	9/16/2003	16:07
Iron	259.94	1.3	11.0	6270	N	1	ICP	9/16/2003	16:07
Manganese	257.61	0.070	1.7	320	N	1	ICP	9/16/2003	16:07
Potassium	766.49	136	552	667		1	ICP	9/16/2003	16:07
Sodium	589	7.2	552	51.1	B	1	ICP	9/16/2003	16:07
Vanadium	292.40	0.28	2.2	7.5		1	ICP	9/16/2003	16:07

PEG
10/16/03

Comments: Lot #: F3I130129 Sample #: 3

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93H **Client ID:** LANL-WR-SS-3

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 9.39

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.018	U	1	CVAA	9/16/2003	11:06

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93J **Client ID:** LANL-WR-SS-4

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.1	2790	N	1	ICP	9/16/2003	16:11
Calcium	317.93	2.8	551	729	E	1	ICP	9/16/2003	16:11
Iron	259.94	1.3	11.0	6340	N	1	ICP	9/16/2003	16:11
Manganese	257.61	0.070	1.7	259	N	1	ICP	9/16/2003	16:11
Potassium	766.49	136	551	659		1	ICP	9/16/2003	16:11
Sodium	589	7.2	551	48.4	B	1	ICP	9/16/2003	16:11
Vanadium	292.40	0.28	2.2	6.5		1	ICP	9/16/2003	16:11

Comments: Lot #: F3I130129 Sample #: 4

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93J **Client ID:** LANL-WR-SS-4

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.018	U	1	CVAA	9/16/2003	11:08

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93P **Client ID:** LANL-WR-SS-5

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.58

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.4	2990	N	1	ICP	9/16/2003	16:15
Calcium	317.93	2.9	559	915	E	1	ICP	9/16/2003	16:15
Iron	259.94	1.3	11.2	6950	N	1	ICP	9/16/2003	16:15
Manganese	257.61	0.071	1.7	383	N	1	ICP	9/16/2003	16:15
Potassium	766.49	138	559	546	B	1	ICP	9/16/2003	16:15
Sodium	589	7.3	559	55.2	B	1	ICP	9/16/2003	16:15
Vanadium	292.40	0.29	2.2	6.0		1	ICP	9/16/2003	16:15

Comments: Lot #: F3I130129 Sample #: 5

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93P **Client ID:** LANL-WR-SS-5

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.58

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.019	B	1	CVAA	9/16/2003	11:11

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93T **Client ID:** LANL-WR-SS-6

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.3	3800	N	1	ICP	9/16/2003	16:19
Calcium	317.93	2.9	559	1780	E	1	ICP	9/16/2003	16:19
Iron	259.94	1.3	11.2	7060	N	1	ICP	9/16/2003	16:19
Manganese	257.61	0.070	1.7	376	N	1	ICP	9/16/2003	16:19
Potassium	766.49	137	559	1160		1	ICP	9/16/2003	16:19
Sodium	589	7.3	559	71.8	B	1	ICP	9/16/2003	16:19
Vanadium	292.40	0.29	2.2	8.2		1	ICP	9/16/2003	16:19

Comments: Lot #: F3I130129 Sample #: 6

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93T **Client ID:** LANL-WR-SS-6

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.039		1	CVAA	9/16/2003	11:13

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93V **Client ID:** LANL-WR-SS-7

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 15.96

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.1	23.8	2930	N	1	ICP	9/16/2003	16:23
Calcium	317.93	3.0	595	1530	E	1	ICP	9/16/2003	16:23
Iron	259.94	1.4	11.9	6960	N	1	ICP	9/16/2003	16:23
Manganese	257.61	0.075	1.8	341	N	1	ICP	9/16/2003	16:23
Potassium	766.49	146	595	675		1	ICP	9/16/2003	16:23
Sodium	589	7.8	595	68.1	B	1	ICP	9/16/2003	16:23
Vanadium	292.40	0.30	2.4	5.7		1	ICP	9/16/2003	16:23

Comments: Lot #: F31130129 Sample #: 7

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93V **Client ID:** LANL-WR-SS-7

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 15.96

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.040	0.020	U	1	CVAA	9/16/2003	11:19

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93X **Client ID:** LANL-WR-SS-8

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.18

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.0	2820	N	1	ICP	9/16/2003	16:27
Calcium	317.93	2.8	551	1740	E	1	ICP	9/16/2003	16:27
Iron	259.94	1.3	11.0	9930	N	1	ICP	9/16/2003	16:27
Manganese	257.61	0.069	1.7	376	N	1	ICP	9/16/2003	16:27
Potassium	766.49	135	551	539	B	1	ICP	9/16/2003	16:27
Sodium	589	7.2	551	68.4	B	1	ICP	9/16/2003	16:27
Vanadium	292.40	0.28	2.2	6.2		1	ICP	9/16/2003	16:27

Comments: Lot #: F3I130129 Sample #: 8

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX93X **Client ID:** LANL-WR-SS-8

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 9.18

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.038		1	CVAA	9/16/2003	11:21

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX930 **Client ID:** LANL-WR-SS-9

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 19.3

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.2	24.8	3400	N	1	ICP	9/16/2003	16:32
Calcium	317.93	3.2	620	1760	E	1	ICP	9/16/2003	16:32
Iron	259.94	1.5	12.4	5480	N	1	ICP	9/16/2003	16:32
Manganese	257.61	0.078	1.9	264	N	1	ICP	9/16/2003	16:32
Potassium	766.49	152	620	888		1	ICP	9/16/2003	16:32
Sodium	589	8.1	620	179	B	1	ICP	9/16/2003	16:32
Vanadium	292.40	0.32	2.5	2.9		1	ICP	9/16/2003	16:32

Comments: Lot #: F3I130129 Sample #: 9

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX930 **Client ID:** LANL-WR-SS-9

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 19.3

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.021	0.041	0.025	B	1	CVAA	9/16/2003	11:23

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX931 **Client ID:** LANL-WR-SS-10

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.62

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.4	2780	N	1	ICP	9/16/2003	16:36
Calcium	317.93	2.9	559	1670	E	1	ICP	9/16/2003	16:36
Iron	259.94	1.3	11.2	7800	N	1	ICP	9/16/2003	16:36
Manganese	257.61	0.071	1.7	285	N	1	ICP	9/16/2003	16:36
Potassium	766.49	138	559	595		1	ICP	9/16/2003	16:36
Sodium	589	7.3	559	65.1	B	1	ICP	9/16/2003	16:36
Vanadium	292.40	0.29	2.2	5.9		1	ICP	9/16/2003	16:36

Comments: Lot #: F3I130129 Sample #: 10

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX931 **Client ID:** LANL-WR-SS-10

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.62

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.062		1	CVAA	9/16/2003	11:25

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

LOT# F3I130129

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX932 **Client ID:** LANL-WR-SS-11

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.1	2230	N	1	ICP	9/16/2003	16:40
Calcium	317.93	2.8	551	989	E	1	ICP	9/16/2003	16:40
Iron	259.94	1.3	11.0	7160	N	1	ICP	9/16/2003	16:40
Manganese	257.61	0.070	1.7	306	N	1	ICP	9/16/2003	16:40
Potassium	766.49	136	551	406	B	1	ICP	9/16/2003	16:40
Sodium	589	7.2	551	54.8	B	1	ICP	9/16/2003	16:40
Vanadium	292.40	0.28	2.2	5.1		1	ICP	9/16/2003	16:40

Comments: Lot #: F3I130129 Sample #: 11

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX932 **Client ID:** LANL-WR-SS-11

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 9.31

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.038		1	CVAA	9/16/2003	11:27

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX933 **Client ID:** LANL-WR-SS-12

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.4

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	22.8	1210	N	1	ICP	9/16/2003	16:52
Calcium	317.93	2.9	571	959	E	1	ICP	9/16/2003	16:52
Iron	259.94	1.4	11.4	7430	N	1	ICP	9/16/2003	16:52
Manganese	257.61	0.072	1.7	356	N	1	ICP	9/16/2003	16:52
Potassium	766.49	140	571	604		1	ICP	9/16/2003	16:52
Sodium	589	7.4	571	137	B	1	ICP	9/16/2003	16:52
Vanadium	292.40	0.29	2.3	2.3		1	ICP	9/16/2003	16:52

Comments: Lot #: F31130129 Sample #: 12

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX933 **Client ID:** LANL-WR-SS-12

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.4

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.019	U	1	CVAA	9/16/2003	11:29

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94A **Client ID:** LANL-WR-SS-13

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 16.1

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.1	23.8	1000	N	1	ICP	9/16/2003	16:56
Calcium	317.93	3.0	596	1620	E	1	ICP	9/16/2003	16:56
Iron	259.94	1.4	11.9	7080	N	1	ICP	9/16/2003	16:56
Manganese	257.61	0.075	1.8	299	N	1	ICP	9/16/2003	16:56
Potassium	766.49	147	596	513	B	1	ICP	9/16/2003	16:56
Sodium	589	7.8	596	194	B	1	ICP	9/16/2003	16:56
Vanadium	292.40	0.30	2.4	2.3	B	1	ICP	9/16/2003	16:56

Comments: Lot #: F31130129 Sample #: 13

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94A **Client ID:** LANL-WR-SS-13

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 16.1

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.040	0.035	B	1	CVAA	9/16/2003	11:31

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94C **Client ID:** LANL-WR-SS-14

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.16

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.8	3490	N	1	ICP	9/16/2003	17:00
Calcium	317.93	2.9	569	2090	E	1	ICP	9/16/2003	17:00
Iron	259.94	1.4	11.4	7580	N	1	ICP	9/16/2003	17:00
Manganese	257.61	0.072	1.7	341	N	1	ICP	9/16/2003	17:00
Potassium	766.49	140	569	1150		1	ICP	9/16/2003	17:00
Sodium	589	7.4	569	53.1	B	1	ICP	9/16/2003	17:00
Vanadium	292.40	0.29	2.3	8.7		1	ICP	9/16/2003	17:00

Comments: Lot #: F31130129 Sample #: 14

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94C **Client ID:** LANL-WR-SS-14

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.16

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.068		1	CVAA	9/16/2003	11:33

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94E **Client ID:** LANL-WR-SS-15

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.44

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	29.8	231	5710	N	10	ICP	9/17/2003	10:54
Calcium	317.93	3.0	578	5160	E	1	ICP	9/16/2003	17:04
Iron	259.94	13.8	116	26900	N	10	ICP	9/17/2003	10:54
Manganese	257.61	0.73	17.3	423	N	10	ICP	9/17/2003	10:54
Potassium	766.49	142	578	1380		1	ICP	9/16/2003	17:04
Sodium	589	7.5	578	59.1	B	1	ICP	9/16/2003	17:04
Vanadium	292.40	3.0	23.1	23.7		10	ICP	9/17/2003	10:54

Comments: Lot #: F3I130129 Sample #: 15

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94E **Client ID:** LANL-WR-SS-15

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.44

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.039	0.21		1	CVAA	9/16/2003	11:35

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94F **Client ID:** LANL-WR-SS-16

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.0	3110	N	1	ICP	9/16/2003	17:08
Calcium	317.93	2.8	549	1390	E	1	ICP	9/16/2003	17:08
Iron	259.94	1.3	11.0	7130	N	1	ICP	9/16/2003	17:08
Manganese	257.61	0.069	1.7	321	N	1	ICP	9/16/2003	17:08
Potassium	766.49	135	549	945		1	ICP	9/16/2003	17:08
Sodium	589	7.2	549	44.8	B	1	ICP	9/16/2003	17:08
Vanadium	292.40	0.28	2.2	7.7		1	ICP	9/16/2003	17:08

Comments: Lot #: F31130129 Sample #: 16

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94F **Client ID:** LANL-WR-SS-16

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.025	B	1	CVAA	9/16/2003	11:37

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94G **Client ID:** LANL-WR-SS-17

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.83

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.2	1840	N	1	ICP	9/16/2003	17:12
Calcium	317.93	3.0	580	505	BE	1	ICP	9/16/2003	17:12
Iron	259.94	1.4	11.6	5140	N	1	ICP	9/16/2003	17:12
Manganese	257.61	0.073	1.7	242	N	1	ICP	9/16/2003	17:12
Potassium	766.49	143	580	367	B	1	ICP	9/16/2003	17:12
Sodium	589	7.6	580	76.1	B	1	ICP	9/16/2003	17:12
Vanadium	292.40	0.30	2.3	3.6		1	ICP	9/16/2003	17:12

Comments: Lot #: F3I130129 Sample #: 17

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94G **Client ID:** LANL-WR-SS-17

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.83

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.039	0.019	U	1	CVAA	9/16/2003	11:43

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94H **Client ID:** LANL-WR-SS-18

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 4.17

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.7	20.9	1870	N	1	ICP	9/16/2003	17:17
Calcium	317.93	2.7	522	660	E	1	ICP	9/16/2003	17:17
Iron	259.94	1.3	10.4	5340	N	1	ICP	9/16/2003	17:17
Manganese	257.61	0.066	1.6	224	N	1	ICP	9/16/2003	17:17
Potassium	766.49	128	522	688		1	ICP	9/16/2003	17:17
Sodium	589	6.8	522	49.8	B	1	ICP	9/16/2003	17:17
Vanadium	292.40	0.27	2.1	4.7		1	ICP	9/16/2003	17:17

Comments: Lot #: F3I130129 Sample #: 18

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94H **Client ID:** LANL-WR-SS-18

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 4.17

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.017	0.035	0.017	U	1	CVAA	9/16/2003	11:46

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94K **Client ID:** LANL-WR-SS-19

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.5	1710	N	1	ICP	9/16/2003	17:21
Calcium	317.93	2.7	537	555	E	1	ICP	9/16/2003	17:21
Iron	259.94	1.3	10.7	3270	N	1	ICP	9/16/2003	17:21
Manganese	257.61	0.068	1.6	257	N	1	ICP	9/16/2003	17:21
Potassium	766.49	132	537	372	B	1	ICP	9/16/2003	17:21
Sodium	589	7.0	537	65.3	B	1	ICP	9/16/2003	17:21
Vanadium	292.40	0.27	2.2	2.8		1	ICP	9/16/2003	17:21

Comments: Lot #: F3I130129 Sample #: 19

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94K **Client ID:** LANL-WR-SS-19

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	11:48

Comments:

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94L **Client ID:** LANL-WR-SS-20

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/15/2003 **Prep Batch:** 3258188

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.74

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.5	1720	N	1	ICP	9/16/2003	17:33
Calcium	317.93	2.7	536	619	E	1	ICP	9/16/2003	17:33
Iron	259.94	1.3	10.7	18100	N	1	ICP	9/16/2003	17:33
Manganese	257.61	0.068	1.6	227	N	1	ICP	9/16/2003	17:33
Potassium	766.49	132	536	429	B	1	ICP	9/16/2003	17:33
Sodium	589	7.0	536	39.0	B	1	ICP	9/16/2003	17:33
Vanadium	292.40	0.27	2.1	4.1		1	ICP	9/16/2003	17:33

Comments: Lot #: F3I130129 Sample #: 20

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94L **Client ID:** LANL-WR-SS-20

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258387

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.74

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	11:50

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94M **Client ID:** LANL-WR-SS-21

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.32

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UN	5	ICPMS	9/22/2003	18:27
Arsenic	75	0.21	0.57	0.95		5	ICPMS	9/22/2003	18:27
Barium	135	0.030	2.3	30.5		5	ICPMS	9/22/2003	18:27
Beryllium	9	0.014	0.11	0.36		5	ICPMS	9/22/2003	18:27
Cadmium	111	0.018	0.11	0.19		5	ICPMS	9/22/2003	18:27
Chromium	52	0.33	1.1	2.3		5	ICPMS	9/22/2003	18:27
Cobalt	59	0.033	1.1	1.4		5	ICPMS	9/22/2003	18:27
Copper	65	0.57	1.1	3.3		5	ICPMS	9/22/2003	18:27
Lead	208	0.080	0.34	11.9		5	ICPMS	9/22/2003	18:27
Magnesium	24	3.7	57.0	517	E	5	ICPMS	9/22/2003	18:27
Nickel	60	0.22	1.1	2.2		5	ICPMS	9/22/2003	18:27
Selenium	82	0.15	0.57	0.15	U	5	ICPMS	9/22/2003	18:27
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	18:27
Thallium	205	0.26	1.1	0.28	B	5	ICPMS	9/22/2003	18:27
Zinc	66	0.74	2.3	62.5		5	ICPMS	9/22/2003	18:27

Comments: Lot #: F3I130129 Sample #: 21

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94P **Client ID:** LANL-WR-SS-22

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UN	5	ICPMS	9/22/2003	19:11
Arsenic	75	0.21	0.56	1.2		5	ICPMS	9/22/2003	19:11
Barium	135	0.029	2.2	68.4		5	ICPMS	9/22/2003	19:11
Beryllium	9	0.014	0.11	0.50		5	ICPMS	9/22/2003	19:11
Cadmium	111	0.017	0.11	0.19		5	ICPMS	9/22/2003	19:11
Chromium	52	0.33	1.1	3.0		5	ICPMS	9/22/2003	19:11
Cobalt	59	0.033	1.1	1.8		5	ICPMS	9/22/2003	19:11
Copper	65	0.56	1.1	6.0		5	ICPMS	9/22/2003	19:11
Lead	208	0.079	0.34	18.2		5	ICPMS	9/22/2003	19:11
Magnesium	24	3.7	56.1	777	E	5	ICPMS	9/22/2003	19:11
Nickel	60	0.21	1.1	3.1		5	ICPMS	9/22/2003	19:11
Selenium	82	0.15	0.56	0.30	B	5	ICPMS	9/22/2003	19:11
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	19:11
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/22/2003	19:11
Zinc	66	0.73	2.2	48.3		5	ICPMS	9/22/2003	19:11

Comments: Lot #: F3I130129 Sample #: 22

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94Q **Client ID:** LANL-WR-SS-23

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.91

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/22/2003	19:17
Arsenic	**75**	**0.20**	**0.54**	**0.99**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Barium	**135**	**0.028**	**2.2**	**29.7**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Beryllium	**9**	**0.013**	**0.11**	**0.37**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Cadmium	**111**	**0.017**	**0.11**	**0.24**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Chromium	**52**	**0.32**	**1.1**	**2.9**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Cobalt	**59**	**0.032**	**1.1**	**1.3**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Copper	**65**	**0.54**	**1.1**	**3.5**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Lead	**208**	**0.076**	**0.33**	**11.8**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Magnesium	**24**	**3.5**	**54.3**	**544**	E	**5**	**ICPMS**	**9/22/2003**	**19:17**
Nickel	**60**	**0.21**	**1.1**	**2.4**		**5**	**ICPMS**	**9/22/2003**	**19:17**
Selenium	**82**	**0.14**	**0.54**	**0.17**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:17**
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	19:17
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	19:17
Zinc	**66**	**0.71**	**2.2**	**66.2**		**5**	**ICPMS**	**9/22/2003**	**19:17**

Comments: Lot #: F3I130129 Sample #: 23

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94R **Client ID:** LANL-WR-SS-24

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.28

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UNJ	5	ICPMS	9/22/2003	19:23
Arsenic	**75**	**0.20**	**0.54**	**0.36**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Barium	**135**	**0.028**	**2.2**	**11.1**		**5**	**ICPMS**	**9/22/2003**	**19:23**
Beryllium	**9**	**0.013**	**0.11**	**0.18**		**5**	**ICPMS**	**9/22/2003**	**19:23**
Cadmium	**111**	**0.017**	**0.11**	**0.086**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Chromium	**52**	**0.31**	**1.1**	**0.97**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Cobalt	**59**	**0.031**	**1.1**	**0.44**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Copper	**65**	**0.54**	**1.1**	**1.7**		**5**	**ICPMS**	**9/22/2003**	**19:23**
Lead	**208**	**0.076**	**0.32**	**7.1**		**5**	**ICPMS**	**9/22/2003**	**19:23**
Magnesium	**24**	**3.5**	**53.9**	**202**	**EJ**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Nickel	**60**	**0.21**	**1.1**	**1.0**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:23**
Selenium	82	0.14	0.54	0.14	U	5	ICPMS	9/22/2003	19:23
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	19:23
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	19:23
Zinc	**66**	**0.70**	**2.2**	**34.5**		**5**	**ICPMS**	**9/22/2003**	**19:23**

Comments: Lot #: F3I130129 Sample #: 24

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94T **Client ID:** LANL-WR-SS-25

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.06

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UNY	5	ICPMS	9/22/2003	19:29
Arsenic	**75**	**0.21**	**0.56**	**0.94**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Barium	**135**	**0.029**	**2.2**	**31.3**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Beryllium	**9**	**0.013**	**0.11**	**0.37**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Cadmium	**111**	**0.017**	**0.11**	**0.59**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Chromium	**52**	**0.32**	**1.1**	**2.2**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Cobalt	**59**	**0.032**	**1.1**	**1.6**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Copper	**65**	**0.56**	**1.1**	**3.4**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Lead	**208**	**0.078**	**0.33**	**11.6**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Magnesium	**24**	**3.6**	**55.6**	**435**	**E**	**5**	**ICPMS**	**9/22/2003**	**19:29**
Nickel	**60**	**0.21**	**1.1**	**2.5**		**5**	**ICPMS**	**9/22/2003**	**19:29**
Selenium	82	0.15	0.56	0.15	U	5	ICPMS	9/22/2003	19:29
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	19:29
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/22/2003	19:29
Zinc	**66**	**0.72**	**2.2**	**200**		**5**	**ICPMS**	**9/22/2003**	**19:29**

Comments: Lot #: F3I130129 Sample #: 25

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94V **Client ID:** LANL-WR-SS-26

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UN	5	ICPMS	9/22/2003	19:35
Arsenic	**75**	**0.21**	**0.57**	**0.95**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Barium	**135**	**0.030**	**2.3**	**43.5**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Beryllium	**9**	**0.014**	**0.11**	**0.52**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Cadmium	**111**	**0.018**	**0.11**	**0.23**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Chromium	**52**	**0.33**	**1.1**	**2.8**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Cobalt	**59**	**0.033**	**1.1**	**1.7**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Copper	**65**	**0.57**	**1.1**	**4.7**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Lead	**208**	**0.080**	**0.34**	**14.2**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Magnesium	**24**	**3.7**	**57.1**	**602**	E	**5**	**ICPMS**	**9/22/2003**	**19:35**
Nickel	**60**	**0.22**	**1.1**	**2.8**		**5**	**ICPMS**	**9/22/2003**	**19:35**
Selenium	**82**	**0.15**	**0.57**	**0.23**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:35**
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	19:35
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/22/2003	19:35
Zinc	**66**	**0.74**	**2.3**	**72.9**		**5**	**ICPMS**	**9/22/2003**	**19:35**

Comments: Lot #: F3I130129 Sample #: 26

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94W **Client ID:** LANL-WR-SS-27

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.79

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	UN	5	ICPMS	9/22/2003	19:41
Arsenic	**75**	**0.22**	**0.58**	**3.1**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Barium	**135**	**0.030**	**2.3**	**92.8**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Beryllium	**9**	**0.014**	**0.12**	**0.84**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Cadmium	**111**	**0.018**	**0.12**	**0.81**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Chromium	**52**	**0.34**	**1.2**	**7.7**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Cobalt	**59**	**0.034**	**1.2**	**4.3**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Copper	**65**	**0.58**	**1.2**	**10.2**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Lead	**208**	**0.081**	**0.35**	**24.9**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Magnesium	**24**	**3.8**	**58.0**	**1140**	**E**	**5**	**ICPMS**	**9/22/2003**	**19:41**
Nickel	**60**	**0.22**	**1.2**	**6.7**		**5**	**ICPMS**	**9/22/2003**	**19:41**
Selenium	82	0.15	0.58	0.15	U	5	ICPMS	9/22/2003	19:41
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	19:41
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/22/2003	19:41
Zinc	**66**	**0.75**	**2.3**	**296**		**5**	**ICPMS**	**9/22/2003**	**19:41**

Comments: Lot #: F3I130129 Sample #: 27

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94X **Client ID:** LANL-WR-SS-28

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 17.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.17	UNJ	5	ICPMS	9/22/2003	19:47
Arsenic	**75**	**0.22**	**0.60**	**0.96**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Barium	**135**	**0.031**	**2.4**	**24.3**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Beryllium	**9**	**0.015**	**0.12**	**0.47**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Cadmium	**111**	**0.019**	**0.12**	**0.13**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Chromium	**52**	**0.35**	**1.2**	**1.5**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Cobalt	**59**	**0.035**	**1.2**	**0.67**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:47**
Copper	**65**	**0.60**	**1.2**	**3.6**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Lead	**208**	**0.084**	**0.36**	**16.3**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Magnesium	**24**	**3.9**	**60.3**	**365**	**E**	**5**	**ICPMS**	**9/22/2003**	**19:47**
Nickel	**60**	**0.23**	**1.2**	**1.7**		**5**	**ICPMS**	**9/22/2003**	**19:47**
Selenium	**82**	**0.16**	**0.60**	**0.33**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:47**
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	19:47
Thallium	205	0.28	1.2	0.28	U	5	ICPMS	9/22/2003	19:47
Zinc	**66**	**0.78**	**2.4**	**55.2**		**5**	**ICPMS**	**9/22/2003**	**19:47**

Comments: Lot #: F3I130129 Sample #: 28

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX940 **Client ID:** LANL-WR-SS-29

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 20.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.18	1.3	0.18	UN3	5	ICPMS	9/22/2003	19:53
Arsenic	75	0.23	0.63	1.8		5	ICPMS	9/22/2003	19:53
Barium	135	0.033	2.5	74.3		5	ICPMS	9/22/2003	19:53
Beryllium	9	0.015	0.13	0.65		5	ICPMS	9/22/2003	19:53
Cadmium	111	0.020	0.13	0.78		5	ICPMS	9/22/2003	19:53
Chromium	52	0.37	1.3	5.4		5	ICPMS	9/22/2003	19:53
Cobalt	59	0.037	1.3	3.1		5	ICPMS	9/22/2003	19:53
Copper	65	0.63	1.3	10.8		5	ICPMS	9/22/2003	19:53
Lead	208	0.089	0.38	22.7		5	ICPMS	9/22/2003	19:53
Magnesium	24	4.1	63.2	1040	E	5	ICPMS	9/22/2003	19:53
Nickel	60	0.24	1.3	7.6		5	ICPMS	9/22/2003	19:53
Selenium	82	0.16	0.63	0.33	B	5	ICPMS	9/22/2003	19:53
Silver	107	0.016	1.3	0.016	U	5	ICPMS	9/22/2003	19:53
Thallium	205	0.29	1.3	0.29	U	5	ICPMS	9/22/2003	19:53
Zinc	66	0.82	2.5	227		5	ICPMS	9/22/2003	19:53

Comments: Lot #: F3I130129 Sample #: 29

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX941 **Client ID:** LANL-WR-SS-30

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 14.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	UN	5	ICPMS	9/22/2003	19:59
Arsenic	**75**	**0.22**	**0.59**	**2.6**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Barium	**135**	**0.031**	**2.4**	**74.3**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Beryllium	**9**	**0.014**	**0.12**	**1.0**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Cadmium	**111**	**0.018**	**0.12**	**0.39**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Chromium	**52**	**0.34**	**1.2**	**3.9**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Cobalt	**59**	**0.034**	**1.2**	**2.3**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Copper	**65**	**0.59**	**1.2**	**6.6**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Lead	**208**	**0.082**	**0.35**	**28.9**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Magnesium	**24**	**3.8**	**58.8**	**914**	**E**	**5**	**ICPMS**	**9/22/2003**	**19:59**
Nickel	**60**	**0.22**	**1.2**	**4.0**		**5**	**ICPMS**	**9/22/2003**	**19:59**
Selenium	**82**	**0.15**	**0.59**	**0.37**	**B**	**5**	**ICPMS**	**9/22/2003**	**19:59**
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	19:59
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/22/2003	19:59
Zinc	**66**	**0.76**	**2.4**	**118**		**5**	**ICPMS**	**9/22/2003**	**19:59**

Comments: Lot #: F3I130129 Sample #: 30

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX942 **Client ID:** LANL-WR-SS-31

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UN	5	ICPMS	9/22/2003	20:05
Arsenic	75	0.21	0.56	1.6		5	ICPMS	9/22/2003	20:05
Barium	135	0.029	2.2	117		5	ICPMS	9/22/2003	20:05
Beryllium	9	0.013	0.11	0.67		5	ICPMS	9/22/2003	20:05
Cadmium	111	0.017	0.11	0.078	B	5	ICPMS	9/22/2003	20:05
Chromium	52	0.32	1.1	3.7		5	ICPMS	9/22/2003	20:05
Cobalt	59	0.032	1.1	3.0		5	ICPMS	9/22/2003	20:05
Copper	65	0.56	1.1	3.4		5	ICPMS	9/22/2003	20:05
Lead	208	0.078	0.33	13.3		5	ICPMS	9/22/2003	20:05
Magnesium	24	3.6	55.6	752	E	5	ICPMS	9/22/2003	20:05
Nickel	60	0.21	1.1	3.5		5	ICPMS	9/22/2003	20:05
Selenium	82	0.14	0.56	0.16	B	5	ICPMS	9/22/2003	20:05
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	20:05
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/22/2003	20:05
Zinc	66	0.72	2.2	21.0		5	ICPMS	9/22/2003	20:05

Comments: Lot #: F3I130129 Sample #: 31

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX943 **Client ID:** LANL-WR-SS-32

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UNJ	5	ICPMS	9/22/2003	20:26
Arsenic	**75**	**0.20**	**0.53**	**0.49**	**B**	**5**	**ICPMS**	**9/22/2003**	**20:26**
Barium	**135**	**0.028**	**2.1**	**17.9**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Beryllium	**9**	**0.013**	**0.11**	**0.21**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Cadmium	**111**	**0.017**	**0.11**	**0.20**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Chromium	**52**	**0.31**	**1.1**	**7.3**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Cobalt	**59**	**0.031**	**1.1**	**1.2**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Copper	**65**	**0.53**	**1.1**	**8.2**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Lead	**208**	**0.075**	**0.32**	**17.9**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Magnesium	**24**	**3.5**	**53.5**	**275**	**EJ**	**5**	**ICPMS**	**9/22/2003**	**20:26**
Nickel	**60**	**0.20**	**1.1**	**4.2**		**5**	**ICPMS**	**9/22/2003**	**20:26**
Selenium	**82**	**0.14**	**0.53**	**0.18**	**B**	**5**	**ICPMS**	**9/22/2003**	**20:26**
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	20:26
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	20:26
Zinc	**66**	**0.70**	**2.1**	**43.8**		**5**	**ICPMS**	**9/22/2003**	**20:26**

Comments: Lot #: F3I130129 Sample #: 32

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX944 **Client ID:** LANL-WR-SS-33

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UNJ	5	ICPMS	9/22/2003	20:31
Arsenic	75	0.20	0.55	1.7		5	ICPMS	9/22/2003	20:31
Barium	135	0.028	2.2	63.5		5	ICPMS	9/22/2003	20:31
Beryllium	9	0.013	0.11	0.67		5	ICPMS	9/22/2003	20:31
Cadmium	111	0.017	0.11	0.084	B	5	ICPMS	9/22/2003	20:31
Chromium	52	0.32	1.1	4.5		5	ICPMS	9/22/2003	20:31
Cobalt	59	0.032	1.1	2.5		5	ICPMS	9/22/2003	20:31
Copper	65	0.55	1.1	4.3		5	ICPMS	9/22/2003	20:31
Lead	208	0.076	0.33	19.3		5	ICPMS	9/22/2003	20:31
Magnesium	24	3.6	54.6	897	E	5	ICPMS	9/22/2003	20:31
Nickel	60	0.21	1.1	3.8		5	ICPMS	9/22/2003	20:31
Selenium	82	0.14	0.55	0.15	B	5	ICPMS	9/22/2003	20:31
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	20:31
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	20:31
Zinc	66	0.71	2.2	32.9		5	ICPMS	9/22/2003	20:31

Comments: Lot #: F3I130129 Sample #: 33

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX945 **Client ID:** LANL-WR-SS-34

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 3.73

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.0	0.15	UN	5	ICPMS	9/22/2003	20:37
Arsenic	**75**	**0.19**	**0.52**	**0.56**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Barium	**135**	**0.027**	**2.1**	**11.2**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Beryllium	**9**	**0.013**	**0.10**	**0.14**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Cadmium	**111**	**0.016**	**0.10**	**0.091**	**B**	**5**	**ICPMS**	**9/22/2003**	**20:37**
Chromium	**52**	**0.30**	**1.0**	**2.1**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Cobalt	**59**	**0.030**	**1.0**	**0.59**	**B**	**5**	**ICPMS**	**9/22/2003**	**20:37**
Copper	**65**	**0.52**	**1.0**	**4.7**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Lead	**208**	**0.073**	**0.31**	**11.6**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Magnesium	**24**	**3.4**	**51.9**	**207**	**E**	**5**	**ICPMS**	**9/22/2003**	**20:37**
Nickel	**60**	**0.20**	**1.0**	**1.7**		**5**	**ICPMS**	**9/22/2003**	**20:37**
Selenium	82	0.14	0.52	0.14	U	5	ICPMS	9/22/2003	20:37
Silver	107	0.013	1.0	0.013	U	5	ICPMS	9/22/2003	20:37
Thallium	205	0.24	1.0	0.24	U	5	ICPMS	9/22/2003	20:37
Zinc	**66**	**0.68**	**2.1**	**29.1**		**5**	**ICPMS**	**9/22/2003**	**20:37**

Comments: Lot #: F3I130129 Sample #: 34

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX946 **Client ID:** LANL-WR-SS-35

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 23.35

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.18	1.3	1.1	BN	5	ICPMS	9/22/2003	20:43
Arsenic	75	0.24	0.65	3.5		5	ICPMS	9/22/2003	20:43
Barium	135	0.034	2.6	102		5	ICPMS	9/22/2003	20:43
Beryllium	9	0.016	0.13	0.70		5	ICPMS	9/22/2003	20:43
Cadmium	111	0.020	0.13	0.99		5	ICPMS	9/22/2003	20:43
Chromium	52	0.38	1.3	9.7		5	ICPMS	9/22/2003	20:43
Cobalt	59	0.038	1.3	4.4		5	ICPMS	9/22/2003	20:43
Copper	65	0.65	1.3	39.3		5	ICPMS	9/22/2003	20:43
Lead	208	0.091	0.39	84.6		5	ICPMS	9/22/2003	20:43
Magnesium	24	4.2	65.2	937	E	5	ICPMS	9/22/2003	20:43
Nickel	60	0.25	1.3	9.2		5	ICPMS	9/22/2003	20:43
Selenium	82	0.17	0.65	0.23	B	5	ICPMS	9/22/2003	20:43
Silver	107	0.016	1.3	0.016	U	5	ICPMS	9/22/2003	20:43
Thallium	205	0.30	1.3	0.30	U	5	ICPMS	9/22/2003	20:43
Zinc	66	0.85	2.6	137		5	ICPMS	9/22/2003	20:43

Comments: Lot #: F3I130129 Sample #: 35

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX947 **Client ID:** LANL-WR-SS-36

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UNJ	5	ICPMS	9/22/2003	20:49
Arsenic	**75**	**0.20**	**0.53**	**0.46**	**B**	**5**	**ICPMS**	**9/22/2003**	**20:49**
Barium	**135**	**0.028**	**2.1**	**21.8**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Beryllium	**9**	**0.013**	**0.11**	**0.24**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Cadmium	**111**	**0.016**	**0.11**	**0.18**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Chromium	**52**	**0.31**	**1.1**	**3.2**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Cobalt	**59**	**0.031**	**1.1**	**1.1**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Copper	**65**	**0.53**	**1.1**	**8.4**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Lead	**208**	**0.074**	**0.32**	**20.1**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Magnesium	**24**	**3.4**	**52.9**	**283**	**E**	**5**	**ICPMS**	**9/22/2003**	**20:49**
Nickel	**60**	**0.20**	**1.1**	**2.9**		**5**	**ICPMS**	**9/22/2003**	**20:49**
Selenium	82	0.14	0.53	0.14	U	5	ICPMS	9/22/2003	20:49
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	20:49
Thallium	205	0.24	1.1	0.24	U	5	ICPMS	9/22/2003	20:49
Zinc	**66**	**0.69**	**2.1**	**47.8**		**5**	**ICPMS**	**9/22/2003**	**20:49**

Comments: Lot #: F3I130129 Sample #: 36

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX948 **Client ID:** LANL-WR-SS-37

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 3.97

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.0	0.15	UNJ	5	ICPMS	9/22/2003	20:55
Arsenic	75	0.19	0.52	0.33	B	5	ICPMS	9/22/2003	20:55
Barium	135	0.027	2.1	18.6		5	ICPMS	9/22/2003	20:55
Beryllium	9	0.013	0.10	0.24		5	ICPMS	9/22/2003	20:55
Cadmium	111	0.016	0.10	0.12		5	ICPMS	9/22/2003	20:55
Chromium	52	0.30	1.0	4.9		5	ICPMS	9/22/2003	20:55
Cobalt	59	0.030	1.0	1.4		5	ICPMS	9/22/2003	20:55
Copper	65	0.52	1.0	8.5		5	ICPMS	9/22/2003	20:55
Lead	208	0.073	0.31	76.5		5	ICPMS	9/22/2003	20:55
Magnesium	24	3.4	52.1	268	E	5	ICPMS	9/22/2003	20:55
Nickel	60	0.20	1.0	3.6		5	ICPMS	9/22/2003	20:55
Selenium	82	0.14	0.52	0.14	U	5	ICPMS	9/22/2003	20:55
Silver	107	0.013	1.0	0.013	U	5	ICPMS	9/22/2003	20:55
Thallium	205	0.24	1.0	0.24	U	5	ICPMS	9/22/2003	20:55
Zinc	66	0.68	2.1	45.6		5	ICPMS	9/22/2003	20:55

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10/14/03

Comments: Lot #: F3I130129 Sample #: 37

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX949 **Client ID:** LANL-WR-SS-38

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/22/2003	21:01
Arsenic	**75**	**0.20**	**0.53**	**0.45**	**B**	**5**	**ICPMS**	**9/22/2003**	**21:01**
Barium	**135**	**0.028**	**2.1**	**15.3**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Beryllium	**9**	**0.013**	**0.11**	**0.23**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Cadmium	**111**	**0.016**	**0.11**	**0.069**	**B**	**5**	**ICPMS**	**9/22/2003**	**21:01**
Chromium	**52**	**0.31**	**1.1**	**1.4**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Cobalt	**59**	**0.031**	**1.1**	**0.57**	**B**	**5**	**ICPMS**	**9/22/2003**	**21:01**
Copper	**65**	**0.53**	**1.1**	**4.8**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Lead	**208**	**0.074**	**0.32**	**9.2**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Magnesium	**24**	**3.4**	**52.9**	**233**	**E**	**5**	**ICPMS**	**9/22/2003**	**21:01**
Nickel	**60**	**0.20**	**1.1**	**1.7**		**5**	**ICPMS**	**9/22/2003**	**21:01**
Selenium	**82**	**0.14**	**0.53**	**0.20**	**B**	**5**	**ICPMS**	**9/22/2003**	**21:01**
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	21:01
Thallium	205	0.24	1.1	0.24	U	5	ICPMS	9/22/2003	21:01
Zinc	**66**	**0.69**	**2.1**	**36.9**		**5**	**ICPMS**	**9/22/2003**	**21:01**

Comments: Lot #: F3I130129 Sample #: 38

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95A **Client ID:** LANL-WR-SS-39

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.24

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.28	BN	5	ICPMS	9/22/2003	21:07
Arsenic	75	0.20	0.53	0.52	B	5	ICPMS	9/22/2003	21:07
Barium	135	0.027	2.1	17.0		5	ICPMS	9/22/2003	21:07
Beryllium	9	0.013	0.11	0.15		5	ICPMS	9/22/2003	21:07
Cadmium	111	0.016	0.11	0.13		5	ICPMS	9/22/2003	21:07
Chromium	52	0.31	1.1	7.0		5	ICPMS	9/22/2003	21:07
Cobalt	59	0.031	1.1	1.6		5	ICPMS	9/22/2003	21:07
Copper	65	0.53	1.1	10.5		5	ICPMS	9/22/2003	21:07
Lead	208	0.074	0.32	12.5		5	ICPMS	9/22/2003	21:07
Magnesium	24	3.4	52.8	233	E	5	ICPMS	9/22/2003	21:07
Nickel	60	0.20	1.1	4.2		5	ICPMS	9/22/2003	21:07
Selenium	82	0.14	0.53	0.14	U	5	ICPMS	9/22/2003	21:07
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	21:07
Thallium	205	0.24	1.1	0.24	U	5	ICPMS	9/22/2003	21:07
Zinc	66	0.69	2.1	39.1		5	ICPMS	9/22/2003	21:07

Comments: Lot #: F3I130129 Sample #: 39

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95C **Client ID:** LANL-WR-SS-40

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260304

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/22/2003	21:13
Arsenic	**75**	**0.20**	**0.53**	**0.61**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Barium	**135**	**0.028**	**2.1**	**18.8**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Beryllium	**9**	**0.013**	**0.11**	**0.22**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Cadmium	**111**	**0.017**	**0.11**	**0.20**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Chromium	**52**	**0.31**	**1.1**	**2.6**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Cobalt	**59**	**0.031**	**1.1**	**0.94**	**B**	**5**	**ICPMS**	**9/22/2003**	**21:13**
Copper	**65**	**0.53**	**1.1**	**9.7**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Lead	**208**	**0.074**	**0.32**	**15.4**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Magnesium	**24**	**3.5**	**53.1**	**262**	**E**	**5**	**ICPMS**	**9/22/2003**	**21:13**
Nickel	**60**	**0.20**	**1.1**	**2.8**		**5**	**ICPMS**	**9/22/2003**	**21:13**
Selenium	82	0.14	0.53	0.14	U	5	ICPMS	9/22/2003	21:13
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	21:13
Thallium	205	0.24	1.1	0.24	U	5	ICPMS	9/22/2003	21:13
Zinc	**66**	**0.69**	**2.1**	**40.0**		**5**	**ICPMS**	**9/22/2003**	**21:13**

Comments: Lot #: F3I130129 Sample #: 40

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94M **Client ID:** LANL-WR-SS-21

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.32

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.8	2640 *	N	1	ICP	9/19/2003	15:09
Calcium	317.93	2.9	570	1080		1	ICP	9/19/2003	15:09
Iron	259.94	1.4	11.4	5190	N	1	ICP	9/19/2003	15:09
Manganese	257.61	0.072	1.7	241	N	1	ICP	9/19/2003	15:09
Potassium	766.49	140	570	666		1	ICP	9/19/2003	15:09
Sodium	589	7.4	570	72.3	B	1	ICP	9/19/2003	15:09
Vanadium	292.40	0.29	5.7	6.9		1	ICP	9/19/2003	15:09

[illegible]

Comments: Lot #: F3I130129 Sample #: 21

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94M **Client ID:** LANL-WR-SS-21

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.32

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.019	U	1	CVAA	9/16/2003	11:57

Comments: Lot #: F3I130129 Sample #: 21

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94P **Client ID:** LANL-WR-SS-22

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.4	2990	N	1	ICP	9/19/2003	15:34
Calcium	317.93	2.9	561	1880		1	ICP	9/19/2003	15:34
Iron	259.94	1.3	11.2	5830	N	1	ICP	9/19/2003	15:34
Manganese	257.61	0.071	1.7	411	N	1	ICP	9/19/2003	15:34
Potassium	766.49	138	561	731		1	ICP	9/19/2003	15:34
Sodium	589	7.3	561	77.4	B	1	ICP	9/19/2003	15:34
Vanadium	292.40	0.29	5.6	7.9		1	ICP	9/19/2003	15:34

Comments:

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94P **Client ID:** LANL-WR-SS-22

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.058		1	CVAA	9/16/2003	12:03

Comments: Lot #: F31130129 Sample #: 22

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94Q **Client ID:** LANL-WR-SS-23

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.91

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.7	2300	N	1	ICP	9/19/2003	15:38
Calcium	317.93	2.8	543	1360		1	ICP	9/19/2003	15:38
Iron	259.94	1.3	10.9	4780	N	1	ICP	9/19/2003	15:38
Manganese	257.61	0.068	1.6	249	N	1	ICP	9/19/2003	15:38
Potassium	766.49	134	543	731		1	ICP	9/19/2003	15:38
Sodium	589	7.1	543	70.2	B	1	ICP	9/19/2003	15:38
Vanadium	292.40	0.28	5.4	6.5		1	ICP	9/19/2003	15:38

Comments: Lot #: F3I130129 Sample #: 23

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94Q **Client ID:** LANL-WR-SS-23

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 7.91

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.030	B	1	CVAA	9/16/2003	12:10

Comments: Lot #: F3I130129 Sample #: 23

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94R **Client ID:** LANL-WR-SS-24

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.28

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.6	1120	N	1	ICP	9/19/2003	15:42
Calcium	317.93	2.8	539	639		1	ICP	9/19/2003	15:42
Iron	259.94	1.3	10.8	2900	N	1	ICP	9/19/2003	15:42
Manganese	257.61	0.068	1.6	143	N	1	ICP	9/19/2003	15:42
Potassium	766.49	133	539	353	B	1	ICP	9/19/2003	15:42
Sodium	589	7.0	539	60.8	B	1	ICP	9/19/2003	15:42
Vanadium	292.40	0.28	5.4	3.3	B	1	ICP	9/19/2003	15:42

Comments: Lot #: F3I130129 Sample #: 24

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94R **Client ID:** LANL-WR-SS-24

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 7.28

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	12:12

Comments: Lot #: F3I130129 Sample #: 24

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94T **Client ID:** LANL-WR-SS-25

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.06

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.2	2000	N	1	ICP	9/19/2003	15:49
Calcium	317.93	2.8	556	1330		1	ICP	9/19/2003	15:49
Iron	259.94	1.3	11.1	5720	N	1	ICP	9/19/2003	15:49
Manganese	257.61	0.070	1.7	199	N	1	ICP	9/19/2003	15:49
Potassium	766.49	137	556	508	B	1	ICP	9/19/2003	15:49
Sodium	589	7.3	556	63.7	B	1	ICP	9/19/2003	15:49
Vanadium	292.40	0.28	5.6	6.8		1	ICP	9/19/2003	15:49

Comments: Lot #: F3I130129 Sample #: 25

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94T **Client ID:** LANL-WR-SS-25

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.06

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.019	U	1	CVAA	9/16/2003	12:14

Comments: Lot #: F3I130129 Sample #: 25

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94V **Client ID:** LANL-WR-SS-26

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	22.8	2880	N	1	ICP	9/19/2003	15:53
Calcium	317.93	2.9	571	1180		1	ICP	9/19/2003	15:53
Iron	259.94	1.4	11.4	5240	N	1	ICP	9/19/2003	15:53
Manganese	257.61	0.072	1.7	226	N	1	ICP	9/19/2003	15:53
Potassium	766.49	141	571	931		1	ICP	9/19/2003	15:53
Sodium	589	7.5	571	108	B	1	ICP	9/19/2003	15:53
Vanadium	292.40	0.29	5.7	8.4		1	ICP	9/19/2003	15:53

Comments: Lot #: F3I130129 Sample #: 26

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94V **Client ID:** LANL-WR-SS-26

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.019	U	1	CVAA	9/16/2003	12:16

Comments: Lot #: F3I130129 Sample #: 26

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94W **Client ID:** LANL-WR-SS-27

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.79

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.2	5040	N	1	ICP	9/19/2003	15:57
Calcium	317.93	3.0	580	2600		1	ICP	9/19/2003	15:57
Iron	259.94	1.4	11.6	18700	N	1	ICP	9/19/2003	15:57
Manganese	257.61	0.073	1.7	445	N	1	ICP	9/19/2003	15:57
Potassium	766.49	143	580	969		1	ICP	9/19/2003	15:57
Sodium	589	7.6	580	79.2	B	1	ICP	9/19/2003	15:57
Vanadium	292.40	0.30	5.8	14.1		1	ICP	9/19/2003	15:57

Comments: Lot #: F3I130129 Sample #: 27

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94W **Client ID:** LANL-WR-SS-27

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.79

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.039	0.048		1	CVAA	9/16/2003	12:18

Comments: Lot #: F3I130129 Sample #: 27

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94X **Client ID:** LANL-WR-SS-28

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 17.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.1	24.1	1540	N	1	ICP	9/19/2003	16:01
Calcium	317.93	3.1	603	1390		1	ICP	9/19/2003	16:01
Iron	259.94	1.4	12.1	5300	N	1	ICP	9/19/2003	16:01
Manganese	257.61	0.076	1.8	285	N	1	ICP	9/19/2003	16:01
Potassium	766.49	148	603	385	B	1	ICP	9/19/2003	16:01
Sodium	589	7.9	603	135	B	1	ICP	9/19/2003	16:01
Vanadium	292.40	0.31	6.0	4.8	B	1	ICP	9/19/2003	16:01

Comments: Lot #: F3I130129 Sample #: 28

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX94X **Client ID:** LANL-WR-SS-28

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 17.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.040	0.036	B	1	CVAA	9/16/2003	12:20

Comments: Lot #: F31130129 Sample #: 28

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX940 **Client ID:** LANL-WR-SS-29

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 20.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.3	25.3	4130	N	1	ICP	9/19/2003	16:05
Calcium	317.93	3.2	632	3620		1	ICP	9/19/2003	16:05
Iron	259.94	1.5	12.6	13700	N	1	ICP	9/19/2003	16:05
Manganese	257.61	0.080	1.9	324	N	1	ICP	9/19/2003	16:05
Potassium	766.49	155	632	1060		1	ICP	9/19/2003	16:05
Sodium	589	8.2	632	176	B	1	ICP	9/19/2003	16:05
Vanadium	292.40	0.32	6.3	11.5		1	ICP	9/19/2003	16:05

Comments: Lot #: F3I130129 Sample #: 29

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX940 **Client ID:** LANL-WR-SS-29

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 20.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.021	0.042	0.070		1	CVAA	9/16/2003	12:22

Comments: Lot #: F3I130129 Sample #: 29

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX941 **Client ID:** LANL-WR-SS-30

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 14.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.5	5110	N	1	ICP	9/19/2003	16:09
Calcium	317.93	3.0	588	2570		1	ICP	9/19/2003	16:09
Iron	259.94	1.4	11.8	6930	N	1	ICP	9/19/2003	16:09
Manganese	257.61	0.074	1.8	401	N	1	ICP	9/19/2003	16:09
Potassium	766.49	145	588	1200		1	ICP	9/19/2003	16:09
Sodium	589	7.7	588	211	B	1	ICP	9/19/2003	16:09
Vanadium	292.40	0.30	5.9	10.7		1	ICP	9/19/2003	16:09

Comments: Lot #: F3I130129 Sample #: 30

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX941 **Client ID:** LANL-WR-SS-30

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 14.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.039	0.021	B	1	CVAA	9/16/2003	12:24

Comments: Lot #: F3I130129 Sample #: 30

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX942 **Client ID:** LANL-WR-SS-31

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.2	4500	N	1	ICP	9/19/2003	16:14
Calcium	317.93	2.8	556	1550		1	ICP	9/19/2003	16:14
Iron	259.94	1.3	11.1	6470	N	1	ICP	9/19/2003	16:14
Manganese	257.61	0.070	1.7	466	N	1	ICP	9/19/2003	16:14
Potassium	766.49	137	556	914		1	ICP	9/19/2003	16:14
Sodium	589	7.3	556	69.7	B	1	ICP	9/19/2003	16:14
Vanadium	292.40	0.28	5.6	11.0		1	ICP	9/19/2003	16:14

Comments: Lot #: F3I130129 Sample #: 31

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX942 **Client ID:** LANL-WR-SS-31

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.02

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.019	U	1	CVAA	9/16/2003	12:26

Comments: Lot #: F3I130129 Sample #: 31

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX943 **Client ID:** LANL-WR-SS-32

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**2.8**	**21.4**	**1170**	N,S	1	ICP	9/19/2003	16:26
Calcium	**317.93**	**2.7**	**535**	**822**		1	ICP	9/19/2003	16:26
Iron	**259.94**	**1.3**	**10.7**	**4400**	N	1	ICP	9/19/2003	16:26
Manganese	**257.61**	**0.067**	**1.6**	**137**	N	1	ICP	9/19/2003	16:26
Potassium	766.49	132	535	132	U	1	ICP	9/19/2003	19:40
Sodium	**589**	**7.0**	**535**	**80.3**	B	1	ICP	9/19/2003	16:26
Vanadium	**292.40**	**0.27**	**5.3**	**9.1**		1	ICP	9/19/2003	16:26

Comments: Lot #: F3I130129 Sample #: 32

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX943 **Client ID:** LANL-WR-SS-32

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.019	B	1	CVAA	9/16/2003	12:28

Comments: Lot #: F3I130129 Sample #: 32

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX944 **Client ID:** LANL-WR-SS-33

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.8	3940	N	1	ICP	9/19/2003	16:30
Calcium	317.93	2.8	546	2010		1	ICP	9/19/2003	16:30
Iron	259.94	1.3	10.9	5640	N	1	ICP	9/19/2003	16:30
Manganese	257.61	0.069	1.6	254	N	1	ICP	9/19/2003	16:30
Potassium	766.49	134	546	1130		1	ICP	9/19/2003	19:44
Sodium	589	7.1	546	72.9	B	1	ICP	9/19/2003	16:30
Vanadium	292.40	0.28	5.5	9.4		1	ICP	9/19/2003	16:30

Comments: Lot #: F31130129 Sample #: 33

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX944 **Client ID:** LANL-WR-SS-33

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.38

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.028	B	1	CVAA	9/16/2003	12:35

Comments: Lot #: F3I130129 Sample #: 33

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX945 **Client ID:** LANL-WR-SS-34

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 3.73

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**2.7**	**20.8**	**658**	**N**	**1**	**ICP**	**9/19/2003**	**16:39**
Calcium	**317.93**	**2.7**	**519**	**456**	**B**	**1**	**ICP**	**9/19/2003**	**16:39**
Iron	**259.94**	**1.2**	**10.4**	**2650**	**N**	**1**	**ICP**	**9/19/2003**	**16:39**
Manganese	**257.61**	**0.065**	**1.6**	**83.8**	**N**	**1**	**ICP**	**9/19/2003**	**16:39**
Potassium	766.49	128	519	128	U	1	ICP	9/19/2003	19:48
Sodium	**589**	**6.8**	**519**	**50.7**	**B**	**1**	**ICP**	**9/19/2003**	**16:39**
Vanadium	**292.40**	**0.27**	**5.2**	**5.5**		**1**	**ICP**	**9/19/2003**	**16:39**

Comments: Lot #: F3I130129 Sample #: 34

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX945 **Client ID:** LANL-WR-SS-34

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 3.73

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.017	0.035	0.022	B	1	CVAA	9/16/2003	12:37

Comments: Lot #: F3I130129 Sample #: 34

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX946 **Client ID:** LANL-WR-SS-35

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 23.35

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.4	26.1	4180	N	1	ICP	9/19/2003	16:43
Calcium	317.93	3.3	652	2350		1	ICP	9/19/2003	16:43
Iron	259.94	1.6	13.1	12500	N	1	ICP	9/19/2003	16:43
Manganese	257.61	0.082	2.0	333	N	1	ICP	9/19/2003	16:43
Potassium	766.49	161	652	758		1	ICP	9/19/2003	19:52
Sodium	589	8.5	652	95.9	B	1	ICP	9/19/2003	16:43
Vanadium	292.40	0.33	6.5	25.0		1	ICP	9/19/2003	16:43

Comments: Lot #: F31130129 Sample #: 35

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX946 **Client ID:** LANL-WR-SS-35

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 23.35

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.022	0.044	0.20		1	CVAA	9/16/2003	12:40

Comments: Lot #: F3I130129 Sample #: 35

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX947 **Client ID:** LANL-WR-SS-36

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.7	21.1	1130	N	1	ICP	9/19/2003	16:47
Calcium	317.93	2.7	529	592		1	ICP	9/19/2003	16:47
Iron	259.94	1.3	10.6	4560	N	1	ICP	9/19/2003	16:47
Manganese	257.61	0.067	1.6	152	N	1	ICP	9/19/2003	16:47
Potassium	766.49	130	529	130	U	1	ICP	9/19/2003	19:56
Sodium	589	6.9	529	59.2	B	1	ICP	9/19/2003	16:47
Vanadium	292.40	0.27	5.3	9.2		1	ICP	9/19/2003	16:47

Comments: Lot #: F31130129 Sample #: 36

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX947 **Client ID:** LANL-WR-SS-36

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 5.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.035	0.018	U	1	CVAA	9/16/2003	12:42

Comments: Lot #: F3I130129 Sample #: 36

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX948 **Client ID:** LANL-WR-SS-37

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 3.97

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**2.7**	**20.8**	**977**	**N**	**1**	**ICP**	**9/19/2003**	**16:51**
Calcium	**317.93**	**2.7**	**521**	**654**		**1**	**ICP**	**9/19/2003**	**16:51**
Iron	**259.94**	**1.3**	**10.4**	**6210**	**N**	**1**	**ICP**	**9/19/2003**	**16:51**
Manganese	**257.61**	**0.066**	**1.6**	**153**	**N**	**1**	**ICP**	**9/19/2003**	**16:51**
Potassium	766.49	128	521	128	U	1	ICP	9/19/2003	20:00
Sodium	**589**	**6.8**	**521**	**60.0**	**B**	**1**	**ICP**	**9/19/2003**	**16:51**
Vanadium	**292.40**	**0.27**	**5.2**	**14.4**		**1**	**ICP**	**9/19/2003**	**16:51**

Comments: Lot #: F3I130129 Sample #: 37

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX948 **Client ID:** LANL-WR-SS-37

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 3.97

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.017	0.035	0.026	B	1	CVAA	9/16/2003	12:48

Comments: Lot #: F3I130129 Sample #: 37

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX949 **Client ID:** LANL-WR-SS-38

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.7	21.2	690	N	1	ICP	9/19/2003	16:55
Calcium	317.93	2.7	529	2410		1	ICP	9/19/2003	16:55
Iron	259.94	1.3	10.6	3170	N	1	ICP	9/19/2003	16:55
Manganese	257.61	0.067	1.6	169	N	1	ICP	9/19/2003	16:55
Potassium	766.49	130	529	130	U	1	ICP	9/19/2003	20:04
Sodium	589	6.9	529	61.8	B	1	ICP	9/19/2003	16:55
Vanadium	292.40	0.27	5.3	4.6	B	1	ICP	9/19/2003	16:55

Comments: Lot #: F3I130129 Sample #: 38

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX949 **Client ID:** LANL-WR-SS-38

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 5.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.035	0.018	U	1	CVAA	9/16/2003	12:50

Comments: Lot #: F3I130129 Sample #: 38

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95A **Client ID:** LANL-WR-SS-39

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.24

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.7	21.1	708	N	1	ICP	9/19/2003	16:59
Calcium	317.93	2.7	528	469	B	1	ICP	9/19/2003	16:59
Iron	259.94	1.3	10.6	4410	N	1	ICP	9/19/2003	16:59
Manganese	257.61	0.067	1.6	131	N	1	ICP	9/19/2003	16:59
Potassium	766.49	130	528	130	U	1	ICP	9/19/2003	20:08
Sodium	589	6.9	528	47.1	B	1	ICP	9/19/2003	16:59
Vanadium	292.40	0.27	5.3	14.3		1	ICP	9/19/2003	16:59

Comments: Lot #: F3I130129 Sample #: 39

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95A **Client ID:** LANL-WR-SS-39

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 5.24

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.035	0.018	U	1	CVAA	9/16/2003	12:52

Comments: Lot #: F3I130129 Sample #: 39

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95C **Client ID:** LANL-WR-SS-40

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260306

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.7	21.2	866	N	1	ICP	9/19/2003	17:03
Calcium	317.93	2.7	531	684		1	ICP	9/19/2003	17:03
Iron	259.94	1.3	10.6	5120	N	1	ICP	9/19/2003	17:03
Manganese	257.61	0.067	1.6	140	N	1	ICP	9/19/2003	17:03
Potassium	766.49	131	531	131	U	1	ICP	9/19/2003	20:12
Sodium	589	6.9	531	53.5	B	1	ICP	9/19/2003	17:03
Vanadium	292.40	0.27	5.3	7.2		1	ICP	9/19/2003	17:03

Comments: Lot #: F31130129 Sample #: 40

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95C **Client ID:** LANL-WR-SS-40

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258388

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 5.85

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.035	0.020	B	1	CVAA	9/16/2003	12:54

Comments: Lot #: F3I130129 Sample #: 40

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95D **Client ID:** LANL-WR-SS-41

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.17	U	5	ICPMS	9/22/2003	21:46
Arsenic	75	0.23	0.61	0.64		5	ICPMS	9/22/2003	21:46
Barium	135	0.032	2.4	28.1		5	ICPMS	9/22/2003	21:46
Beryllium	9	0.015	0.12	0.42		5	ICPMS	9/22/2003	21:46
Cadmium	111	0.019	0.12	0.12		5	ICPMS	9/22/2003	21:46
Chromium	52	0.35	1.2	1.6		5	ICPMS	9/22/2003	21:46
Cobalt	59	0.035	1.2	0.73	B	5	ICPMS	9/22/2003	21:46
Copper	65	0.61	1.2	3.6		5	ICPMS	9/22/2003	21:46
Lead	208	0.086	0.37	11.3		5	ICPMS	9/22/2003	21:46
Magnesium	24	4.0	61.1	511	E	5	ICPMS	9/22/2003	21:46
Nickel	60	0.23	1.2	1.9		5	ICPMS	9/22/2003	21:46
Selenium	82	0.16	0.61	0.18	B	5	ICPMS	9/22/2003	21:46
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	21:46
Thallium	205	0.28	1.2	0.28	U	5	ICPMS	9/22/2003	21:46
Zinc	66	0.79	2.4	33.6		5	ICPMS	9/22/2003	21:46

Comments: Lot #: F3I130129 Sample #: 41

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95E **Client ID:** LANL-WR-SS-42

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.78

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	U	5	ICPMS	9/22/2003	22:15
Arsenic	75	0.20	0.54	1.0		5	ICPMS	9/22/2003	22:15
Barium	135	0.028	2.2	30.5		5	ICPMS	9/22/2003	22:15
Beryllium	9	0.013	0.11	0.30		5	ICPMS	9/22/2003	22:15
Cadmium	111	0.017	0.11	0.16		5	ICPMS	9/22/2003	22:15
Chromium	52	0.31	1.1	5.5		5	ICPMS	9/22/2003	22:15
Cobalt	59	0.031	1.1	1.7		5	ICPMS	9/22/2003	22:15
Copper	65	0.54	1.1	8.5		5	ICPMS	9/22/2003	22:15
Lead	208	0.075	0.32	22.3		5	ICPMS	9/22/2003	22:15
Magnesium	24	3.5	53.6	402	E S	5	ICPMS	9/22/2003	22:15
Nickel	60	0.20	1.1	5.0		5	ICPMS	9/22/2003	22:15
Selenium	82	0.14	0.54	0.20	B	5	ICPMS	9/22/2003	22:15
Silver	107	0.013	1.1	0.013	U	5	ICPMS	9/22/2003	22:15
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	22:15
Zinc	66	0.70	2.2	63.0		5	ICPMS	9/22/2003	22:15

Comments: Lot #: F3I130129 Sample #: 42

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95F **Client ID:** LANL-WR-SS-43

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	U	5	ICPMS	9/22/2003	22:21
Arsenic	75	0.21	0.58	1.3		5	ICPMS	9/22/2003	22:21
Barium	135	0.030	2.3	45.2		5	ICPMS	9/22/2003	22:21
Beryllium	9	0.014	0.12	0.47		5	ICPMS	9/22/2003	22:21
Cadmium	111	0.018	0.12	0.58		5	ICPMS	9/22/2003	22:21
Chromium	52	0.34	1.2	3.6		5	ICPMS	9/22/2003	22:21
Cobalt	59	0.034	1.2	1.6		5	ICPMS	9/22/2003	22:21
Copper	65	0.58	1.2	18.9		5	ICPMS	9/22/2003	22:21
Lead	208	0.081	0.35	33.0		5	ICPMS	9/22/2003	22:21
Magnesium	24	3.8	57.8	647	E	5	ICPMS	9/22/2003	22:21
Nickel	60	0.22	1.2	4.2		5	ICPMS	9/22/2003	22:21
Selenium	82	0.15	0.58	0.19	B	5	ICPMS	9/22/2003	22:21
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	22:21
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/22/2003	22:21
Zinc	66	0.75	2.3	161		5	ICPMS	9/22/2003	22:21

10/17/03

Comments: Lot #: F3I130129 Sample #: 43

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95G **Client ID:** LANL-WR-SS-44

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.98

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.96	B	5	ICPMS	9/22/2003	22:27
Arsenic	75	0.20	0.55	0.43	B	5	ICPMS	9/22/2003	22:27
Barium	135	0.029	2.2	27.5		5	ICPMS	9/22/2003	22:27
Beryllium	9	0.013	0.11	0.30		5	ICPMS	9/22/2003	22:27
Cadmium	111	0.017	0.11	0.21		5	ICPMS	9/22/2003	22:27
Chromium	52	0.32	1.1	3.0		5	ICPMS	9/22/2003	22:27
Cobalt	59	0.032	1.1	0.96	B	5	ICPMS	9/22/2003	22:27
Copper	65	0.55	1.1	8.7		5	ICPMS	9/22/2003	22:27
Lead	208	0.077	0.33	24.2		5	ICPMS	9/22/2003	22:27
Magnesium	24	3.6	54.9	432	E	5	ICPMS	9/22/2003	22:27
Nickel	60	0.21	1.1	4.1		5	ICPMS	9/22/2003	22:27
Selenium	82	0.14	0.55	0.14	U	5	ICPMS	9/22/2003	22:27
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	22:27
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	22:27
Zinc	66	0.71	2.2	83.9		5	ICPMS	9/22/2003	22:27

Comments: Lot #: F3I130129 Sample #: 44

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95H **Client ID:** LANL-WR-SS-45

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 14.71

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.45	B	5	ICPMS	9/22/2003	22:33
Arsenic	75	0.22	0.59	1.3		5	ICPMS	9/22/2003	22:33
Barium	135	0.031	2.3	76.8		5	ICPMS	9/22/2003	22:33
Beryllium	9	0.014	0.12	0.58		5	ICPMS	9/22/2003	22:33
Cadmium	111	0.018	0.12	3.1		5	ICPMS	9/22/2003	22:33
Chromium	52	0.34	1.2	5.4		5	ICPMS	9/22/2003	22:33
Cobalt	59	0.034	1.2	2.0		5	ICPMS	9/22/2003	22:33
Copper	65	0.59	1.2	26.0		5	ICPMS	9/22/2003	22:33
Lead	208	0.082	0.35	63.5		5	ICPMS	9/22/2003	22:33
Magnesium	24	3.8	58.6	801	E J	5	ICPMS	9/22/2003	22:33
Nickel	60	0.22	1.2	5.7		5	ICPMS	9/22/2003	22:33
Selenium	82	0.15	0.59	0.52	B	5	ICPMS	9/22/2003	22:33
Silver	107	0.015	1.2	0.55	B	5	ICPMS	9/22/2003	22:33
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/22/2003	22:33
Zinc	66	0.76	2.3	197		5	ICPMS	9/22/2003	22:33

Comments: Lot #: F3I130129 Sample #: 45

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95J **Client ID:** LANL-WR-SS-46

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 11.25

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	U	5	ICPMS	9/22/2003	22:54
Arsenic	75	0.21	0.56	2.2		5	ICPMS	9/22/2003	22:54
Barium	135	0.029	2.3	79.8		5	ICPMS	9/22/2003	22:54
Beryllium	9	0.014	0.11	0.68		5	ICPMS	9/22/2003	22:54
Cadmium	111	0.018	0.11	0.10	B	5	ICPMS	9/22/2003	22:54
Chromium	52	0.33	1.1	5.7		5	ICPMS	9/22/2003	22:54
Cobalt	59	0.033	1.1	4.1		5	ICPMS	9/22/2003	22:54
Copper	65	0.56	1.1	5.5		5	ICPMS	9/22/2003	22:54
Lead	208	0.079	0.34	19.5		5	ICPMS	9/22/2003	22:54
Magnesium	24	3.7	56.3	1340	E	5	ICPMS	9/22/2003	22:54
Nickel	60	0.21	1.1	5.1		5	ICPMS	9/22/2003	22:54
Selenium	82	0.15	0.56	0.15	U	5	ICPMS	9/22/2003	22:54
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	22:54
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/22/2003	22:54
Zinc	66	0.73	2.3	29.7		5	ICPMS	9/22/2003	22:54

Comments: Lot #: F3I130129 Sample #: 46

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95K **Client ID:** LANL-WR-SS-47

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.17	U	5	ICPMS	9/22/2003	23:00
Arsenic	75	0.23	0.61	2.0		5	ICPMS	9/22/2003	23:00
Barium	135	0.032	2.5	59.9		5	ICPMS	9/22/2003	23:00
Beryllium	9	0.015	0.12	0.62		5	ICPMS	9/22/2003	23:00
Cadmium	111	0.019	0.12	0.094	B	5	ICPMS	9/22/2003	23:00
Chromium	52	0.36	1.2	4.2		5	ICPMS	9/22/2003	23:00
Cobalt	59	0.036	1.2	2.3		5	ICPMS	9/22/2003	23:00
Copper	65	0.61	1.2	5.6		5	ICPMS	9/22/2003	23:00
Lead	208	0.086	0.37	25.3		5	ICPMS	9/22/2003	23:00
Magnesium	24	4.0	61.4	989	E	5	ICPMS	9/22/2003	23:00
Nickel	60	0.23	1.2	3.8		5	ICPMS	9/22/2003	23:00
Selenium	82	0.16	0.61	0.40	B	5	ICPMS	9/22/2003	23:00
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	23:00
Thallium	205	0.28	1.2	0.28	U	5	ICPMS	9/22/2003	23:00
Zinc	66	0.80	2.5	39.9		5	ICPMS	9/22/2003	23:00

Comments: Lot #: F3I130129 Sample #: 47

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95L **Client ID:** LANL-WR-SS-48

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	U	5	ICPMS	9/22/2003	23:06
Arsenic	75	0.20	0.55	1.3		5	ICPMS	9/22/2003	23:06
Barium	135	0.029	2.2	46.1		5	ICPMS	9/22/2003	23:06
Beryllium	9	0.013	0.11	0.56		5	ICPMS	9/22/2003	23:06
Cadmium	111	0.017	0.11	0.073	B	5	ICPMS	9/22/2003	23:06
Chromium	52	0.32	1.1	3.1		5	ICPMS	9/22/2003	23:06
Cobalt	59	0.032	1.1	2.0		5	ICPMS	9/22/2003	23:06
Copper	65	0.55	1.1	3.5		5	ICPMS	9/22/2003	23:06
Lead	208	0.077	0.33	9.5		5	ICPMS	9/22/2003	23:06
Magnesium	24	3.6	54.9	714	E J	5	ICPMS	9/22/2003	23:06
Nickel	60	0.21	1.1	3.2		5	ICPMS	9/22/2003	23:06
Selenium	82	0.14	0.55	0.14	U	5	ICPMS	9/22/2003	23:06
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	23:06
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	23:06
Zinc	66	0.71	2.2	23.6		5	ICPMS	9/22/2003	23:06

KAC
10/10/03

Comments: Lot #: F3I130129 Sample #: 48

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95M **Client ID:** LANL-WR-SS-49

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.26

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	U	5	ICPMS	9/22/2003	23:11
Arsenic	75	0.20	0.55	0.74		5	ICPMS	9/22/2003	23:11
Barium	135	0.028	2.2	38.5		5	ICPMS	9/22/2003	23:11
Beryllium	9	0.013	0.11	0.57		5	ICPMS	9/22/2003	23:11
Cadmium	111	0.017	0.11	0.095	B	5	ICPMS	9/22/2003	23:11
Chromium	52	0.32	1.1	2.0		5	ICPMS	9/22/2003	23:11
Cobalt	59	0.032	1.1	1.0	B	5	ICPMS	9/22/2003	23:11
Copper	65	0.55	1.1	2.9		5	ICPMS	9/22/2003	23:11
Lead	208	0.076	0.33	13.9		5	ICPMS	9/22/2003	23:11
Magnesium	24	3.5	54.5	589	E	5	ICPMS	9/22/2003	23:11
Nickel	60	0.21	1.1	2.4		5	ICPMS	9/22/2003	23:11
Selenium	82	0.14	0.55	0.14	B	5	ICPMS	9/22/2003	23:11
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	23:11
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	23:11
Zinc	66	0.71	2.2	20.9		5	ICPMS	9/22/2003	23:11

Comments: Lot #: F3I130129 Sample #: 49

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95N **Client ID:** LANL-WR-SS-50

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 15.03

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.17	U	5	ICPMS	9/22/2003	23:17
Arsenic	75	0.22	0.59	0.47	B	5	ICPMS	9/22/2003	23:17
Barium	135	0.031	2.4	22.1		5	ICPMS	9/22/2003	23:17
Beryllium	9	0.014	0.12	0.31		5	ICPMS	9/22/2003	23:17
Cadmium	111	0.018	0.12	0.066	B	5	ICPMS	9/22/2003	23:17
Chromium	52	0.34	1.2	1.6		5	ICPMS	9/22/2003	23:17
Cobalt	59	0.034	1.2	1.3		5	ICPMS	9/22/2003	23:17
Copper	65	0.59	1.2	2.4		5	ICPMS	9/22/2003	23:17
Lead	208	0.082	0.35	8.3		5	ICPMS	9/22/2003	23:17
Magnesium	24	3.8	58.8	352	E	5	ICPMS	9/22/2003	23:17
Nickel	60	0.22	1.2	2.4		5	ICPMS	9/22/2003	23:17
Selenium	82	0.15	0.59	0.16	B	5	ICPMS	9/22/2003	23:17
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	23:17
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/22/2003	23:17
Zinc	66	0.77	2.4	25.0		5	ICPMS	9/22/2003	23:17

Comments: Lot #: F3I130129 Sample #: 50

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95P **Client ID:** LANL-WR-SS-51

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 24.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.19	1.3	0.19	U	5	ICPMS	9/22/2003	23:23
Arsenic	75	0.25	0.66	1.3		5	ICPMS	9/22/2003	23:23
Barium	135	0.034	2.7	49.1		5	ICPMS	9/22/2003	23:23
Beryllium	9	0.016	0.13	0.55		5	ICPMS	9/22/2003	23:23
Cadmium	111	0.021	0.13	0.38		5	ICPMS	9/22/2003	23:23
Chromium	52	0.38	1.3	2.8		5	ICPMS	9/22/2003	23:23
Cobalt	59	0.038	1.3	1.3		5	ICPMS	9/22/2003	23:23
Copper	65	0.66	1.3	4.5		5	ICPMS	9/22/2003	23:23
Lead	208	0.093	0.40	16.7		5	ICPMS	9/22/2003	23:23
Magnesium	24	4.3	66.2	648	E	5	ICPMS	9/22/2003	23:23
Nickel	60	0.25	1.3	3.0		5	ICPMS	9/22/2003	23:23
Selenium	82	0.17	0.66	0.28	B	5	ICPMS	9/22/2003	23:23
Silver	107	0.017	1.3	0.017	U	5	ICPMS	9/22/2003	23:23
Thallium	205	0.30	1.3	0.30	U	5	ICPMS	9/22/2003	23:23
Zinc	66	0.86	2.7	165		5	ICPMS	9/22/2003	23:23

Comments: Lot #: F3I130129 Sample #: 51

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95Q **Client ID:** LANL-WR-SS-52

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.17	1.2	0.17	U	5	ICPMS	9/22/2003	23:29
Arsenic	75	0.23	0.61	0.56	B	5	ICPMS	9/22/2003	23:29
Barium	135	0.032	2.5	28.3		5	ICPMS	9/22/2003	23:29
Beryllium	9	0.015	0.12	0.50		5	ICPMS	9/22/2003	23:29
Cadmium	111	0.019	0.12	0.11	B	5	ICPMS	9/22/2003	23:29
Chromium	52	0.36	1.2	1.5		5	ICPMS	9/22/2003	23:29
Cobalt	59	0.036	1.2	0.68	B	5	ICPMS	9/22/2003	23:29
Copper	65	0.61	1.2	2.4		5	ICPMS	9/22/2003	23:29
Lead	208	0.086	0.37	8.1		5	ICPMS	9/22/2003	23:29
Magnesium	24	4.0	61.3	385	E	5	ICPMS	9/22/2003	23:29
Nickel	60	0.23	1.2	1.6		5	ICPMS	9/22/2003	23:29
Selenium	82	0.16	0.61	0.16	U	5	ICPMS	9/22/2003	23:29
Silver	107	0.015	1.2	0.015	U	5	ICPMS	9/22/2003	23:29
Thallium	205	0.28	1.2	0.28	U	5	ICPMS	9/22/2003	23:29
Zinc	66	0.80	2.5	30.2		5	ICPMS	9/22/2003	23:29

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10/17/03

Comments: Lot #: F3I130129 Sample #: 52

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95R **Client ID:** LANL-WR-SS-53

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 20.93

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.18	1.3	0.18	U	5	ICPMS	9/22/2003	23:35
Arsenic	75	0.23	0.63	0.65		5	ICPMS	9/22/2003	23:35
Barium	135	0.033	2.5	39.0		5	ICPMS	9/22/2003	23:35
Beryllium	9	0.015	0.13	0.48		5	ICPMS	9/22/2003	23:35
Cadmium	111	0.020	0.13	0.17		5	ICPMS	9/22/2003	23:35
Chromium	52	0.37	1.3	2.6		5	ICPMS	9/22/2003	23:35
Cobalt	59	0.037	1.3	1.2	B	5	ICPMS	9/22/2003	23:35
Copper	65	0.63	1.3	4.4		5	ICPMS	9/22/2003	23:35
Lead	208	0.089	0.38	14.8		5	ICPMS	9/22/2003	23:35
Magnesium	24	4.1	63.2	609	E	5	ICPMS	9/22/2003	23:35
Nickel	60	0.24	1.3	2.4		5	ICPMS	9/22/2003	23:35
Selenium	82	0.16	0.63	0.16	U	5	ICPMS	9/22/2003	23:35
Silver	107	0.016	1.3	0.016	U	5	ICPMS	9/22/2003	23:35
Thallium	205	0.29	1.3	0.29	U	5	ICPMS	9/22/2003	23:35
Zinc	66	0.82	2.5	42.4		5	ICPMS	9/22/2003	23:35

10/17/03

Comments: Lot #: F3I130129 Sample #: 53

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95T **Client ID:** LANL-WR-SS-54

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	U	5	ICPMS	9/22/2003	23:41
Arsenic	75	0.20	0.55	0.52	B	5	ICPMS	9/22/2003	23:41
Barium	135	0.029	2.2	33.4		5	ICPMS	9/22/2003	23:41
Beryllium	9	0.013	0.11	0.54		5	ICPMS	9/22/2003	23:41
Cadmium	111	0.017	0.11	0.11	B	5	ICPMS	9/22/2003	23:41
Chromium	52	0.32	1.1	2.0		5	ICPMS	9/22/2003	23:41
Cobalt	59	0.032	1.1	0.93	B	5	ICPMS	9/22/2003	23:41
Copper	65	0.55	1.1	3.4		5	ICPMS	9/22/2003	23:41
Lead	208	0.077	0.33	10.7		5	ICPMS	9/22/2003	23:41
Magnesium	24	3.6	54.9	435	E-V	5	ICPMS	9/22/2003	23:41
Nickel	60	0.21	1.1	2.1		5	ICPMS	9/22/2003	23:41
Selenium	82	0.14	0.55	0.15	B	5	ICPMS	9/22/2003	23:41
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/22/2003	23:41
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/22/2003	23:41
Zinc	66	0.71	2.2	36.5		5	ICPMS	9/22/2003	23:41

Comments: Lot #: F3I130129 Sample #: 54

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95V **Client ID:** LANL-WR-SS-55

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 24.22

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.19	1.3	0.19	U	5	ICPMS	9/22/2003	23:47
Arsenic	75	0.24	0.66	0.66		5	ICPMS	9/22/2003	23:47
Barium	135	0.034	2.6	26.6		5	ICPMS	9/22/2003	23:47
Beryllium	9	0.016	0.13	0.44		5	ICPMS	9/22/2003	23:47
Cadmium	111	0.021	0.13	0.095	B	5	ICPMS	9/22/2003	23:47
Chromium	52	0.38	1.3	2.2		5	ICPMS	9/22/2003	23:47
Cobalt	59	0.038	1.3	0.90	B	5	ICPMS	9/22/2003	23:47
Copper	65	0.66	1.3	3.2		5	ICPMS	9/22/2003	23:47
Lead	208	0.092	0.40	14.3		5	ICPMS	9/22/2003	23:47
Magnesium	24	4.3	66.0	458	EI	5	ICPMS	9/22/2003	23:47
Nickel	60	0.25	1.3	2.0		5	ICPMS	9/22/2003	23:47
Selenium	82	0.17	0.66	0.17	U	5	ICPMS	9/22/2003	23:47
Silver	107	0.017	1.3	0.017	U	5	ICPMS	9/22/2003	23:47
Thallium	205	0.30	1.3	0.30	U	5	ICPMS	9/22/2003	23:47
Zinc	66	0.86	2.6	40.7		5	ICPMS	9/22/2003	23:47

Comments: Lot #: F3I130129 Sample #: 55

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95W **Client ID:** LANL-WR-SS-56

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	U	5	ICPMS	9/23/2003	0:08
Arsenic	75	0.20	0.54	0.57		5	ICPMS	9/23/2003	0:08
Barium	135	0.028	2.2	21.3		5	ICPMS	9/23/2003	0:08
Beryllium	9	0.013	0.11	0.39		5	ICPMS	9/23/2003	0:08
Cadmium	111	0.017	0.11	0.067	B	5	ICPMS	9/23/2003	0:08
Chromium	52	0.31	1.1	1.6		5	ICPMS	9/23/2003	0:08
Cobalt	59	0.031	1.1	0.71	B	5	ICPMS	9/23/2003	0:08
Copper	65	0.54	1.1	2.5		5	ICPMS	9/23/2003	0:08
Lead	208	0.076	0.33	9.0		5	ICPMS	9/23/2003	0:08
Magnesium	24	3.5	54.1	355	E	5	ICPMS	9/23/2003	0:08
Nickel	60	0.21	1.1	1.9		5	ICPMS	9/23/2003	0:08
Selenium	82	0.14	0.54	0.14	U	5	ICPMS	9/23/2003	0:08
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/23/2003	0:08
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/23/2003	0:08
Zinc	66	0.70	2.2	32.5		5	ICPMS	9/23/2003	0:08

Comments: Lot #: F3I130129 Sample #: 56

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95X **Client ID:** LANL-WR-SS-57

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.67

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	U	5	ICPMS	9/23/2003	0:14
Arsenic	75	0.21	0.57	1.3		5	ICPMS	9/23/2003	0:14
Barium	135	0.030	2.3	73.4		5	ICPMS	9/23/2003	0:14
Beryllium	9	0.014	0.12	0.51		5	ICPMS	9/23/2003	0:14
Cadmium	111	0.018	0.12	0.16		5	ICPMS	9/23/2003	0:14
Chromium	52	0.33	1.2	2.2		5	ICPMS	9/23/2003	0:14
Cobalt	59	0.033	1.2	1.1	B	5	ICPMS	9/23/2003	0:14
Copper	65	0.57	1.2	4.0		5	ICPMS	9/23/2003	0:14
Lead	208	0.080	0.34	15.9		5	ICPMS	9/23/2003	0:14
Magnesium	24	3.7	57.3	477	E	5	ICPMS	9/23/2003	0:14
Nickel	60	0.22	1.2	2.2		5	ICPMS	9/23/2003	0:14
Selenium	82	0.15	0.57	0.19	B	5	ICPMS	9/23/2003	0:14
Silver	107	0.014	1.2	0.014	U	5	ICPMS	9/23/2003	0:14
Thallium	205	0.26	1.2	0.26	U	5	ICPMS	9/23/2003	0:14
Zinc	66	0.74	2.3	49.0		5	ICPMS	9/23/2003	0:14

10/17/03

Comments: Lot #: F3I130129 Sample #: 57

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX950 **Client ID:** LANL-WR-SS-58

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.11

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	U	5	ICPMS	9/23/2003	0:20
Arsenic	75	0.21	0.56	0.45	B	5	ICPMS	9/23/2003	0:20
Barium	135	0.029	2.2	18.2		5	ICPMS	9/23/2003	0:20
Beryllium	9	0.013	0.11	0.30		5	ICPMS	9/23/2003	0:20
Cadmium	111	0.017	0.11	0.063	B	5	ICPMS	9/23/2003	0:20
Chromium	52	0.32	1.1	1.5		5	ICPMS	9/23/2003	0:20
Cobalt	59	0.032	1.1	0.59	B	5	ICPMS	9/23/2003	0:20
Copper	65	0.56	1.1	2.7		5	ICPMS	9/23/2003	0:20
Lead	208	0.078	0.33	9.4		5	ICPMS	9/23/2003	0:20
Magnesium	24	3.6	55.6	364	E	5	ICPMS	9/23/2003	0:20
Nickel	60	0.21	1.1	1.5		5	ICPMS	9/23/2003	0:20
Selenium	82	0.15	0.56	0.32	B	5	ICPMS	9/23/2003	0:20
Silver	107	0.014	1.1	0.014	U	5	ICPMS	9/23/2003	0:20
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/23/2003	0:20
Zinc	66	0.72	2.2	42.4		5	ICPMS	9/23/2003	0:20

Comments: Lot #: F3I130129 Sample #: 58

Version 4.75.1

U Result is less than the IDL

B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX951 **Client ID:** LANL-WR-SS-59

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.84

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	U	5	ICPMS	9/23/2003	0:26
Arsenic	75	0.21	0.57	0.67		5	ICPMS	9/23/2003	0:26
Barium	135	0.030	2.3	18.9		5	ICPMS	9/23/2003	0:26
Beryllium	9	0.014	0.12	0.41		5	ICPMS	9/23/2003	0:26
Cadmium	111	0.018	0.12	0.10	B	5	ICPMS	9/23/2003	0:26
Chromium	52	0.33	1.2	1.5		5	ICPMS	9/23/2003	0:26
Cobalt	59	0.033	1.2	0.65	B	5	ICPMS	9/23/2003	0:26
Copper	65	0.57	1.2	3.1		5	ICPMS	9/23/2003	0:26
Lead	208	0.080	0.34	14.2		5	ICPMS	9/23/2003	0:26
Magnesium	24	3.7	57.4	310	E	5	ICPMS	9/23/2003	0:26
Nickel	60	0.22	1.2	1.5		5	ICPMS	9/23/2003	0:26
Selenium	82	0.15	0.57	0.15	U	5	ICPMS	9/23/2003	0:26
Silver	107	0.014	1.2	0.014	U	5	ICPMS	9/23/2003	0:26
Thallium	205	0.26	1.2	0.26	U	5	ICPMS	9/23/2003	0:26
Zinc	66	0.75	2.3	46.9		5	ICPMS	9/23/2003	0:26

Comments: Lot #: F3I130129 Sample #: 59

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX952 **Client ID:** LANL-WR-SS-60

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260307

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.43

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	U	5	ICPMS	9/23/2003	0:32
Arsenic	75	0.21	0.58	0.86		5	ICPMS	9/23/2003	0:32
Barium	135	0.030	2.3	17.2		5	ICPMS	9/23/2003	0:32
Beryllium	9	0.014	0.12	0.56		5	ICPMS	9/23/2003	0:32
Cadmium	111	0.018	0.12	0.11	B	5	ICPMS	9/23/2003	0:32
Chromium	52	0.34	1.2	1.6		5	ICPMS	9/23/2003	0:32
Cobalt	59	0.034	1.2	0.60	B	5	ICPMS	9/23/2003	0:32
Copper	65	0.58	1.2	3.2		5	ICPMS	9/23/2003	0:32
Lead	208	0.081	0.35	10.1		5	ICPMS	9/23/2003	0:32
Magnesium	24	3.8	57.8	379	E J	5	ICPMS	9/23/2003	0:32
Nickel	60	0.22	1.2	1.6		5	ICPMS	9/23/2003	0:32
Selenium	82	0.15	0.58	0.15	U	5	ICPMS	9/23/2003	0:32
Silver	107	0.014	1.2	0.014	U	5	ICPMS	9/23/2003	0:32
Thallium	205	0.27	1.2	0.27	U	5	ICPMS	9/23/2003	0:32
Zinc	66	0.75	2.3	46.2		5	ICPMS	9/23/2003	0:32

Comments: Lot #: F3I130129 Sample #: 60

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95D **Client ID:** LANL-WR-SS-41

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.2	24.4	1920	N	1	ICP	9/19/2003	17:24
Calcium	317.93	3.1	611	1520		1	ICP	9/19/2003	17:24
Iron	259.94	1.5	12.2	3970	N	1	ICP	9/19/2003	17:24
Manganese	257.61	0.077	1.8	191	N	1	ICP	9/19/2003	17:24
Potassium	766.49	150	611	362	B	1	ICP	9/19/2003	20:33
Sodium	589	8.0	611	94.9	B	1	ICP	9/19/2003	17:24
Vanadium	292.40	0.31	6.1	4.7	B	1	ICP	9/19/2003	17:24

Comments: Lot #: F3I130129 Sample #: 41

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95E **Client ID:** LANL-WR-SS-42

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.78

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.5	1420	N	1	ICP	9/19/2003	17:40
Calcium	317.93	2.7	536	2110		1	ICP	9/19/2003	17:40
Iron	259.94	1.3	10.7	6680	N	1	ICP	9/19/2003	17:40
Manganese	257.61	0.068	1.6	190	N	1	ICP	9/19/2003	17:40
Potassium	766.49	132	536	272	B	1	ICP	9/19/2003	20:49
Sodium	589	7.0	536	132	B	1	ICP	9/19/2003	17:40
Vanadium	292.40	0.27	5.4	14.0		1	ICP	9/19/2003	17:40

Comments: Lot #: F3I130129 Sample #: 42

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95D **Client ID:** LANL-WR-SS-41

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 18.14

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.041	0.020	U	1	CVAA	9/16/2003	13:00

Comments: Lot #: F3I130129 Sample #: 41

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95E **Client ID:** LANL-WR-SS-42

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.78

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	13:07

Comments: Lot #: F31130129 Sample #: 42

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

[redacted]

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95F **Client ID:** LANL-WR-SS-43

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.1	2630	N	1	ICP	9/19/2003	17:44
Calcium	317.93	3.0	578	2150		1	ICP	9/19/2003	17:44
Iron	259.94	1.4	11.6	6140	N	1	ICP	9/19/2003	17:44
Manganese	257.61	0.073	1.7	221	N	1	ICP	9/19/2003	17:44
Potassium	766.49	142	578	340	B	1	ICP	9/19/2003	20:53
Sodium	589	7.5	578	90.2	B	1	ICP	9/19/2003	17:44
Vanadium	292.40	0.30	5.8	8.2		1	ICP	9/19/2003	17:44

Comments: Lot #: F3I130129 Sample #: 43

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95G **Client ID:** LANL-WR-SS-44

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.98

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.0	1480	N	1	ICP	9/19/2003	17:48
Calcium	317.93	2.8	549	1310		1	ICP	9/19/2003	17:48
Iron	259.94	1.3	11.0	5550	N	1	ICP	9/19/2003	17:48
Manganese	257.61	0.069	1.7	153	N	1	ICP	9/19/2003	17:48
Sodium	589	7.2	549	82.7	B	1	ICP	9/19/2003	17:48
Vanadium	292.40	0.28	5.5	6.5		1	ICP	9/19/2003	17:48

Comments: Lot #: F3I130129 Sample #: 44

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95F **Client ID:** LANL-WR-SS-43

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.53

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.039	0.10		1	CVAA	9/16/2003	13:13

Comments: Lot #: F3I130129 Sample #: 43

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95G **Client ID:** LANL-WR-SS-44

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.98

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.018	U	1	CVAA	9/16/2003	13:15

Comments: Lot #: F31130129 Sample #: 44

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95H **Client ID:** LANL-WR-SS-45

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 14.71

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.5	3300	N	1	ICP	9/19/2003	17:52
Calcium	317.93	3.0	586	2340		1	ICP	9/19/2003	17:52
Iron	259.94	1.4	11.7	6390	N	1	ICP	9/19/2003	17:52
Manganese	257.61	0.074	1.8	253	N	1	ICP	9/19/2003	17:52
Potassium	766.49	144	586	599		1	ICP	9/19/2003	21:02
Sodium	589	7.6	586	98.7	B	1	ICP	9/19/2003	17:52
Vanadium	292.40	0.30	5.9	9.3		1	ICP	9/19/2003	17:52

Comments: Lot #: F3I130129 Sample #: 45

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95H **Client ID:** LANL-WR-SS-45

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 14.71

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.039	0.24		1	CVAA	9/16/2003	13:17

Comments: Lot #: F3I130129 Sample #: 45

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95J **Client ID:** LANL-WR-SS-46

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 11.25

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.5	6000	N	1	ICP	9/19/2003	21:14
Calcium	317.93	2.9	563	2250		1	ICP	9/19/2003	21:14
Iron	259.94	1.4	11.3	9130	N	1	ICP	9/19/2003	21:14
Manganese	257.61	0.071	1.7	427	N	1	ICP	9/19/2003	21:14
Potassium	766.49	139	563	1130		1	ICP	9/19/2003	21:14
Sodium	589	7.4	563	67.7	B	1	ICP	9/19/2003	21:14
Vanadium	292.40	0.29	5.6	14.3		1	ICP	9/19/2003	21:14

Comments: Lot #: F3I130129 Sample #: 46

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95J **Client ID:** LANL-WR-SS-46

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 11.25

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.040		1	CVAA	9/16/2003	13:19

Comments: Lot #: F3I130129 Sample #: 46

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95K **Client ID:** LANL-WR-SS-47

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.2	24.6	4500	N	1	ICP	9/19/2003	21:18
Calcium	317.93	3.1	614	2340		1	ICP	9/19/2003	21:18
Iron	259.94	1.5	12.3	7910	N	1	ICP	9/19/2003	21:18
Manganese	257.61	0.077	1.8	365	N	1	ICP	9/19/2003	21:18
Potassium	766.49	151	614	851		1	ICP	9/19/2003	21:18
Sodium	589	8.0	614	65.2	B	1	ICP	9/19/2003	21:18
Vanadium	292.40	0.31	6.1	10.2		1	ICP	9/19/2003	21:18

Comments: Lot #: F3I130129 Sample #: 47

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95K **Client ID:** LANL-WR-SS-47

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 18.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.021	0.041	0.057		1	CVAA	9/16/2003	13:21

Comments: Lot #: F3I130129 Sample #: 47

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95L **Client ID:** LANL-WR-SS-48

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.0	3190	N	1	ICP	9/19/2003	21:22
Calcium	317.93	2.8	549	1080		1	ICP	9/19/2003	21:22
Iron	259.94	1.3	11.0	5700	N	1	ICP	9/19/2003	21:22
Manganese	257.61	0.069	1.7	287	N	1	ICP	9/19/2003	21:22
Potassium	766.49	135	549	689		1	ICP	9/19/2003	21:22
Sodium	589	7.2	549	58.5	B	1	ICP	9/19/2003	21:22
Vanadium	292.40	0.28	5.5	8.2		1	ICP	9/19/2003	21:22

Comments: Lot #: F3I130129 Sample #: 48

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX961 **Client ID:** LANL-WR-SS-67

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258194

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**19.5**	**200**	**26.2**	**B**	**1**	**ICP**	**9/16/2003**	**17:53**
Calcium	**317.93**	**54.4**	**5000**	**84.7**	**B**	**1**	**ICP**	**9/16/2003**	**17:53**
Iron	259.94	6.8	100	6.8	U	1	ICP	9/16/2003	17:53
Manganese	257.61	0.35	15.0	0.35	U	1	ICP	9/16/2003	17:53
Potassium	**766.49**	**1330**	**5000**	**1470**	**B**	**1**	**ICP**	**9/16/2003**	**17:53**
Sodium	**589**	**246**	**5000**	**360**	**B**	**1**	**ICP**	**9/16/2003**	**17:53**
Vanadium	292.40	4.3	20.0	4.3	U	1	ICP	9/16/2003	17:53

Comments: Lot #: F31130129 Sample #: 67

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX961 **Client ID:** LANL-WR-SS-67

Matrix: Water **Units:** ug/L **Prep Date:** 9/17/2003 **Prep Batch:** 3259389

Weight: 30 **Volume:** 30 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.10	0.20	0.10	U	1	CVAA	9/17/2003	14:58

PES
10/16/03

Comments: Lot #: F31130129 Sample #: 67

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

Data-Validation Cover Sheet

☐ **Rejected Data**

Section I

Request Number: LANL Waste Removal Validation Date: 10-20-03 Lab Code: Perchlorate

Contract Laboratory Name: STL – St. Louis

Validator: Brienne Funston Organization: Portage Environmental, Inc.

Analytical Suite (check all that apply):

- ☐ Volatile Organics
- ☐ Semivolatile Organics
- ☐ Organochlorine Pesticides/Polychlorinated Biphenyls
- ☐ High Explosives
- ☒ Inorganics
- ☐ Radiochemistry

Other (describe): LANL Airport Waste Removal Project; Post Removal Sampling Data; Perchlorate

Section II—Completeness Check

Yes	No	n/a	(check one)	Yes	No	n/a	(check one)
☒	☐	☐	1. Chain-of-custody form(s)	☒	☐	☐	6. Raw/BSS data
☒	☐	☐	2. Case narrative	☒	☐	☐	7. Quality control forms
☒	☐	☐	3. Sample result form(s)	☐	☐	☒	8. Quantitation reports
☐	☐	☒	4. Sample chromatograms	☐	☐	☒	9. TICs forms
☐	☐	☒	5. Standard chromatograms	☐	☐	☒	10. TICs mass spectra

Identify any samples in the assigned Request Number that are missing:

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

(Attach additional comment sheets as necessary.)

Validator's signature: [signature] Date: 10/20/03

SOP-15.05, R1

Los Alamos National Laboratory
RRES-Remediation Program

Inorganic Data-Validation Checklist

Yes	No	n/a	(check one)	Assign qualifier listed belo if criteria = Yes: Detected analyte	Undetected analyte
☐	☒	☐	1. The preparation Blank (PB), ICB, or CCB was not analyzed with the samples.	Present	
☐	☒	☐	2. The analyte detected in PB and the sample result for the analyte =5x the amount in PB.	Acceptable	
☐	☒	☐	3. The initial or continuing calibration verification (ICV or CCV) was not analyzed with the samples.	Present	
☐	☒	☐	4. The ICV or CCV recovery is >UAL.	Acceptable	
☐	☒	☐	5. The ICV or CCV recovery is >UWL and =UAL.	Acceptable	
☐	☒	☐	6. The ICV or CCV recovery is <LWL but =LAL.	Acceptable	
☐	☒	☐	7. The ICV or CCV recovery is <LAL.	Acceptable	
☐	☐	☒	8. For ICPMS and CN analyses: The correlation coefficient is <0.995?	Not Applicable	
☐	☐	☒	9. The interference check sample (ICS) was not analyzed with the samples.	Not Applicable	
☐	☐	☒	10. The ICS recovery is >120%.	Not Applicable	
☐	☐	☒	11. The ICS recovery is =50% and <80%.	Not Applicable	
☐	☐	☒	12. The ICS recovery is <50%.	Not Applicable	
☐	☒	☐	13. The MS was not analyzed with the sample without explanation.	Present	
☐	☒	☐	14. Insufficient sample volume for MS analyses was provided.	Sufficient Sample Provided	
☐	☒	☐	15. An MS analyses was performed on a non-LANL sample.	Performed on LANL Samples	
☐	☒	☐	16. The MS recovery was > 150%.*	None > 150%	
☒	☐	☐	17. The MS recovery was >125% and =150%.	Perchlorate (for 20 samples)	
☐	☒	☐	18. The MS recovery was =30% and <75%.	None < 75%	
☐	☒	☐	19. The MS recovery was <30%.	None < 30%	
☐	☒	☐	20. A duplicate sample was not analyzed without explanation.	Present	
☐	☒	☐	21. Insufficient sample volume for duplicate sample analysis was provided.	Sufficient Sample Provided	
☐	☒	☐	22. A duplicate sample was performed on a non-LANL sample.	Performed on LANL Samples	
☐	☒	☐	23. Both the sample and the duplicate are =5x RL, and the RPD is >20 for water samples or >35 for soil samples.	None > 20% RPD for Waters None > 35% RPD for Soils	
☐	☒	☐	24. Either the sample or Dup is =5x the RL and the sample and Dup results are not within ±1x the RL for water or ±2x the RL for soil.	Acceptable	
☐	☒	☐	25. The LCS was not analyzed with the samples.	Present	
☐	☒	☐	26. The LCS recovery was >the UWL.	None > UWL	
☐	☒	☐	27. The LCS recovery was =LAL and <LWL.	None < LWL	
☐	☒	☐	28. The LCS recovery was <the LAL.	None < LAL	
☐	☐	☒	29. The serial dilution sample was not analyzed with the samples.	Not Applicable	
☐	☐	☒	30. The serial dilution sample was performed on a non-LANL sample.	Not Applicable	
☐	☐	☒	31. The RPD between the sample and the serial dilution sample is >10, and the undiluted sample result is >50x the RL(>100x for ICPMS).	Not Applicable	
☐	☒	☐	32. The sample was analyzed past the appropriate hold time.	Acceptable	
☐	☒	☐	33. The sample was analyzed past double the hold time.	Acceptable	
☐	☐	☒	34. B-flagged sample results are present.	All Sample Results < RL	
☐	☒	☐	35. Other obvious data quality issues are identified.	All are listed above. See Over Assessment of Data for detail:	

Overall Assessment of Data

A total of 64 solid and 3 liquid field blanks were analyzed from the Los Alamos Airport, Waste Removal Project Post Removal Sampling effort. The results of data validation for this data set are outlined below.

LANL-WR-SS-1 through LANL-WR-SS-20 [Soils]
All perchlorate results are acceptable for use without limitation for this group of samples.

LANL-WR-SS-21 through LANL-WR-SS-40 [Soils]
All perchlorate results are acceptable for use without limitation for this group of samples.

LANL-WR-SS-41 through LANL-WR-SS-60 [Soils]
The matrix spike (MS) recover for perchlorate (126%) was above the upper control limit of 125%. However, all perchlorate results for this batch are below the detecton limit. Therefore, no matrix interference is suspected. All perchlorate results are acceptable for use without limitations for this group of samples.

LANL-WR-SS-61 through LANL-WR-SS-64 [Field Duplicates – Soils]
All perchlorate results are acceptable for use without limitation for this group of samples.

LANL-WR-SS-65 through LANL-WR-SS-67 [Liquid Field Blanks]
All perchlorate results are acceptable for use without limitation for this group of samples.

Attachment A

Form I's Corrected for Qualification

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-1

General Chemistry

Lot-Sample #...: F3I130129-001 **Work Order #...:** FX925 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 07:50 **Date Received..:** 09/12/03
% Moisture.....: 6.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-2

General Chemistry

Lot-Sample #...: F3I130129-002 **Work Order #...:** FX93G **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:05 **Date Received..:** 09/12/03
% Moisture.....: 6.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.6	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-3

General Chemistry

Lot-Sample #...: F3I130129-003 **Work Order #...:** FX93H **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:15 **Date Received..:** 09/12/03
% Moisture.....: 9.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**9.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.1	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-4

General Chemistry

Lot-Sample #...: F3I130129-004 **Work Order #...:** FX93J **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:20 **Date Received..:** 09/12/03
% Moisture.....: 9.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**9.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.1	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-5

General Chemistry

Lot-Sample #...: F3I130129-005 **Work Order #...:** FX93P **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:30 **Date Received..:** 09/12/03
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-6

General Chemistry

Lot-Sample #...: F3I130129-006 **Work Order #...:** FX93T **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:35 **Date Received..:** 09/12/03
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.5**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-7

General Chemistry

Lot-Sample #...: F3I130129-007 **Work Order #...:** FX93V **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:50 **Date Received..:** 09/12/03
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**16.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	47.6	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-8

General Chemistry

Lot-Sample #...: F3I130129-008 **Work Order #...:** FX93X **Matrix.....:** SOLID
Date Sampled...: 09/09/03 08:55 **Date Received..:** 09/12/03
% Moisture.....: 9.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**9.2**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.0	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-9

General Chemistry

Lot-Sample #...: F3I130129-009 **Work Order #...:** FX930 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:05 **Date Received..:** 09/12/03
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**19.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	49.6	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-10

General Chemistry

Lot-Sample #...: F3I130129-010 **Work Order #...:** FX931 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:10 **Date Received..:** 09/12/03
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.8	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-11

General Chemistry

Lot-Sample #...: F3I130129-011 **Work Order #...:** FX932 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:15 **Date Received..:** 09/12/03
% Moisture.....: 9.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**9.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.1	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-12

General Chemistry

Lot-Sample #...: F3I130129-012 **Work Order #...:** FX933 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:25 **Date Received..:** 09/12/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-13

General Chemistry

Lot-Sample #...: F3I130129-013 **Work Order #...:** FX94A **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:30 **Date Received..:** 09/12/03
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**16.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	47.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-14

General Chemistry

Lot-Sample #...: F3I130129-014 **Work Order #...:** FX94C **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:33 **Date Received..:** 09/12/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	12.2	0.10	%	MCAWW 160.3 MOD	09/16-09/17/03	3259514
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-15

General Chemistry

Lot-Sample #...: F3I130129-015 **Work Order #...:** FX94E **Matrix.....:** SOLID
Date Sampled...: 09/09/03 09:40 **Date Received..:** 09/12/03
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**13.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.2	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-16

General Chemistry

Lot-Sample #...: F3I130129-016 **Work Order #...:** FX94F **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:15 **Date Received..:** 09/12/03
% Moisture.....: 8.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**8.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.9	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-17

General Chemistry

Lot-Sample #...: F3I130129-017 **Work Order #...:** FX94G **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:20 **Date Received..:** 09/12/03
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	13.8	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.4	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-18

General Chemistry

Lot-Sample #...: F3I130129-018 **Work Order #...:** FX94H **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:23 **Date Received..:** 09/12/03
% Moisture.....: 4.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**4.2**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	41.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-19

General Chemistry

Lot-Sample #...: F3I130129-019 **Work Order #...:** FX94K **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:40 **Date Received..:** 09/12/03
% Moisture.....: 6.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.0	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-20

General Chemistry

Lot-Sample #...: F3I130129-020 **Work Order #...:** FX94L **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:45 **Date Received..:** 09/12/03
% Moisture.....: 6.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.7**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259514**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.9	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262409
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-21

General Chemistry

Lot-Sample #...: F3I130129-021 **Work Order #...:** FX94M **Matrix.....:** SOLID
Date Sampled...: 09/09/03 10:55 **Date Received..:** 09/12/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.6	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-22

General Chemistry

Lot-Sample #...: F3I130129-022 **Work Order #...:** FX94P **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:05 **Date Received..:** 09/12/03
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.9	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-23

General Chemistry

Lot-Sample #...: F3I130129-023 **Work Order #...:** FX94Q **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:10 **Date Received..:** 09/12/03
% Moisture.....: 7.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**7.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.4	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-24

General Chemistry

Lot-Sample #...: F3I130129-024 **Work Order #...:** FX94R **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:20 **Date Received..:** 09/12/03
% Moisture.....: 7.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**7.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.1	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-25

General Chemistry

Lot-Sample #...: F3I130129-025 **Work Order #...:** FX94T **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:30 **Date Received..:** 09/12/03
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-26

General Chemistry

Lot-Sample #...: F3I130129-026 **Work Order #...:** FX94V **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:35 **Date Received..:** 09/12/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-27

General Chemistry

Lot-Sample #...: F3I130129-027 **Work Order #...:** FX94W **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:45 **Date Received..:** 09/12/03
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**13.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.4	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-28

General Chemistry

Lot-Sample #...: F3I130129-028 **Work Order #...:** FX94X **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:50 **Date Received..:** 09/12/03
% Moisture.....: 17

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**17.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	48.2	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-29

General Chemistry

Lot-Sample #...: F3I130129-029 **Work Order #...:** FX940 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 11:55 **Date Received..:** 09/12/03
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**20.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	50.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-30

General Chemistry

Lot-Sample #...: F3I130129-030 **Work Order #...:** FX941 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 12:00 **Date Received..:** 09/12/03
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**14.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	47.0	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-31

General Chemistry

Lot-Sample #...: F3I130129-031 **Work Order #...:** FX942 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:15 **Date Received..:** 09/12/03
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-32

General Chemistry

Lot-Sample #...: F3I130129-032 **Work Order #...:** FX943 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:18 **Date Received..:** 09/12/03
% Moisture.....: 6.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.8	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-33

General Chemistry

Lot-Sample #...: F3I130129-033 **Work Order #...:** FX944 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:23 **Date Received..:** 09/12/03
% Moisture.....: 8.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**8.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-34

General Chemistry

Lot-Sample #...: F3I130129-034 **Work Order #...:** FX945 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:30 **Date Received..:** 09/12/03
% Moisture.....: 3.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**3.7**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	41.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-35

General Chemistry

Lot-Sample #...: F3I130129-035 **Work Order #...:** FX946 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:42 **Date Received..:** 09/12/03
% Moisture.....: 23

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**23.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	52.2	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-36

General Chemistry

Lot-Sample #...: F3I130129-036 **Work Order #...:** FX947 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:50 **Date Received..:** 09/12/03
% Moisture.....: 5.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**5.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.3	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-37

General Chemistry

Lot-Sample #...: F3I130129-037 **Work Order #...:** FX948 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:00 **Date Received..:** 09/12/03
% Moisture.....: 4.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**4.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	41.7	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-38

General Chemistry

Lot-Sample #...: F3I130129-038 **Work Order #...:** FX949 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:10 **Date Received..:** 09/12/03
% Moisture.....: 5.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	5.5	0.10	%	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.3	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-39

General Chemistry

Lot-Sample #...: F3I130129-039 **Work Order #...:** FX95A **Matrix.....:** SOLID
Date Sampled...: 09/09/03 14:15 **Date Received..:** 09/12/03
% Moisture.....: 5.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**5.2**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.2	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-40

General Chemistry

Lot-Sample #...: F3I130129-040 **Work Order #...:** FX95C **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:20 **Date Received..:** 09/12/03
% Moisture.....: 5.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**5.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259515**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.5	ug/kg	EPA-DW1 314.0	09/18-09/19/03	3262410
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-41

General Chemistry

Lot-Sample #...: F3I130129-041 **Work Order #...:** FX95D **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:25 **Date Received..:** 09/12/03
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**18.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	48.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-42

General Chemistry

Lot-Sample #...: F3I130129-042 **Work Order #...:** FX95E **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:35 **Date Received..:** 09/12/03
% Moisture.....: 6.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-43

General Chemistry

Lot-Sample #...: F3I130129-043 **Work Order #...:** FX95F **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:40 **Date Received..:** 09/12/03
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**13.5**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.3	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-44

General Chemistry

Lot-Sample #...: F3I130129-044 **Work Order #...:** FX95G **Matrix.....:** SOLID
Date Sampled...: 09/09/03 15:55 **Date Received..:** 09/12/03
% Moisture.....: 9.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**9.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-45

General Chemistry

Lot-Sample #...: F3I130129-045 **Work Order #...:** FX95H **Matrix.....:** SOLID
Date Sampled...: 09/09/03 16:00 **Date Received..:** 09/12/03
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**14.7**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-46

General Chemistry

Lot-Sample #...: F3I130129-046 **Work Order #...:** FX95J **Matrix.....:** SOLID
Date Sampled...: 09/09/03 16:50 **Date Received..:** 09/12/03
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**11.2**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.1	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-47

General Chemistry

Lot-Sample #...: F3I130129-047 **Work Order #...:** FX95K **Matrix.....:** SOLID
Date Sampled...: 09/09/03 16:55 **Date Received..:** 09/12/03
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**18.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	49.1	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-48

General Chemistry

Lot-Sample #...: F3I130129-048 **Work Order #...:** FX95L **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:00 **Date Received..:** 09/12/03
% Moisture.....: 8.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**8.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-49

General Chemistry

Lot-Sample #...: F3I130129-049 **Work Order #...:** FX95M **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:10 **Date Received..:** 09/12/03
% Moisture.....: 8.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**8.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.6	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-50

General Chemistry

Lot-Sample #...: F3I130129-050 **Work Order #...:** FX95N **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:20 **Date Received..:** 09/12/03
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**15.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	47.1	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-51

General Chemistry

Lot-Sample #...: F3I130129-051 **Work Order #...:** FX95P **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:25 **Date Received..:** 09/12/03
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**24.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	52.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-52

General Chemistry

Lot-Sample #...: F3I130129-052 **Work Order #...:** FX95Q **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:35 **Date Received..:** 09/12/03
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**18.5**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	49.1	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-53

General Chemistry

Lot-Sample #...: F3I130129-053 **Work Order #...:** FX95R **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:40 **Date Received..:** 09/12/03
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**20.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	50.6	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-54

General Chemistry

Lot-Sample #...: F3I130129-054 **Work Order #...:** FX95T **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:45 **Date Received..:** 09/12/03
% Moisture.....: 8.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**8.9**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-55

General Chemistry

Lot-Sample #...: F3I130129-055 **Work Order #...:** FX95V **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:50 **Date Received..:** 09/12/03
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**24.2**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	52.8	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-56

General Chemistry

Lot-Sample #...: F3I130129-056 **Work Order #...:** FX95W **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:53 **Date Received..:** 09/12/03
% Moisture.....: 7.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**7.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	43.3	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-57

General Chemistry

Lot-Sample #...: F3I130129-057 **Work Order #...:** FX95X **Matrix.....:** SOLID
Date Sampled...: 09/09/03 17:55 **Date Received..:** 09/12/03
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.7**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.8	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-58

General Chemistry

Lot-Sample #...: F3I130129-058 **Work Order #...:** FX950 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:05 **Date Received..:** 09/12/03
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**10.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	44.5	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-59

General Chemistry

Lot-Sample #...: F3I130129-059 **Work Order #...:** FX951 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:08 **Date Received..:** 09/12/03
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.8**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.9	ug/kg	EPA-DW1 314.0	09/19/03	3262411
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95L **Client ID:** LANL-WR-SS-48

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.89

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.019	B	1	CVAA	9/16/2003	13:23

Comments: Lot #: F3I130129 Sample #: 48

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95N **Client ID:** LANL-WR-SS-50

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 15.03

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.5	1620	N	1	ICP	9/19/2003	21:30
Calcium	317.93	3.0	588	1050		1	ICP	9/19/2003	21:30
Iron	259.94	1.4	11.8	3490	N	1	ICP	9/19/2003	21:30
Manganese	257.61	0.074	1.8	178	N	1	ICP	9/19/2003	21:30
Potassium	766.49	145	588	182	B	1	ICP	9/19/2003	21:30
Sodium	589	7.7	588	43.3	B	1	ICP	9/19/2003	21:30
Vanadium	292.40	0.30	5.9	4.5	B	1	ICP	9/19/2003	21:30

Comments: Lot #: F3I130129 Sample #: 50

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95M **Client ID:** LANL-WR-SS-49

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.26

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.022	B	1	CVAA	9/16/2003	13:25

Comments: Lot #: F3I130129 Sample #: 49

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95M **Client ID:** LANL-WR-SS-49

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.26

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.8	2960	N	1	ICP	9/19/2003	21:26
Calcium	317.93	2.8	545	1250		1	ICP	9/19/2003	21:26
Iron	259.94	1.3	10.9	4160	N	1	ICP	9/19/2003	21:26
Manganese	257.61	0.069	1.6	208	N	1	ICP	9/19/2003	21:26
Potassium	766.49	134	545	1060		1	ICP	9/19/2003	21:26
Sodium	589	7.1	545	87.7	B	1	ICP	9/19/2003	21:26
Vanadium	292.40	0.28	5.5	5.3	B	1	ICP	9/19/2003	21:26

Comments: Lot #: F3I130129 Sample #: 49

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95N **Client ID:** LANL-WR-SS-50

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 15.03

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.039	0.020	U	1	CVAA	9/16/2003	13:27

Comments: Lot #: F3I130129 Sample #: 50

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95P **Client ID:** LANL-WR-SS-51

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 24.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.4	26.5	2710	N	1	ICP	9/19/2003	21:34
Calcium	317.93	3.4	662	2410		1	ICP	9/19/2003	21:34
Iron	259.94	1.6	13.2	5920	N	1	ICP	9/19/2003	21:34
Manganese	257.61	0.083	2.0	312	N	1	ICP	9/19/2003	21:34
Potassium	766.49	163	662	260	B	1	ICP	9/19/2003	21:34
Sodium	589	8.6	662	235	B	1	ICP	9/19/2003	21:34
Vanadium	292.40	0.34	6.6	7.3		1	ICP	9/19/2003	21:34

Comments: Lot #: F3I130129 Sample #: 51

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95P **Client ID:** LANL-WR-SS-51

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 24.41

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.022	0.044	0.044	B	1	CVAA	9/16/2003	13:29

Comments: Lot #: F3I130129 Sample #: 51

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95Q **Client ID:** LANL-WR-SS-52

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 18.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.2	24.5	2090	N	1	ICP	9/19/2003	21:38
Calcium	317.93	3.1	613	1710		1	ICP	9/19/2003	21:38
Iron	259.94	1.5	12.3	4290	N	1	ICP	9/19/2003	21:38
Manganese	257.61	0.077	1.8	277	N	1	ICP	9/19/2003	21:38
Potassium	766.49	151	613	211	B	1	ICP	9/19/2003	21:38
Sodium	589	8.0	613	76.0	B	1	ICP	9/19/2003	21:38
Vanadium	292.40	0.31	6.1	3.4	B	1	ICP	9/19/2003	21:38

Comments: Lot #: F3I130129 Sample #: 52

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95Q **Client ID:** LANL-WR-SS-52

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 18.49

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.020	0.041	0.020	U	1	CVAA	9/16/2003	13:31

Comments: Lot #: F3I130129 Sample #: 52

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95R **Client ID:** LANL-WR-SS-53

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 20.93

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.3	25.3	2480	N	1	ICP	9/19/2003	21:43
Calcium	317.93	3.2	632	1590		1	ICP	9/19/2003	21:43
Iron	259.94	1.5	12.7	5600	N	1	ICP	9/19/2003	21:43
Manganese	257.61	0.080	1.9	290	N	1	ICP	9/19/2003	21:43
Potassium	766.49	156	632	437	B	1	ICP	9/19/2003	21:43
Sodium	589	8.3	632	157	B	1	ICP	9/19/2003	21:43
Vanadium	292.40	0.32	6.3	6.1	B	1	ICP	9/19/2003	21:43

Comments: Lot #: F3I130129 Sample #: 53

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95R **Client ID:** LANL-WR-SS-53

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 20.93

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.021	0.042	0.045		1	CVAA	9/16/2003	13:37

Comments: Lot #: F3I130129 Sample #: 53

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95T **Client ID:** LANL-WR-SS-54

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	22.0	2010	N	1	ICP	9/19/2003	21:47
Calcium	317.93	2.8	549	1440		1	ICP	9/19/2003	21:47
Iron	259.94	1.3	11.0	4950	N	1	ICP	9/19/2003	21:47
Manganese	257.61	0.069	1.7	266	N	1	ICP	9/19/2003	21:47
Potassium	766.49	135	549	207	B	1	ICP	9/19/2003	21:47
Sodium	589	7.2	549	63.7	B	1	ICP	9/19/2003	21:47
Vanadium	292.40	0.28	5.5	4.9	B	1	ICP	9/19/2003	21:47

Comments: Lot #: F3I130129 Sample #: 54

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95T **Client ID:** LANL-WR-SS-54

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 8.87

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.037	0.018	U	1	CVAA	9/16/2003	13:39

Comments: Lot #: F3I130129 Sample #: 54

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95V **Client ID:** LANL-WR-SS-55

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 24.22

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.4	26.4	2110	N	1	ICP	9/19/2003	21:59
Calcium	317.93	3.4	660	1110		1	ICP	9/19/2003	21:59
Iron	259.94	1.6	13.2	6040	N	1	ICP	9/19/2003	21:59
Manganese	257.61	0.083	2.0	247	N	1	ICP	9/19/2003	21:59
Potassium	766.49	162	660	394	B	1	ICP	9/19/2003	23:56
Sodium	589	8.6	660	216	B	1	ICP	9/19/2003	21:59
Vanadium	292.40	0.34	6.6	5.5	B	1	ICP	9/19/2003	21:59

Comments: Lot #: F3I130129 Sample #: 55

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95V **Client ID:** LANL-WR-SS-55

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 24.22

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.022	0.044	0.045		1	CVAA	9/16/2003	13:41

Comments: Lot #: F3I130129 Sample #: 55

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

[redacted]

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95W **Client ID:** LANL-WR-SS-56

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 7.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.6	1780	N	1	ICP	9/19/2003	22:03
Calcium	317.93	2.8	541	977		1	ICP	9/19/2003	22:03
Iron	259.94	1.3	10.8	5220	N	1	ICP	9/19/2003	22:03
Manganese	257.61	0.068	1.6	266	N	1	ICP	9/19/2003	22:03
Potassium	766.49	133	541	269	B	1	ICP	9/20/2003	0:00
Sodium	589	7.1	541	54.2	B	1	ICP	9/19/2003	22:03
Vanadium	292.40	0.28	5.4	4.2	B	1	ICP	9/19/2003	22:03

Comments: Lot #: F3I130129 Sample #: 56

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95W **Client ID:** LANL-WR-SS-56

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 7.57

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.018	U	1	CVAA	9/16/2003	13:43

Comments: Lot #: F3I130129 Sample #: 56

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

[redacted]

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95X **Client ID:** LANL-WR-SS-57

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.67

Element	WL/ Mass	MDL	Report Limit	Conc.	Q	DF	Instr.	Anal Date	Anal Time
Aluminum	308.22	3.0	22.9	2110	N	1	ICP	9/19/2003	22:07
Calcium	317.93	2.9	573	1620		1	ICP	9/19/2003	22:07
Iron	259.94	1.4	11.5	6060	N	1	ICP	9/19/2003	22:07
Manganese	257.61	0.072	1.7	346	N	1	ICP	9/19/2003	22:07
Potassium	766.49	141	573	479	B	1	ICP	9/20/2003	0:04
Sodium	589	7.5	573	77.1	B	1	ICP	9/19/2003	22:07
Vanadium	292.40	0.29	5.7	5.4	B	1	ICP	9/19/2003	22:07

Comments: Lot #: F3I130129 Sample #: 57

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX95X **Client ID:** LANL-WR-SS-57

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.67

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.022	B	1	CVAA	9/16/2003	13:45

Comments: Lot #: F31130129 Sample #: 57

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX950 **Client ID:** LANL-WR-SS-58

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 10.11

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.9	22.3	1480	N	1	ICP	9/19/2003	22:11
Calcium	317.93	2.8	556	973		1	ICP	9/19/2003	22:11
Iron	259.94	1.3	11.1	5820	N	1	ICP	9/19/2003	22:11
Manganese	257.61	0.070	1.7	254	N	1	ICP	9/19/2003	22:11
Potassium	766.49	137	556	381	B	1	ICP	9/20/2003	0:08
Sodium	589	7.3	556	66.2	B	1	ICP	9/19/2003	22:11
Vanadium	292.40	0.28	5.6	4.2	B	1	ICP	9/19/2003	22:11

Comments: Lot #: F3I130129 Sample #: 58

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX950 **Client ID:** LANL-WR-SS-58

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 10.11

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.037	0.019	U	1	CVAA	9/16/2003	13:47

Comments: Lot #: F3I130129 Sample #: 58

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX951 **Client ID:** LANL-WR-SS-59

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.84

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.0	1420	N	1	ICP	9/19/2003	22:15
Calcium	317.93	2.9	574	1310		1	ICP	9/19/2003	22:15
Iron	259.94	1.4	11.5	6500	N	1	ICP	9/19/2003	22:15
Manganese	257.61	0.072	1.7	346	N	1	ICP	9/19/2003	22:15
Potassium	766.49	141	574	290	B	1	ICP	9/20/2003	0:13
Sodium	589	7.5	574	71.7	B	1	ICP	9/19/2003	22:15
Vanadium	292.40	0.29	5.7	4.4	B	1	ICP	9/19/2003	22:15

Comments: Lot #: F3I130129 Sample #: 59

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX951 **Client ID:** LANL-WR-SS-59

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.84

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.030	B	1	CVAA	9/16/2003	13:49

Comments: Lot #: F31130129 Sample #: 59

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX952 **Client ID:** LANL-WR-SS-60

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/17/2003 **Prep Batch:** 3260311

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.43

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.1	1760	N	1	ICP	9/19/2003	22:20
Calcium	317.93	3.0	578	1630		1	ICP	9/19/2003	22:20
Iron	259.94	1.4	11.6	5730	N	1	ICP	9/19/2003	22:20
Manganese	257.61	0.073	1.7	322	N	1	ICP	9/19/2003	22:20
Potassium	766.49	142	578	364	B	1	ICP	9/20/2003	0:17
Sodium	589	7.5	578	74.8	B	1	ICP	9/19/2003	22:20
Vanadium	292.40	0.30	5.8	4.1	B	1	ICP	9/19/2003	22:20

Comments: Lot #: F3I130129 Sample #: 60

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX952 **Client ID:** LANL-WR-SS-60

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3258448

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.43

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.039	0.037	B	1	CVAA	9/16/2003	13:51

Comments: Lot #: F31130129 Sample #: 60

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX954 **Client ID:** LANL-WR-SS-61

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259163

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.13

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.89	BN	5	ICPMS	9/17/2003	20:38
Arsenic	75	0.20	0.53	0.65		5	ICPMS	9/17/2003	20:38
Barium	135	0.027	2.1	18.6		5	ICPMS	9/17/2003	20:38
Beryllium	9	0.013	0.11	0.20		5	ICPMS	9/17/2003	20:38
Cadmium	111	0.016	0.11	0.21		5	ICPMS	9/17/2003	20:38
Chromium	52	0.31	1.1	5.3	*	5	ICPMS	9/17/2003	20:38
Cobalt	59	0.031	1.1	1.3		5	ICPMS	9/17/2003	20:38
Copper	65	0.53	1.1	8.4		5	ICPMS	9/17/2003	20:38
Lead	208	0.074	0.32	34.6	N*	5	ICPMS	9/17/2003	20:38
Magnesium	24	3.4	52.7	242	E	5	ICPMS	9/17/2003	20:38
Nickel	60	0.20	1.1	7.1	*	5	ICPMS	9/17/2003	20:38
Selenium	82	0.14	0.53	0.14	U	5	ICPMS	9/17/2003	20:38
Silver	107	0.013	1.1	0.059	B	5	ICPMS	9/17/2003	20:38
Thallium	205	0.24	1.1	0.24	U	5	ICPMS	9/17/2003	20:38
Zinc	66	0.69	2.1	55.4	N	5	ICPMS	9/17/2003	20:38

Comments: Lot #: F3I130129 Sample #: 61

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX956 **Client ID:** LANL-WR-SS-62

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259163

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.01

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.2	0.16	UNJ	5	ICPMS	9/17/2003	21:07
Arsenic	75	0.21	0.58	1.4		5	ICPMS	9/17/2003	21:07
Barium	135	0.030	2.3	39.2		5	ICPMS	9/17/2003	21:07
Beryllium	9	0.014	0.12	0.38		5	ICPMS	9/17/2003	21:07
Cadmium	111	0.018	0.12	0.11	B	5	ICPMS	9/17/2003	21:07
Chromium	52	0.33	1.2	2.4	*J	5	ICPMS	9/17/2003	21:07
Cobalt	59	0.033	1.2	1.7		5	ICPMS	9/17/2003	21:07
Copper	65	0.58	1.2	4.2		5	ICPMS	9/17/2003	21:07
Lead	208	0.081	0.35	16.0	N*J	5	ICPMS	9/17/2003	21:07
Magnesium	24	3.7	57.5	611	EJ	5	ICPMS	9/17/2003	21:07
Nickel	60	0.22	1.2	2.6	*J	5	ICPMS	9/17/2003	21:07
Selenium	82	0.15	0.58	0.33	B	5	ICPMS	9/17/2003	21:07
Silver	107	0.014	1.2	0.071	B	5	ICPMS	9/17/2003	21:07
Thallium	205	0.26	1.2	0.26	U	5	ICPMS	9/17/2003	21:07
Zinc	66	0.75	2.3	29.9	NJ	5	ICPMS	9/17/2003	21:07

Comments: Lot #: F3I130129 Sample #: 62

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX957 **Client ID:** LANL-WR-SS-63

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259163

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.16	1.1	0.16	UN	5	ICPMS	9/17/2003	21:26
Arsenic	75	0.21	0.57	0.63		5	ICPMS	9/17/2003	21:26
Barium	135	0.030	2.3	19.5		5	ICPMS	9/17/2003	21:26
Beryllium	9	0.014	0.11	0.41		5	ICPMS	9/17/2003	21:26
Cadmium	111	0.018	0.11	0.048	B	5	ICPMS	9/17/2003	21:26
Chromium	52	0.33	1.1	1.2	*	5	ICPMS	9/17/2003	21:26
Cobalt	59	0.033	1.1	0.93	B	5	ICPMS	9/17/2003	21:26
Copper	65	0.57	1.1	2.0		5	ICPMS	9/17/2003	21:26
Lead	208	0.080	0.34	7.3	N*	5	ICPMS	9/17/2003	21:26
Magnesium	24	3.7	57.1	349	E	5	ICPMS	9/18/2003	16:58
Nickel	60	0.22	1.1	1.7	*	5	ICPMS	9/17/2003	21:26
Selenium	82	0.15	0.57	0.37	B	5	ICPMS	9/17/2003	21:26
Silver	107	0.014	1.1	0.023	B	5	ICPMS	9/17/2003	21:26
Thallium	205	0.26	1.1	0.26	U	5	ICPMS	9/17/2003	21:26
Zinc	66	0.74	2.3	21.1	N	5	ICPMS	9/17/2003	21:26

Comments: Lot #: F3I130129 Sample #: 63

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX959 **Client ID:** LANL-WR-SS-64

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259163

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.65

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.15	1.1	0.15	UN	5	ICPMS	9/17/2003	21:32
Arsenic	75	0.20	0.54	0.94		5	ICPMS	9/17/2003	21:32
Barium	135	0.028	2.1	21.8		5	ICPMS	9/17/2003	21:32
Beryllium	9	0.013	0.11	0.21		5	ICPMS	9/17/2003	21:32
Cadmium	111	0.017	0.11	0.086	B	5	ICPMS	9/17/2003	21:32
Chromium	52	0.31	1.1	1.9	*	5	ICPMS	9/17/2003	21:32
Cobalt	59	0.031	1.1	1.4		5	ICPMS	9/17/2003	21:32
Copper	65	0.54	1.1	2.2		5	ICPMS	9/17/2003	21:32
Lead	208	0.075	0.32	10.8	N*	5	ICPMS	9/17/2003	21:32
Magnesium	24	3.5	53.6	388	E	5	ICPMS	9/18/2003	17:03
Nickel	60	0.20	1.1	1.6	*	5	ICPMS	9/17/2003	21:32
Selenium	82	0.14	0.54	0.15	B	5	ICPMS	9/17/2003	21:32
Silver	107	0.013	1.1	0.017	B	5	ICPMS	9/17/2003	21:32
Thallium	205	0.25	1.1	0.25	U	5	ICPMS	9/17/2003	21:32
Zinc	66	0.70	2.1	28.7	N	5	ICPMS	9/17/2003	21:32

Comments: Lot #: F3I130129 Sample #: 64

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX954 **Client ID:** LANL-WR-SS-61

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259164

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 5.13

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**2.7**	**21.1**	**1100**	**N**	**1**	**ICP**	**9/17/2003**	**16:26**
Calcium	**317.93**	**2.7**	**527**	**536**	*****	**1**	**ICP**	**9/17/2003**	**16:26**
Iron	**259.94**	**1.3**	**10.5**	**6120**	**N**	**1**	**ICP**	**9/17/2003**	**16:26**
Manganese	**257.61**	**0.066**	**1.6**	**170**	**N**	**1**	**ICP**	**9/17/2003**	**16:26**
Potassium	766.49	130	527	130	U	1	ICP	9/17/2003	16:26
Sodium	**589**	**6.9**	**527**	**31.3**	**B**	**1**	**ICP**	**9/17/2003**	**16:26**
Vanadium	**292.40**	**0.27**	**2.1**	**10.3**		**1**	**ICP**	**9/17/2003**	**16:26**

Comments: Lot #: F3I130129 Sample #: 61

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX954 **Client ID:** LANL-WR-SS-61

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259196

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 5.13

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.035	0.018	U	1	CVAA	9/16/2003	14:02

Comments: Lot #: F31130129 Sample #: 61

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX956 **Client ID:** LANL-WR-SS-62

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259164

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 13.01

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	23.0	2990	N	1	ICP	9/17/2003	16:42
Calcium	317.93	2.9	575	1400	*	1	ICP	9/17/2003	16:42
Iron	259.94	1.4	11.5	5500	N	1	ICP	9/17/2003	16:42
Manganese	257.61	0.072	1.7	235	N	1	ICP	9/17/2003	16:42
Potassium	766.49	141	575	525	B	1	ICP	9/17/2003	16:42
Sodium	589	7.5	575	45.3	B	1	ICP	9/17/2003	16:42
Vanadium	292.40	0.29	2.3	6.5		1	ICP	9/17/2003	16:42

Comments: Lot #: F3I130129 Sample #: 62

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX956 **Client ID:** LANL-WR-SS-62

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259196

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 13.01

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.027	B	1	CVAA	9/16/2003	14:08

Comments: Lot #: F3I130129 Sample #: 62

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX957 **Client ID:** LANL-WR-SS-63

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259164

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	3.0	22.8	1910	N	1	ICP	9/17/2003	16:54
Calcium	317.93	2.9	571	651	*	1	ICP	9/17/2003	16:54
Iron	259.94	1.4	11.4	3620	N	1	ICP	9/17/2003	16:54
Manganese	257.61	0.072	1.7	183	N	1	ICP	9/17/2003	16:54
Potassium	766.49	141	571	355	B	1	ICP	9/17/2003	16:54
Sodium	589	7.5	571	77.2	B	1	ICP	9/17/2003	16:54
Vanadium	292.40	0.29	2.3	3.3		1	ICP	9/17/2003	16:54

Comments: Lot #: F3I130129 Sample #: 63

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX957 **Client ID:** LANL-WR-SS-63

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259196

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 12.45

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.019	0.038	0.019	U	1	CVAA	9/16/2003	14:10

Comments: Lot #: F31130129 Sample #: 63

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX959 **Client ID:** LANL-WR-SS-64

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259164

Weight: 0.5 **Volume:** 50 **Percent Moisture:** 6.65

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	2.8	21.4	1910	N	1	ICP	9/17/2003	16:59
Calcium	317.93	2.7	536	506	B	1	ICP	9/17/2003	16:59
Iron	259.94	1.3	10.7	5230	N	1	ICP	9/17/2003	16:59
Manganese	257.61	0.068	1.6	237	N	1	ICP	9/17/2003	16:59
Potassium	766.49	132	536	359	B	1	ICP	9/17/2003	16:59
Sodium	589	7.0	536	35.4	B	1	ICP	9/17/2003	16:59
Vanadium	292.40	0.27	2.1	5.9		1	ICP	9/17/2003	16:59

Comments: Lot #: F3I130129 Sample #: 64

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX959 **Client ID:** LANL-WR-SS-64

Matrix: Soil **Units:** mg/kg **Prep Date:** 9/16/2003 **Prep Batch:** 3259196

Weight: 0.6 **Volume:** 100 **Percent Moisture:** 6.65

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.018	0.036	0.021	B	1	CVAA	9/16/2003	14:12

Comments: Lot #: F3I130129 Sample #: 64

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form 1 Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96N **Client ID:** LANL-WR-SS-65

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258193

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.56	10.0	0.56	U	2	ICPMS	9/16/2003	17:48
Arsenic	75	0.74	10.0	0.74	U	2	ICPMS	9/16/2003	17:48
Barium	**135**	**0.10**	**20.0**	**0.13**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:48**
Beryllium	9	0.048	5.0	0.048	U	2	ICPMS	9/16/2003	17:48
Cadmium	111	0.062	5.0	0.062	U	2	ICPMS	9/16/2003	17:48
Chromium	**52**	**1.2**	**10.0**	**1.5**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:48**
Cobalt	59	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	17:48
Copper	65	2.0	10.0	2.0	U	2	ICPMS	9/16/2003	17:48
Lead	208	0.28	3.0	0.28	U	2	ICPMS	9/16/2003	17:48
Magnesium	**24**	**13.0**	**500**	**55.9**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:48**
Nickel	60	0.76	10.0	0.76	U	2	ICPMS	9/16/2003	17:48
Selenium	82	0.52	5.0	0.52	U	2	ICPMS	9/16/2003	17:48
Silver	107	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	17:48
Thallium	205	0.92	10.0	0.92	U	2	ICPMS	9/16/2003	17:48
Zinc	**66**	**0.80**	**20.0**	**1.9**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:48**

Comments: Lot #: F3I130129 Sample #: 65

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96X **Client ID:** LANL-WR-SS-66

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258193

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.56	10.0	0.56	U	2	ICPMS	9/16/2003	17:54
Arsenic	75	0.74	10.0	0.74	U	2	ICPMS	9/16/2003	17:54
Barium	135	0.10	20.0	0.10	U	2	ICPMS	9/16/2003	17:54
Beryllium	9	0.048	5.0	0.048	U	2	ICPMS	9/16/2003	17:54
Cadmium	111	0.062	5.0	0.062	U	2	ICPMS	9/16/2003	17:54
Chromium	**52**	**1.2**	**10.0**	**1.6**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:54**
Cobalt	59	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	17:54
Copper	65	2.0	10.0	2.0	U	2	ICPMS	9/16/2003	17:54
Lead	208	0.28	3.0	0.28	U	2	ICPMS	9/16/2003	17:54
Magnesium	**24**	**13.0**	**500**	**52.0**	**B**	**2**	**ICPMS**	**9/16/2003**	**17:54**
Nickel	60	0.76	10.0	0.76	U	2	ICPMS	9/16/2003	17:54
Selenium	82	0.52	5.0	0.52	U	2	ICPMS	9/16/2003	17:54
Silver	107	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	17:54
Thallium	205	0.92	10.0	0.92	U	2	ICPMS	9/16/2003	17:54
Zinc	66	0.80	20.0	0.80	U	2	ICPMS	9/16/2003	17:54

Comments: Lot #: F3I130129 Sample #: 66

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX961 **Client ID:** LANL-WR-SS-67

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258193

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Antimony	123	0.56	10.0	0.56	U	2	ICPMS	9/16/2003	18:00
Arsenic	75	0.74	10.0	0.74	U	2	ICPMS	9/16/2003	18:00
Barium	**135**	**0.10**	**20.0**	**0.11**	**B**	**2**	**ICPMS**	**9/16/2003**	**18:00**
Beryllium	9	0.048	5.0	0.048	U	2	ICPMS	9/16/2003	18:00
Cadmium	111	0.062	5.0	0.062	U	2	ICPMS	9/16/2003	18:00
Chromium	**52**	**1.2**	**10.0**	**1.9**	**B**	**2**	**ICPMS**	**9/16/2003**	**18:00**
Cobalt	59	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	18:00
Copper	**65**	**2.0**	**10.0**	**3.1**	**B**	**2**	**ICPMS**	**9/16/2003**	**18:00**
Lead	208	0.28	3.0	0.28	U	2	ICPMS	9/16/2003	18:00
Magnesium	**24**	**13.0**	**500**	**52.6**	**B**	**2**	**ICPMS**	**9/16/2003**	**18:00**
Nickel	60	0.76	10.0	0.76	U	2	ICPMS	9/16/2003	18:00
Selenium	82	0.52	5.0	0.52	U	2	ICPMS	9/16/2003	18:00
Silver	107	0.12	10.0	0.12	U	2	ICPMS	9/16/2003	18:00
Thallium	205	0.92	10.0	0.92	U	2	ICPMS	9/16/2003	18:00
Zinc	**66**	**0.80**	**20.0**	**1.2**	**B**	**2**	**ICPMS**	**9/16/2003**	**18:00**

Comments: Lot #: F3I130129 Sample #: 67

Version 4.75.1

U Result is less than the IDL
B Result is between IDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96N **Client ID:** LANL-WR-SS-65

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258194

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	**308.22**	**19.5**	**200**	**28.2**	**B** U	**1**	**ICP**	**9/16/2003**	**17:45**
Calcium	**317.93**	**54.4**	**5000**	**105**	**B**	**1**	**ICP**	**9/16/2003**	**17:45**
Iron	259.94	6.8	100	6.8	U	1	ICP	9/16/2003	17:45
Manganese	257.61	0.35	15.0	0.35	U	1	ICP	9/16/2003	17:45
Potassium	766.49	1330	5000	1330	U	1	ICP	9/16/2003	17:45
Sodium	**589**	**246**	**5000**	**340**	**B**	**1**	**ICP**	**9/16/2003**	**17:45**
Vanadium	292.40	4.3	20.0	4.3	U	1	ICP	9/16/2003	17:45

PGS 09/16/03

Comments: Lot #: F31130129 Sample #: 65

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96N **Client ID:** LANL-WR-SS-65

Matrix: Water **Units:** ug/L **Prep Date:** 9/17/2003 **Prep Batch:** 3259389

Weight: 30 **Volume:** 30 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.10	0.20	0.10	U	1	CVAA	9/17/2003	14:54

PGS
10/10/03

Comments: Lot #: F31130129 Sample #: 65

Version 4.75.1

U Result is less than the MDL
B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96X **Client ID:** LANL-WR-SS-66

Matrix: Water **Units:** ug/L **Prep Date:** 9/15/2003 **Prep Batch:** 3258194

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Aluminum	308.22	19.5	200	19.5	U	1	ICP	9/16/2003	17:49
Calcium	**317.93**	**54.4**	**5000**	**84.4**	**B**	**1**	**ICP**	**9/16/2003**	**17:49**
Iron	259.94	6.8	100	6.8	U	1	ICP	9/16/2003	17:49
Manganese	257.61	0.35	15.0	0.35	U	1	ICP	9/16/2003	17:49
Potassium	766.49	1330	5000	1330	U	1	ICP	9/16/2003	17:49
Sodium	**589**	**246**	**5000**	**322**	**B**	**1**	**ICP**	**9/16/2003**	**17:49**
Vanadium	292.40	4.3	20.0	4.3	U	1	ICP	9/16/2003	17:49

Comments: Lot #: F31130129 Sample #: 66

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form I Equivalent

STL-ST. LOUIS

Metals Data Reporting Form

Sample Results

Lab Sample ID: FX96X **Client ID:** LANL-WR-SS-66

Matrix: Water **Units:** ug/L **Prep Date:** 9/17/2003 **Prep Batch:** 3259389

Weight: 30 **Volume:** 30 **Percent Moisture:** NA

Element	WL/ Mass	MDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Mercury	253.7	0.10	0.20	0.10	U	1	CVAA	9/17/2003	14:56

Comments: Lot #: F31130129 Sample #: 66

Version 4.75.1

U Result is less than the MDL

B Result is between MDL and RL

Form 1 Equivalent

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-60

General Chemistry

Lot-Sample #...: F3I130129-060 **Work Order #...:** FX952 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:12 **Date Received..:** 09/12/03
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**13.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259516**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.2	ug/kg	EPA-DW1 314.0	09/19/03	3262412
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-61

General Chemistry

Lot-Sample #...: F3I130129-061 **Work Order #...:** FX954 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:30 **Date Received..:** 09/12/03
% Moisture.....: 5.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**5.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259517**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.2	ug/kg	EPA-DW1 314.0	09/19/03	3262412
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-62

General Chemistry

Lot-Sample #...: F3I130129-062 **Work Order #...:** FX956 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:56 **Date Received..:** 09/12/03
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**13.0**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259517**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	46.0	ug/kg	EPA-DW1 314.0	09/19/03	3262412
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-63

General Chemistry

Lot-Sample #...: F3I130129-063 **Work Order #...:** FX957 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:35 **Date Received..:** 09/12/03
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**12.4**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259517**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	45.7	ug/kg	EPA-DW1 314.0	09/19/03	3262412
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-64

General Chemistry

Lot-Sample #...: F3I130129-064 **Work Order #...:** FX959 **Matrix.....:** SOLID
Date Sampled...: 09/09/03 18:40 **Date Received..:** 09/12/03
% Moisture.....: 6.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**6.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**09/16-09/17/03**	**3259517**
		Dilution Factor: 1		Analysis Time..: 00:04		
Perchlorate	ND	42.8	ug/kg	EPA-DW1 314.0	09/19/03	3262412
		Dilution Factor: 1		Analysis Time..: 00:00		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-65

General Chemistry

Lot-Sample #...: F3I130129-065 **Work Order #...:** FX96N **Matrix.....:** WATER
Date Sampled...: 09/09/03 18:50 **Date Received..:** 09/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND	4.0	ug/L	EPA-DW1 314.0	09/19/03	3262413
		Dilution Factor: 1		Analysis Time..: 00:00		

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-66

General Chemistry

Lot-Sample #...: F3I130129-066 **Work Order #...:** FX96X **Matrix.....:** WATER
Date Sampled...: 09/09/03 16:30 **Date Received..:** 09/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND	4.0	ug/L	EPA-DW1 314.0	09/19/03	3262413

Dilution Factor: 1 Analysis Time..: 00:00

PORTAGE ENVIRONMENTAL INC

Client Sample ID: LANL-WR-SS-67

General Chemistry

Lot-Sample #...: F3I130129-067 **Work Order #...:** FX961 **Matrix.....:** WATER
Date Sampled...: 09/09/03 10:15 **Date Received..:** 09/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND	4.0	ug/L	EPA-DW1 314.0	09/19/03	3262413

Dilution Factor: 1 Analysis Time..: 00:00

APPENDIX D

WASTE DISPOSAL RECEIPTS

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-11-03	Informational		LA811031500

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM
1	Drainage 'A' Misc	0	<MDA	130	<MDA	0	<MDA	63	<MDA
2		0		127		0		68	
3		0		148		0		72	
4		0		117		0		71	
5		0		104		0		67	
6		1		120		0		87	
7		0		131		0		87	
8		1		147		0		57	
9		1		119		0		77	
10		2		122		1		91	
11		1		121		0		85	
12		0		117		0		83	
13		2		140		0		79	
14		1		133		0		72	
15		0		127		0		74	
16		0		125		0		71	
17		0		119		0		64	
18		0		95		0		70	
19		0		117		1		58	
20	↓	0	↓	117	↓	0	↓	69	↓

Comments: Direct + Indirect Survey of Misc. Debris Items in Drainages "A", "B", "C"

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	L2221	M	2929	
Serial #	81301	C92613	44656	
Cal Due Date	8/1/04	8/1/04	8/1/04	
Probe Model	43-5	44-9	47-1C	
Serial #	18081	251	162702	
Cal Due Date	8/1/04	8/1/04	8/1/04	
Bkg Counts	1	120	3	1704
Bkg Count Time	10	1	10	10
Bkg CPM	.1	120	.3	170
Efficiency / 100	10.99	29.04	23.55	41.09
Area Cor. Factor	1	1	1	1
Smpl Count Time	1	1	1	1
MDA	36.7	134	20	74

SUPERVISOR SIGNATURE	DATE
	8-11-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-11-03	Informational		LA081103150O

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM	~~Gross~~ net CPM	Sample DPM
21	Drainage 'B' Misc	0	<MDA	104	<MDA	0	<MDA	73	<MDA
22		0		100		0		72	
23		0		97		0		80	
24		0		136		0		71	
25		3		142		0		66	
26		1		127		1		59	
27		1		148		0		61	
28		0		151		0		73	
29		0		160		0		74	
30		0		111		0		68	
31		0		119		0		61	
32		0		99		0		64	
33		0		127		2		88	
34		0		125		0		79	
35		0		125		1		76	
36	Drainage 'C' Misc	1		130		0		71	
37		0		128		0		67	
38		1		128		0		74	
39		1		147		0		70	
40		0		141		0		61	
41		2		122		0		83	
42		0		133		0		80	
43		1		97		0		73	
44		0		114		0		73	
45		0		119		0		80	
46		0		106		0		81	
47		0		140		0		75	
48		0		126		0		68	
49		0		138		0		63	
50		0		132		0		71	

Comments:

SUPERVISOR SIGNATURE	DATE
	8-11-03

EQUIPMENT & MATERIALS SURVEY FORM

Page 1 of ___

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-12-03	Informational		LA08203090O

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Drainage "D2" Misc.	0	<MDA	97	<MDA	0	<MDA	171	<MDA
2		0		112		0		170	
3		0		89		1		159	
4		0		95		1		163	
5		0		107		0		167	
6		0		111		0		165	
7		0		127		1		170	
8		0		130		0		169	
9		0		99		1		157	
10		2		112		1		164	
11		0		114		0		172	
12		0		117		0		177	
13		0		101		0		181	
14		1		134		0		163	
15		0		103		0		166	
			N						
				A					

Comments: Direct + Indirect Survey of Misc. Debris in Drainage "D2"

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221	M	2929	
Serial #	81030	C926B	114659	
Cal Due Date	8-1-034	8-1-04	8-1-04	
Probe Model	43-5	44-9	43-10	
Serial #	18081	251	162702	
Cal Due Date	8-1-04	8-1-04	8-1-04	
Bkg Counts	2	114	3	1689
Bkg Count Time	10	1	10	10
Bkg CPM	.2	114	.3	169
Efficiency / 100	10.99	29.04	23.55	41.09
Area Cor. Factor	1	1	1	1
Smpl Count Time	1	1	1	1
MDA	41	131	20	111

SUPERVISOR SIGNATURE	DATE
	8-12-03

EQUIPMENT & MATERIALS SURVEY FORM

Page 1 of ___

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-13-03	Informational		LA081303080

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	All Work Areas			All					
	from Taxiway			Read					
	To Property			ings	N		N		
	Fence and	N		12					
	from Hanger			To	A			A	
	Tarmac To		A	18					
	Drainage "B"			Kcpm					
			N						
				A					

Comments: Walkover Survey of Soils. Readings in Kcpm.

BKg 13-17 Kcpm

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	Spa 3			
Serial #	0983		N	
Cal Due Date	8-1-04			
Bkg Counts				
Bkg Count Time				
Bkg CPM			A	
Efficiency / 100				
Area Cor. Factor				
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8/18/03	NaI Survey Misc.		LA081803130C

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	"D2" Misc Debris			12					
2				12					
3				13					
4				13					
5				12					
6				11					
7				14					
8		N		15					
9				15	N		N		
10			A	14					
11				11				A	
12				16	A				
13				17					
14				16					
15				11					
16				14					
17				13					
18				16					
19				14					
20				11					

Comments: GA scan w/ NaI 2x2 on Misc Debris as removed from Drainage "D2" All Readings in kcpm. Bkg 13-17 kcpm.

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	Spa 3			
Serial #	0983			
Cal Due Date	8-1-04		N	
Bkg Counts				
Bkg Count Time				A
Bkg CPM	N			
Efficiency / 100	A			
Area Cor. Factor				
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE
	8-18-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-19-03	NaI Survey Misc		LA081903080

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	"D2 Misc Debris			17					
2				17					
3				17					
4				16					
5				17					
6				15					
7				14					
8		N		14					
9				15	N				
10				12			N		
11			A	13					
12				16	A				
13				17				A	
14				16					
15				16					
16				16					
17				17					
18				18					
19				17					
20				15					

Comments: GA Scan w/ NaI 2x2 on Misc Debris as removed from Drainage "D2". All Readings in kcpm. Bkg 13-17 kcpM.

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	SPA3			
Serial #	0983			
Cal Due Date	8-1-04		N	
Bkg Counts				
Bkg Count Time	N			
Bkg CPM				A
Efficiency / 100				
Area Cor. Factor		A		
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE
	8-19-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-19-03	NaI Survey Misc		LA0819030800

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
21	"D2 Misc Debris			14					
22				15					
23		N		16	N				
24				16			N		
25				14	A				
26			A	17				A	
27				15					
28				15					
			N						
				A					

Comments: _____

SUPERVISOR SIGNATURE	DATE
	8-19-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-20-03	Informational		iA0820031330

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Misc. Debris	0	<MDA	170	<MDA				
2		0		153					
3		0		142					
4		0		147					
5		0		138					
6		1		156					
7		1		182					
8		1		191					
9		1		138			N		
10		0		163					
11		1		167					
12		0		177					
13		0		151				A	
14		0		168					
15		0		174					
16		1		190					
17		1		188					
18		0		174					
19		8		177					
20		8		183					

Comments: Direct Survey of Misc Debris.

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221	M		
Serial #	81301	C92613		
Cal Due Date	8-1-04	8-1-04		
Probe Model	43-5	44-9	N	
Serial #	15081	251		
Cal Due Date	8-1-04	8-1-04		
Bkg Counts	2	153		A
Bkg Count Time	10	1		
Bkg CPM	.2	153		
Efficiency / 100	.1099	.2904		
Area Cor. Factor	1	1		
Smpl Count Time	1	1		
MDA	41	150		

SUPERVISOR SIGNATURE

DATE 8-20-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-20-03	Nat Survey Misc		LA082003063O

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	DZ Misc Debris			12					
2				14					
3				13					
4				13					
5				15					
6				16					
7		N		13					
8				14			N		
9			A	14					
10				15				A	
11				16					
12				16					
13				14					
14				12					
15				14					
16				12					
			N						
				A					

Comments: GA Scan of Misc Debris from "DZ" as removed. All Readings in KCpm.

Bkg 13-17 Kcpm

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	SPA 3			
Serial #	0983		N	
Cal Due Date	8-1-04			
Bkg Counts				
Bkg Count Time				
Bkg CPM	N			A
Efficiency / 100				
Area Cor. Factor		A		
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE

DATE 8-20-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-21-03	Informational		LA082103 0945

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Drainage "B" Misc			10					
2				10					
3				12					
4				13					
5				13					
6				12			N		
7				11					
8		N		12					
9				12				A	
10			A	12					
11				11					
12				14					
13				14					
14				10					
15				12					
16				13					
17	↓			13					
			N						
				A					

Comments: GA Scan w/ NaI 2x2 of Misc Debris as Removed from "B" Drainage. All Readings in K CPM. Bkg 13-17 Kcpm

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	5PA 3			
Serial #	0983		N	
Cal Due Date	8-1-04			
Bkg Counts				
Bkg Count Time				A
Bkg CPM	N			
Efficiency / 100				
Area Cor. Factor		A		
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE
	8-21-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-22-03	Informational		LA082203080

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Drainage & Misc			8					
2				9					
3				9	N				
4				8					
5				10					
6				11	A				
7				11			N		
8				12					
9		N		9					
10				9					
11			A	10					
12				11				A	
13				10					
14				10					
15				11					
16				9					
17				12					
18				11					
19				14					
20				13					

Comments: GA Scan w/ NaI. 5x2 of Misc Debris as removed from "A" Drainage. All Readings in KCPM

Bkg 10-16 KCPM

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04		N	
Probe Model	Spa 3			
Serial #	0983			
Cal Due Date	5-1-04			
Bkg Counts				
Bkg Count Time				
Bkg CPM		A	N	
Efficiency / 100				
Area Cor. Factor				A
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-25-03	Informational	[signature]	CA082503063O

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	Drainage "A" Misc.			9					
2				10					
3				8					
4				11					
5				11					
6				10					
7	Drainage "C" Misc	N		11		N			
8				11					
9				11					
10			A	10			A		
11				11					
12				9					
13				9					
14				10					
15				11					
16				13					
17				12					
			N						
				A					

Comments: GA Scan w/ NaI 2x2 of Misc Debris as removed from Drainage "A". All Readings in Kcpm. Bkg 13-17 Kcpm.

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221			
Serial #	89648			
Cal Due Date	8-1-04			
Probe Model	SPA 3			
Serial #	0983			
Cal Due Date	8-1-04		N	
Bkg Counts				
Bkg Count Time				
Bkg CPM	N			A
Efficiency / 100				
Area Cor. Factor		A		
Smpl Count Time				
MDA				

SUPERVISOR SIGNATURE	DATE
[signature]	8-25-03

EQUIPMENT & MATERIALS SURVEY FORM

DATE	PURPOSE	SURVEYOR SIGNATURE	SURVEY LOG #
8-25-03	Informational		LA082503153C

No.	Area Surveyed	Direct Reading				Removable Readings			
		Alpha / 100 cm²		Beta-Gamma/100 cm²		Alpha / 100 cm²		Beta-Gamma/100 cm²	
		Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM	Gross CPM	Sample DPM
1	RCRA Drum "C"	0	<MDA	140	<MDA				
2		0		140					
3		0		120					
4		0		120					
5		0		110					
6		0		80					
7		1		120					
8		0		1210					
9		0		140			N		
	N							A	
		A							

Comments: Survey of RCRA Drums as Removed from Drainage 'C'.

Survey Instrument Data	Direct		Removable	
	Alpha	Beta Gamma	Alpha	Beta Gamma
Scaler Model	2221	M		
Serial #	81301	C92613		
Cal Due Date	8-1-04	8-1-04		
Probe Model	43-5	44-9		
Serial #	18081	251	N	
Cal Due Date	8-1-04	8-1-04		
Bkg Counts	2	162		A
Bkg Count Time	10	1		
Bkg CPM	.2	162		
Efficiency / 100	.1099	.2904		
Area Cor. Factor	1	1		
Smpl Count Time	1	1		
MDA	41	155		

SUPERVISOR SIGNATURE

DATE

ENVIRONMENTAL DIMENSIONS, INC.
SOURCE CHECK LOG

Site Name: Los Alamos Week Ending: 8-24-03 Location: Airport

Scaler/Ratemeter: Surveyor M S/N: C92613 Cal Due: 8-1-04

Detector: 44-9 S/N: 251 Cal Due: 8-1-04

Calibrated efficiency: 29.04 +20% of calibrated value: .349 -20% of calibrated value: .232

Date	Time	Source	Source S/N	Source Active dpm	Source Check cpm	Bkg/ Bkg time/ bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-18	1000	Sr Y90	479-95	145000	44286	167/1	.305	✓	✓	✓	✓	✓	✓	y
8-19	0900	↓	↓	↓	43470	144/1	.299	✓	✓	✓	✓	✓	✓	y
8-20	0800				43477	153/1	.302	✓	✓	✓	✓	✓	✓	y
8-21	0800				44961	138/1	.309	✓	✓	✓	✓	✓	✓	y
8-22	0800				45083	143/1	.310	✓	✓	✓	✓	✓	✓	y
8-25	1600	Sr Y90	479-95	145000	44801	162/1	.308	✓	✓	✓	✓	✓	✓	y

ENVIRONMENTAL DIMENSIONS, INC.
SOURCE CHECK LOG

Site Name: Los Alamos Week Ending: 8-24-03 Location: Airport

Scaler/Ratemeter: 2221 S/N: 81301 Cal Due: 8-1-04

Detector: 43-5 S/N: 18081 Cal Due: 8-1-04

Calibrated efficiency: 10.99 +20% of calibrated value: .132 -20% of calibrated value: .1079

Date	Time	Source	Source S/N	Source Active dpm	Source Check cpm	Bkg/ Bkg time/ bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-18	1000	Th-230	1833-94	34300	3703	1/10/.1	.108	✓	✓	✓	✓	✓	✓	[illegible]
8-19	0900	↓	↓	↓	3788	1/10/.1	.110	✓	✓	✓	✓	✓	✓	[illegible]
8-20	0800				3651	2/10/.2	.106	✓	✓	✓	✓	✓	✓	[illegible]
8-21	0800				3844	1/10/.1	.112	✓	✓	✓	✓	✓	✓	[illegible]
8-22	0800				3751	3/10/.3	.109	✓	✓	✓	✓	✓	✓	[illegible]
8-25	1600	Th230	1833-94	34300	3817	2/10/.2	.111	✓	✓	✓	✓	✓	✓	[illegible]

ENVIRONMENTAL DIMENSIONS, INC.

SOURCE CHECK LOG

Site Name: Los Alamos Week Ending: 8-17-03 Location: Airport

Scaler/Ratemeter: 2221 S/N: 81301 Cal Due: 8-1-04

Detector: 43-5 S/N: 18081 Cal Due: 8-1-04

Calibrated efficiency: 10.99 +20% of calibrated value: .132 -20% of calibrated value: .0879

Date	Time	Source	Source S/N	Source Active dpm	Source Check cpm	Bkg/ Bkg time/ bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-11	0645	Th230	1833-94	34300	3823	10/1/.1	.111	✓	✓	✓	✓	✓	✓	y
8-12	0700	Th230	1833-94	34300	3796	10/2/.2	.111	✓	✓	✓	✓	✓	✓	y
8-13	0700	Th230	1833-94	34300	3815	10/2/.2	.111	✓	✓	✓	✓	✓	✓	y
8-14	0730	Th230	1833-94	34300	3697	10/1/.1	.108	✓	✓	✓	✓	✓	✓	y

ENVIRONMENTAL DIMENSIONS, INC.

SOURCE CHECK LOG

Site Name: Los Alamos Week Ending: 8-17-03 Location: Airport

Scaler/Ratemeter: Surveyor M S/N: C92613 Cal Due: 8-1-04

Detector: 44-9 S/N: 251 Cal Due: 8-1-04

Calibrated efficiency: 29.04 +20% of calibrated value: 34.85 -20% of calibrated value: 23.23

Date	Time	Source	Source S/N	Source Active dpm	Source Check cpm	Bkg/ Bkg time/ bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-11	0645	Sr/90	479-95	145000	45191	129/1	.311	✓	✓	✓	✓	NA	✓	[illegible]
8-12	0700	Sr/90	479-95	145000	43280	114/1	.298	✓	✓	✓	✓	NA	✓	[illegible]
8-13	0700	Sr/90	479-95	145000	43907	119/1	.302	✓	✓	✓	✓	NA	✓	[illegible]
8-14	0730	Sr/90	479-95	145000	44021	123/1	.303	✓	✓	✓	✓	NA	✓	[illegible]

ENVIRONMENTAL DIMENSIONS, INC

NaI SURVEY INSTRUMENT DAILY RESPONSE CHECK LOG

Site Name: Los Alamos Instrument Model: 2221 S/N: 89648 Calibration Due Date: 8-1-04

Source Type: Cs 137 Source S/N: 2166 Source Activity: 10 μCi

Date	Time	Bat	HV	Source Check (Kcpm)	Bkg (Kcpm)	Spkr	Disp	OK	By
8-11-03	0645	✓	✓	140	15	✓	✓	✓	[illegible]
8-12-03	0700	✓	✓	140	15	✓	✓	✓	[illegible]
8-13-03	0700	✓	✓	139	14	✓	✓	✓	[illegible]
8-14-03	0730	✓	✓	141	15	✓	✓	✓	[illegible]
8-18-03	0700	✓	✓	140	14	✓	✓	✓	[illegible]
8-19-03	0700	✓	✓	140	15	✓	✓	✓	[illegible]
8-20-03	0730	✓	✓	139	13	✓	✓	✓	[illegible]
8-21-03	0630	✓	✓	140	15	✓	✓	✓	[illegible]
8-22-03	0700	✓	✓	141	14	✓	✓	✓	[illegible]
8-25-03	0700	✓	✓	141	16	✓	✓	✓	[illegible]

ENVIRONMENTAL DIMENSIONS, INC

ALPHA/BETA COMBINED SOURCE CHECK LOG

Site Name: Los Alamos
Week Ending: 8-17-03
Location: Airport

Scaler/Ratemeter: 2929
S/N: 44656
Cal Due: 8-1-04

Detector: 43-10-1
S/N: 162702
Cal Due: 8-1-04

α Calibrated efficiency: 23.55
+20% of calibrated value: 28.26
-20% of calibrated value: 18.84

β Calibrated efficiency: 41.09
+20% of calibrated value: 49.31
-20% of calibrated value: 32.87

Date	Time	Source	Source S/N	Source Activity dpm	Source Check cpm	Bkg/ Bkg time	Bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-11	0645	α: Th230	1833-94	34300	8526	3/10	.3	.249	✓	NA	✓	✓	NA	✓	[illegible]
		β: SrY90	479-95	145000	57191	1204/10	170	.393							
8-12	0700	α: Th230	1833-94	34300	8604	3/10	.3	.251	✓	↓	✓	✓	↓	✓	[illegible]
		β: SrY90	479-95	145000	56812	1684/10	169	.391							
8-13	0700	α: Th230	1833-94	34300	8397	2/10	.2	.245	✓	↓	✓	✓	↓	✓	[illegible]
		β: SrY90	479-95	145000	56923	1737/10	174	.391							
8-14	0730	α: Th230	1833-94	34300	8679	2/10	.2	.253	✓	↓	✓	✓	↓	✓	[illegible]
		β: SrY90	479-95	145000	56830	1811/10	181	.391							
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													

ENVIRONMENTAL DIMENSIONS, INC

ALPHA/BETA COMBINED SOURCE CHECK LOG

Site Name: Los Alamos
Week Ending: 8-31-03
Location: Airport

Scaler/Ratemeter: 2929
S/N: 44656
Cal Due: 8-1-04

Detector: 43-10-1
S/N: 162702
Cal Due: 8-1-04

α Calibrated efficiency: 23.55
+20% of calibrated value: 28.26
-20% of calibrated value: 18.84

β Calibrated efficiency: 41.09
+20% of calibrated value: 49.31
-20% of calibrated value: 32.87

Date	Time	Source	Source S/N	Source Activity dpm	Source Check cpm	Bkg/ Bkg time	Bkg cpm	Daily Eff	HV	Bat	Spkr	Disp	Mylar	OK	By
8-25	1530	α: Tn230	1883-44	34300	8636	1883/10	1835	.252	✓	NA	✓	✓	NA	✓	[illegible]
		β: Sr90	479.45	145000	36740	2/10	.2	.390							
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													
		α:													
		β:													

LOS ALAMOS COUNTY 1070[illegible]

$ 6644

NAME DM CT

ADDRESS LA Airport

CITY

STATE

ZIP

WASTE Cell Tires only

CODE

LICENSE 41062

Portage Env.
#20-52

LOOP # 24
08-18-03 03:22 PM
INBOUND 36440 lb

36440 lb GR
30580 lb TA
5860 lb NT

LOOP # 24 03:37 PM

DRIVER [illegible]

LOS ALAMOS COUNTY 10703

$ _____

NAME DMCT

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE _____

CODE _____

LICENSE _____

20 YRD SERIAL #30550
PORTAGE ENVIRONMENTAL
LOS ALAMOS AIRPORT.

LOOP # 19
08-19-03 08:48 AM
INBOUND 37680 lb

37680 lb GR
32060 lb TA
5620 lb NT

LOOP # 19 09:04 AM

DRIVER _____

LOS ALAMOS COUNTY 107261

$ _____

NAME DMCT

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE _____

CODE _____

LICENSE _____

2043
PORTAGE ENVIRONMENTAL
LOS ALAMOS AIRPORT.

LOOP # 40
08-19-03 09:51 AM
INBOUND 38300 lb

38300 lb GR
32420 lb TA
5880 lb NT

LOOP # 40 10:10 AM

DRIVER _____

LOS ALAMOS COUNTY 107314

$ _____

NAME [illegible]

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE [illegible]

CODE _____

LICENSE [illegible]

LOOP # 89
08-19-03 11:41 AM
INBOUND 38920 lb

38920 lb GR
31940 lb TA
6980 lb NT

LOOP # 89 11:54 AM

20101
PORTAGE ENVIRONMENTAL
LOS ALAMOS AIRPORT

DRIVER [signature]

LOS ALAMOS COUNTY 107291

$ _____

NAME [illegible]

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE [illegible]

CODE _____

LICENSE [illegible]

LOOP # 70
08-19-03 10:52 AM
INBOUND 38060 lb

38060 lb GR
32020 lb TA
6040 lb NT

LOOP # 70 11:05 AM

20137
PORTAGE ENVIRONMENTAL
LOS ALAMOS AIRPORT

DRIVER [signature]

LOS ALAMOS COUNTY 10732

$ _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE _____

CODE _____

LICENSE _____

LOOP # 3
08-19-03 12:53 PM
INBOUND 36760 lb

36760 lb GR
32040 lb TA
4720 lb NT

LOOP # 3 01:04 PM

20117
PORTOGE ENVIRONMENTAL
LOS ALAMOS AIRPORT

DRIVER _____

LOS ALAMOS COUNTY 107478

$ _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE _____

CODE _____

LICENSE _____

LOOP # 62
08-19-03 03:04 PM
INBOUND 38560 lb

38560 lb GR
31940 lb TA
6620 lb NT

LOOP # 62 03:23 PM

20yrs Social # 30550
PORTOGE ENVIRONMENTAL
LOS ALAMOS AIRPORT

DRIVER _____

LOS ALAMOS COUNTY 10758

$ _____

NAME DP. CT
ADDRESS LA AIRPORT
CITY _____ STATE _____ ZIP _____
WASTE TIRES
CODE _____
LICENSE 36787

LOOP # 72
08-20-03 11:51 AM
INBOUND 41880 lb

41880 lb GR
32100 lb TA
9780 lb NT

LOOP # 72 12:07 PM

2052
Portage Env.

DRIVER Martin

LOS ALAMOS COUNTY 107601

$ _____

NAME DP. CT
ADDRESS LA. AIRPORT
CITY _____ STATE _____ ZIP _____
WASTE SIT
CODE _____
LICENSE 36787

LOOP # 85
08-20-03 12:43 PM
INBOUND 39600 lb

39600 lb GR
31760 lb TA
7840 lb NT

LOOP # 85 01:05 PM

Portage Environmental
20127

DRIVER Martin

LOS ALAMOS COUNTY 107088

$ _____

NAME DOCT

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE 313

CODE _____

LICENSE 36787

LOOP # 91
08-21-03 02:09 PM
INBOUND 39100 lb

39100 lb GR
32300 lb TA
6800 lb HT

LOOP # 91 02:24 PM

2043
Portage Environmental
L.A. Airport

DRIVER [signature]

LOS ALAMOS COUNTY 107097

$ _____

NAME DOCT

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE [illegible]

CODE _____

LICENSE 36787

LOOP # 100
08-21-03 02:53 PM
INBOUND 39040 lb

39040 lb GR
32360 lb TA
6680 lb HT

LOOP # 100 03:02 PM

2003
Portage Env.
L.A. Airport.

DRIVER [signature]

LOS AL^MOS COUNTY 1071C

$

NAME DICT

ADDRESS

CITY STATE ZIP

WASTE

CODE

LICENSE

LOOP # 8
08-21-03 03:22 PM
INBOUND 37640 lb

37640 lb GR
31820 lb TA
5820 lb NT

LOOP # 8 03:35 PM

20101
Portage ENV.

DRIVER

LOS ALAMOS COUNTY 107110

$

NAME DICT

ADDRESS

CITY STATE ZIP

WASTE

CODE

LICENSE

LOOP # 13
08-21-03 03:59 PM
INBOUND 34880 lb

34880 lb GR
31820 lb TA
3060 lb NT

LOOP # 13 04:11 PM

20117
Portage ENV.
LA. Airport

DRIVER

LOS ALAMOS COUNTY 107232 $ _____

NAME _____
ADDRESS L A
CITY _____ STATE _____ ZIP _____
WASTE _____
CODE _____
LICENSE _____

LOOP # 18
08-22-03 02:05 PM
INBOUND 37940 lb

37940 lb GR
31860 lb TA
6080 lb NT

LOOP # 18 02:12 PM

2052 Portage Env.
L.A. Airport

DRIVER _____

LOS ALAMOS COUNTY 107245 $ _____

NAME DOE
ADDRESS L.A. Airport
CITY _____ STATE _____ ZIP _____
WASTE ST
CODE _____
LICENSE 36 16

LOOP # 31
08-22-03 02:43 PM
INBOUND 36640 lb

36640 lb GR
31600 lb TA
5040 lb NT

LOOP # 31 02:51 PM

20107 Portage Env.

DRIVER _____

202-527-8340

LOS ALAMOS COUNTY 108060

$ _____

NAME MT

ADDRESS

CITY _____ STATE _____ ZIP _____

WASTE

CODE

LICENSE

Portage Envir.
20117

LOOP # 22
08-25-03 09:35 AM
INBOUND 38740 lb

38740 lb GR
30720 lb TA
8020 lb NT

LOOP # 22 09:48 AM

DRIVER

LOS ALAMOS COUNTY 107950

$ _____

NAME MT

ADDRESS

CITY _____ STATE _____ ZIP _____

WASTE

CODE

LICENSE

Portage Enviro.
LA Airport
2052

LOOP # 12
08-25-03 08:39 AM
INBOUND 36380 lb

36380 lb GR
31000 lb TA
5380 lb NT

LOOP # 12 08:52 AM

DRIVER

LOS ALAMOS COUNTY 108072

$ _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

WASTE _____ Portage Envir.

CODE _____

LICENSE _____ #2003

LOOP # 39
08-25-03 10:25 AM
INBOUND 37220 lb

37220 lb GR
31220 lb TA
6000 lb NT

LOOP # 39 10:41 AM

DRIVER _____

LOS ALAMOS COUNTY 108280

$ _____

NAME DOT

ADDRESS Airport

CITY _____ STATE _____ ZIP _____

WASTE ST Portage Environ.

CODE _____

LICENSE 400GL #20-52

LOOP # 15
08-26-03 08:42 AM
INBOUND 34740 lb

34740 lb GR
30860 lb TA
3880 lb NT

LOOP # 15 09:03 AM

DRIVER [signature]

LOS ALAMOS COUNTY 108295

$ _____

NAME DOT

ADDRESS Airport

CITY _____ STATE _____ ZIP _____

WASTE ST Portage Environ.

CODE _____

LICENSE 400GL #20-117

LOOP # 30
08-26-03 09:46 AM
INBOUND 33380 lb

33380 lb GR
30540 lb TA
2840 lb NT

LOOP # 30 10:00 AM

DRIVER [signature]

LOS ALAMOS COUNTY 108307

$

NAME MCT

ADDRESS Airport

CITY STATE ZIP

WASTE Tires Only

CODE

LICENSE 41026L

Portage Environ.
20-03

LOOP # 41
08-26-03 10:39 AM
INBOUND 35940 lb

35940 lb GR
31060 lb TA
4880 lb NT

LOOP # 41 10:51 AM

DRIVER

LOS ALAMOS COUNTY 107767

$

NAME MCT

ADDRESS Airport

CITY STATE ZIP

WASTE ST

CODE

LICENSE 41026L

Portage Environ.
20-0101

LOOP # 21
08-26-03 03:16 PM
INBOUND 31860 lb
31860 lb GR
30420 lb TA
1440 lb NT

LOOP # 21 03:34 PM

DRIVER

APPENDIX E

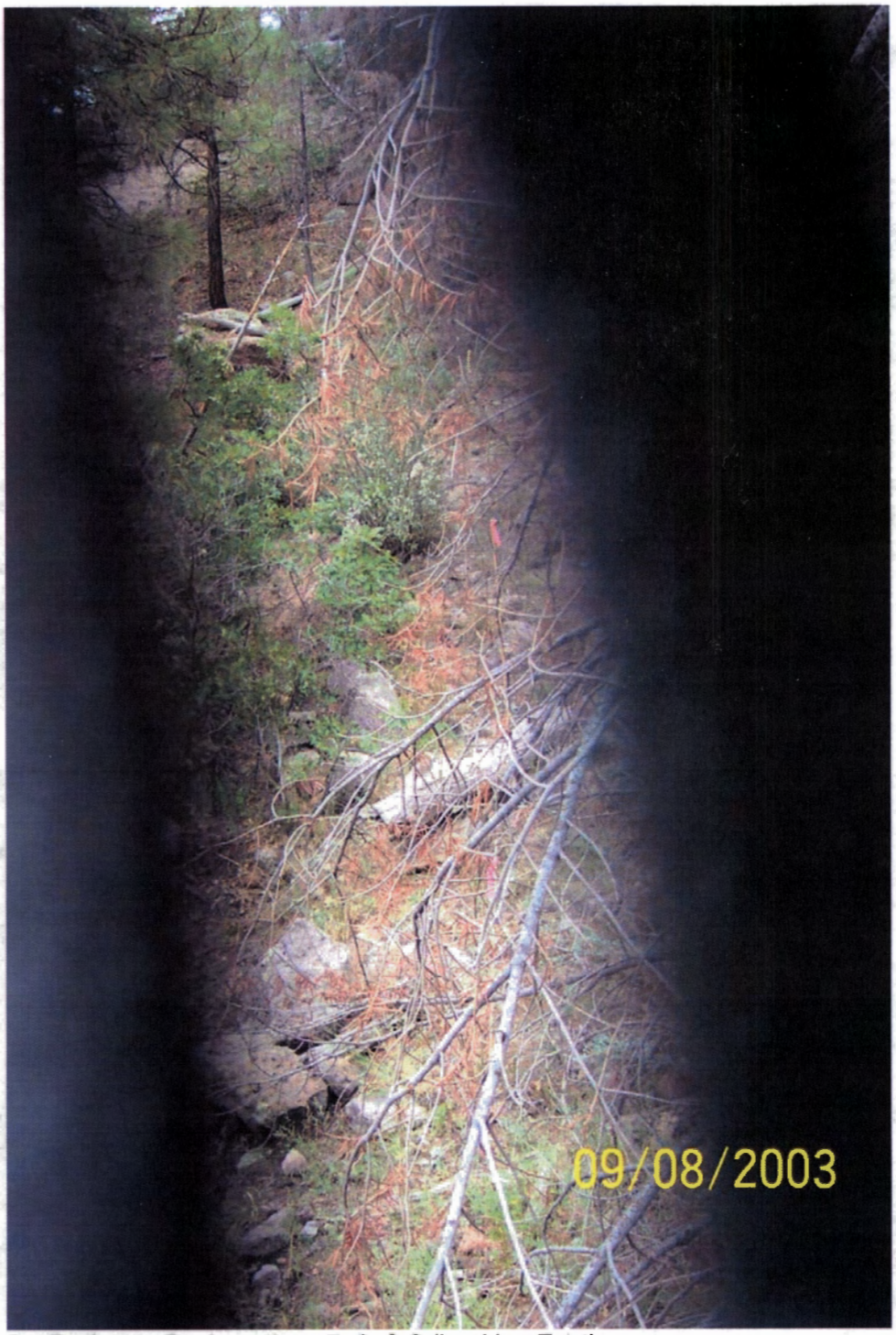
PHOTOGRAPHS

PHOTOGRAPHS 1 THROUGH 36 – SAMPLE LOCATIONS

PHOTOGRAPHS 37 THROUGH 47 – FIELD ACTIVITIES

1. Drainage C - Locations 15, 14, & 13 (Looking Southwest)

2. Drainage C – Locations 10, 11, & 12 (Looking Southeast)



3. Drainage C – Locations 7, 8, & 9 (Looking East)

4. Drainage C – Location 6 (Looking South)

5. Drainage C – Location 5 (Looking North)

6. Drainage C – Location 4 (Looking Southeast)

7. Drainage C – Locations 1, 2, & 3 (Looking East)

8. Drainage D2 – Locations 1, 2, & 3 (Looking East)

9. Drainage D2 – Location 4 (Looking Southwest)

10. Drainage D2 – Location 5 (Looking Southeast)

11. Drainage D2 – Location 6 (Looking South)

12. Drainage D2 – Location 7 (Looking Southwest)

13. Drainage D2 – Location 8 (Looking South)

14. Drainage D2 – Location 9 (Looking Southeast)

15. Drainage D2 – Locations 10 & 11 (Looking South)

16. Drainage D2 – Locations 12 & 13 (Looking South)

17. Drainage D2 – Locations 14 & 15 (Looking Southeast)

18. Drainage B – Locations 1, 2, & 3 (Looking South)

19. Drainage B – Locations 4 & 5 (Looking North)

20. Drainage B – Location 6 (Looking Southeast)

21. Drainage B – Locations 7 & 8 (Looking Southeast)

22. Drainage B – Location 9 (Looking South)

23. Drainage B – Locations 10 & 11 (Looking Southwest)

24. Drainage B – Location 12 (Looking Southwest)

25. Drainage B – Locations 13 & 14 (Looking East)

26. Drainage B – Location 15 (Looking West)

27. Drainage A – Location 15 (Looking South)

28. Drainage A – Location 14 (Looking Southwest)

29. Drainage A – Locations 12 & 13 (Looking Southeast)

30. Drainage A – Locations 9, 10, & 11 (Looking West)

31. Drainage A – Location 8 (Looking South)

32. Drainage A – Location 7 (Looking South)

33. Drainage A – Location 5 & 6 (Looking East)

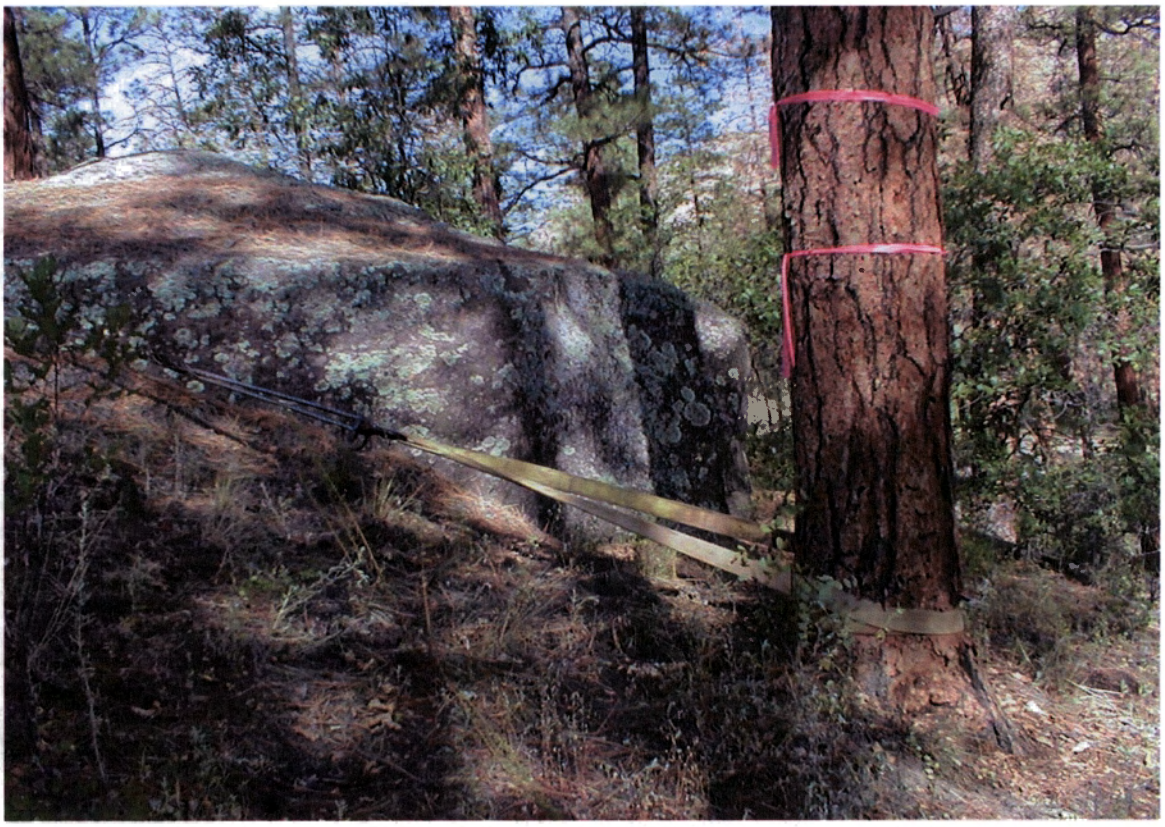
34. Drainage A – Location 4 (Looking South)

35. Drainage A – Location 2 & 3 (Looking South)

36. Drainage A – Location 1 (Looking South)

37. Skyline logger set up (Pueblo canyon to the right)

38. Skyline logger showing cable line and carriage brining up a load of debris from Pueblo Canyon



39. Anchor point for skyline logger cable a t the bottom of Pueblo Canyon

40. Skyline logger main cable, carriage with load

41. Skyline logger cable and carriage removing car body from drainage D2

42. Consolidated debris being retrieved by carriage

43. Debris at bottom of drainage D2 in the bottom of Pueblo Canyon

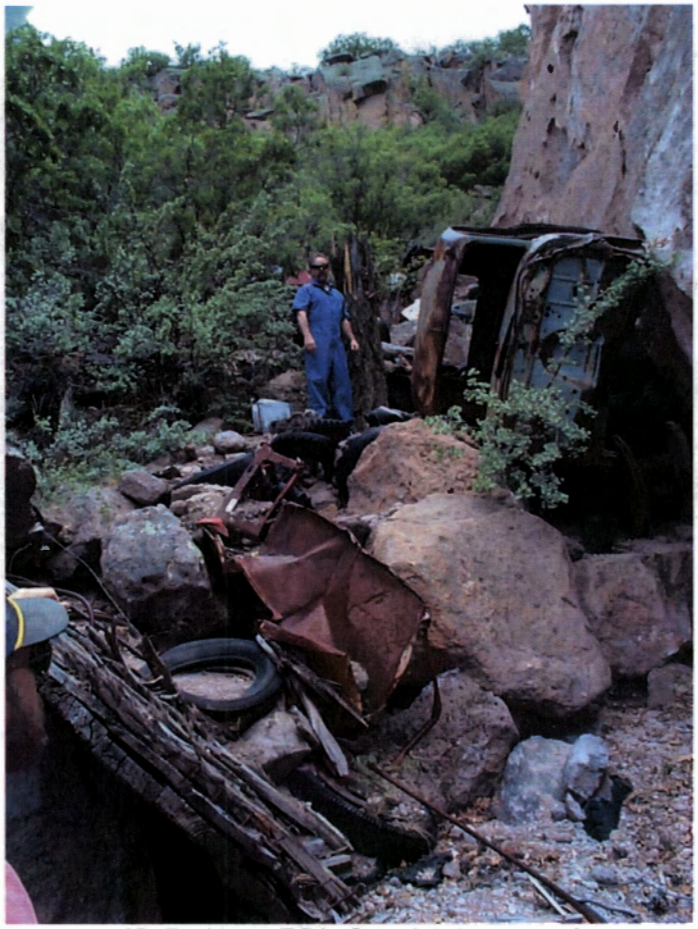
44. Load of Debris being lifted and carried out of Pueblo Canyon

45. Inspection of Drainage D2, marking of items remaining to be removed

46. Footprint of drum after removal

47. Rolloff loaded with debris from drainages

48. Pre Dainage A before debris removal



49. Drainage D2 before debris removal

APPENDIX F

RISK ASSESSMENT

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F RISK ASSESSMENT

This appendix presents a summary of the chemicals of potential concern (COPCs) in the airport drainages addressed by the interim measure, the conceptual site model, and the screening assessments for human health and ecological risk. The analyses are based on an evaluation of 1996 Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) samples and the 2003 confirmatory samples. Drainages addressed by the interim measure and included in this assessment are identified as Drainages A, B, C and D2 and do not include all of the drainages sampled as part of the 1996 RFI; Drainages D3 and D4 were not part of the debris removal activity because they had little or no debris (LANL 2003).

The COPCs were identified based on a comparison to background values (BVs) for inorganic chemicals and radionuclides and evaluation of detection status for organic chemicals. The BVs were obtained from "Inorganic and Radionuclides Background Data for Soils, Canyon Sediment, and Bandelier Tuff at Los Alamos National Laboratory" (LANL 1998). The conceptual site model looks at both the potential transport of COPCs as well as the potential exposure pathways to the receptors. The COPCs were then compared to soil screening levels (SSLs) and ecological screening levels (ESLs) to determine if there is a potential unacceptable risk to human and ecological receptors.

F.1 COPC Identification

The sampling data for the airport drainage COPCs are summarized in Table F-1. The data summaries in these tables present the following information: the number of samples collected and analyzed, the number of detects, the minimum and maximum detected and nondetected concentrations, and the mean site concentration. For the inorganic chemicals and radionuclides the BVs or fallout values (FVs) are provided (Table F-1). The COPCs identified by the data review include the following.

Drainage A

Inorganic chemicals: antimony, selenium, cobalt, copper, lead, cadmium, zinc, vanadium, iron, mercury, nickel

Organic chemicals:

Polychlorinated biphenyls (PCBs): Aroclor-1254

Pesticides: endrin ketone, DDE, endrin aldehyde, gamma-chlordane, endosulfan I, endrin, methoxychlor, endosulfan sulfate

Semivolatile organic chemicals (SVOCs): fluoranthene, pyrene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, di-n-butyl phthalate, phenanthrene

Radionuclides: plutonium-239

Drainage B

Inorganic chemicals: selenium, vanadium, lead, cadmium, iron, zinc

Organic chemicals

PCBs: Aroclor-1260

Pesticides: DDE, DDT, dieldrin

SVOCs: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, phenanthrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, fluoranthene, fluorene, pyrene

Radionuclides: plutonium-239

Drainage D2

Inorganic chemicals: antimony, mercury, lead, cadmium, zinc, vanadium, selenium

Organic chemicals:

PCBs: Aroclor-1254, Aroclor-1260

Pesticides: DDD, DDE, DDT, alpha-chlordane, endrin ketone, gamma-chlordane, dieldrin

SVOCs: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, phenanthrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, carbazole, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, pyrene, 2-methylnaphthalene, dibenzofuran, naphthalene, butylbenzyl phthalate

Radionuclides: plutonium-239

Drainage C

Inorganic chemicals: cadmium, selenium, lead, zinc

Organic chemicals:

Pesticides: DDE, DDT, endrin ketone

SVOCs: butylbenzyl phthalate, chrysene, fluoranthene, phenanthrene, pyrene, di-n-butyl phthalate, phenol

Radionuclides: plutonium-239

Silver and thallium were reported in most samples as undetected at detection limits (1.1 mg/kg to 1.3 mg/kg) above the BVs for sediment ([1.0 mg/kg and 0.73 mg/kg, respectively] LANL 1998). Because the elevated detection limits only slightly exceed the BVs (less than twice the BVs) and both inorganic chemicals were below their respective BVs when detected, silver and thallium are not retained as COPCs. Cesium-137 was detected in several samples above the FV for sediment of 0.9 pCi/g (LANL 1998). However, the concentrations did not exceed the maximum fallout concentration of 1.28 pCi/g (LANL 1998) so cesium-137 is not retained as a COPC.

F.2 Conceptual Site Model

The debris and trash found in the four drainages along the north facing slope of Pueblo Canyon resulted from approximately 30 years of use by DOE and its predecessor agencies, and Los Alamos County. Debris was generally found in and along each drainage thalweg, though scattered debris was found on side slopes along the various drainages. There was no appreciable migration of the debris items toward the bottom of Pueblo Canyon. Contaminants detected in the drainage sediment include inorganic chemicals, organic chemicals (PCBs, pesticides, and SVOCs), and radionuclides. The two contaminant groups that are the primary contributors to the overall risk at this site are polycyclic aromatic hydrocarbons (PAHs) and PCBs. PAHs may have originated from some of the debris items as well as from mesa-top runoff from

asphalted areas. PCBs could have originated from transformers or dialectric fluids that could have been present in the land fill.

Figure 5 presents the conceptual site model for the airport drainages. The source of the COPCs was the debris and other trash disposed of in the drainages as well as runoff from the mesa top. The following potential release mechanisms are present:

- leaching, corrosion, weathering and decomposition of disposed debris and trash;
- surface runoff from storm events or snow melt; and
- particulate suspension of contaminants.

The debris and trash have been removed from the drainages, but the sampling results indicate that residual contamination remains within the drainages. Exposure to the residual contamination only occurs if a receptor is in the drainages. The most likely human receptor is a recreational trail user who hikes up the side of Pueblo Canyon along the drainages. Access to the drainages is not available from the mesa top because the area around the airport is fenced. Potential exposure pathways include ingestion of soil, inhalation of particulates/dust, and dermal contact. Ecological receptors are also present in the form of plants, small mammals, large mammals, and birds; no aquatic receptors are present. Potential exposure pathways for these receptors include root uptake, food web transport, soil ingestion, dermal contact and inhalation of dust. External irradiation is an unlikely pathway for all receptors because the only radionuclide COPC is plutonium-239, which is an alpha emitter.

F.2.1 Nature and Extent

In Drainages A and B most of the COPCs have their highest concentrations either at the bottom of the drainage or in the lower half of the drainage. For Drainage C, which has the fewest COPCs, the highest concentrations are in the upper half of the drainage, while the lower half has few detected concentrations. The COPCs in Drainage D2 are often present throughout the drainage and show varying degrees of change in concentration from top to bottom. The PAHs show a definite and pronounced decreasing trend from top to bottom, while the inorganic chemicals show the opposite trend. The pesticides and PCBs are less frequently detected and show little change in concentration from top to bottom. Plutonium-239 was detected throughout the drainages with a slight to moderate decreasing trend from top to bottom in each drainage.

Data are also available for reaches in Pueblo Canyon downcanyon from where the drainages connect with the canyon bottom (Reneau et al. 1998). Reaches P-2 West and P-2 East are just below the drainages, while Reach P-3 (West and East) is approximately three-quarters to one mile downcanyon from Reach P-2 East and straddles the Bayo Canyon Wastewater Treatment Plant. Reach P-4 (West and East) is approximately one- to three-quarters of a mile below P-3 East and is just above the confluence with Los Alamos Canyon. All of these reaches have been sampled but only Reach P-4 has SVOC data, while all the reaches have inorganic chemical, plutonium-239, and pesticide/PCB data (Reneau et al. 1998).

Reaches P-2 and P-3 have few detected concentrations of inorganic chemicals above BVs, while Reach P-4 has 1 to 3 detected concentrations of several inorganic chemicals above BVs (Reneau et al. 1998). Fewer inorganic chemicals were detected above BVs in the reaches than in the drainages and generally have lower concentrations. The concentrations above BVs in all reaches are not substantially elevated; within a factor of 2-3 in Reaches P-2 and P-3. In Reach P-4, concentrations are less than a factor of 2 above the BV, except for thallium. The only PCB detected in Reaches P-2 and P-3 was Aroclor-1260 and was detected at lower concentrations than at the bottom of the drainages and decreased from Reach P-2 to P-4, where it was not detected (Reneau et al. 1998). No pesticides were detected in Reaches P-2, P-3, and P-4 (Reneau et al. 1998). The SVOC data from Reach P-4 has detected concentrations of PAHs that are generally higher than those detected at the bottom of the drainages, indicating other sources

of PAHs within the watershed (Reneau et al. 1998). However, as noted above, the concentrations of PAHs markedly decreased from the top of the drainage to the bottom in all cases. Plutonium-239 was detected in all reaches at much higher concentrations than reported inn the drainages (Reneau et al. 1998). Plutonium-239 decreased from the top of drainages to the bottom as noted above.

Reaches LA-4 and LA-5 in Los Alamos Canyon, which are below the confluence with Pueblo Canyon, also have plutonium-239 data. Plutonium-239 was detected in both reaches but at concentrations less than detected in Reaches P-2, P-3, and P-4 (Reneau et al. 1998). However, concentrations of plutonium-239 were still higher than detected in the drainages. Reach LA-5 has SVOC data that show SVOCs (including PAHs) were not detected in Reach LA-5 (Reneau et al. 1998).

F.2.2 Environmental Fate and Transport

The evaluation of environmental fate addresses the chemical processes that affect the persistence of a chemical in the environment. The evaluation of transport addresses the physical processes affecting mobility along the migration pathway.

Organic Chemicals

Table F-2 presents the physicochemical properties of the organic COPCs, which are important when evaluating their fate and transport. Information in the following paragraphs about the physicochemical properties of organic COPCs is presented to illustrate some aspects of the fate and transport tendencies of the COPCs (Ney 1995).

Water solubility is perhaps the most important chemical characteristic used to assess mobility of organic chemicals. The higher the water solubility of a chemical, the more likely it is to be mobile and the less likely it is to accumulate, bioaccumulate, volatilize, or persist in the environment. A highly soluble chemical (water solubility greater than 1000 mg/L) is prone to biodegradation and metabolism that may detoxify the parent chemical. Phenol is the only COPC with water solubility greater than 1000 mg/L (Table F-2).

The lower the water solubility of a chemical (especially lower than 10 mg/L), the more likely it will be immobilized by adsorption. Chemicals with lower water solubilities tend to be more likely to accumulate or bioaccumulate and persist in the environment, to be slightly prone to biodegradation, and may be metabolized in plants and animals. Most of the organic COPCs have water solubilities less than 10 mg/L. The water solubility of di-n-butylphthalate is 10.8 mg/L, while endrin aldehyde, 2-methylnaphthalene, and naphthalene have water solubility values between 24.6 mg/L and 50 mg/L (Table F-2). These values indicate that these COPCs are somewhat more soluble but still relatively immobile.

Vapor pressure is a chemical characteristic used to evaluate the tendency of organic chemicals to volatize. Chemicals with vapor pressure greater than 0.01 millimeter mercury (mm Hg) are more likely to volatilize and diffuse through the soil pore gas, resulting in potential release to the atmosphere. The only organic COPC with a vapor pressure greater than 0.01 mm Hg is 2-methylnaphthalene. Chemicals with vapor pressures less than 0.000001 mm Hg are less likely to volatilize and, therefore, tend to remain immobile. This includes most of the organic COPCs (e.g., PAHs and DDT/DDE). The vapor pressures of Aroclor-1254, Aroclor-1260, dibenzofuran, endosulfan sulfate, naphthalene, phenanthrene, and phenol are not much greater than 0.000001 mm Hg, so these organic COPCs will also tend to remain immobile (Table F-2).

The octanol water partition coefficient (Kow) is an indicator of a chemical's potential to bioaccumulate or bioconcentrate in the fatty tissues of organisms. The unitless Kow value is an indicator of water solubility, mobility, sorption, and bioaccumulation. The higher the Kow value above 1000, the greater the affinity the chemical has for bioaccumulation/bioconcentration in the

food chain, the greater it's potential for sorption in soil, and the lower its mobility (Ney 1995). All of the organic COPCs have a Kow greater than 1,000 with the exception of phenol. The Aroclors and the PAHs have the highest
Kow values (Table F-2).

A Kow of less than 500 indicates high water solubility, mobility, little to no affinity for bioaccumulation, and degradability by microbes, plants, and animals. The only organic COPC with a Kow of less than 500 is phenol (Table F-2).

F.2.3 Inorganic Chemicals

The fate and transport of inorganic chemicals in the environment are determined by several variables that can interact in numerous ways, e.g., physicochemical properties of the individual chemical and physical transport systems such as stormwater or snowmelt runoff. The physicochemical properties, such as water solubility, soil adsorption, and volatilization, are all important in determining the routes by which inorganic chemicals may enter the environment and be distributed. In general, and particularly in a semiarid climate, inorganic chemicals are not highly soluble or mobile in the environment, although there are some exceptions. Adsorption to particulate matter is a major mechanism by which chemicals are removed from solution and depends upon the type of soil. Transport is therefore primarily through surface water runoff following storm or snowmelt events. This mechanism is very much a factor in the drainages investigated here. Volatilization from soil and water is a function of the vapor pressure of a chemicals as well as temperature, degree of adsorption, soil properties, and soil water content (Caserett et al. 1986). Inorganic chemicals, however, are not among the volatile and semivolatile chemicals. Information about the fate and transport properties of individual inorganic chemicals is published by the Agency for Toxic Substances and Disease Registry (ATSDR). These profiles are contained in the CD-ROM distributed by ATSDR (ATSDR 1997). The information is also available from the agency's web site at http://www.atsdr.cdc.gov/toxprofiles.

Radionuclides

The radionuclide COPC in the drainages is plutonium-239, which is an actinide. In general, the actinides form comparatively insoluble compounds in the environment and are not considered biologically mobile. The actinides are transported in ecosystems mainly by physical and sometimes chemical processes. Uptake of actinides by plants from soil is generally low. Plutonium in the environment undergoes hydrolysis and oxidation with plutonium oxide as a common form. Under most environmental conditions, plutonium occurs in forms that are poorly transferred across biological membranes; therefore, movement of plutonium from sediment to plants and animals is greatly inhibited (Whicker and Schultz 1982).

Because plutonium under oxic conditions preferentially binds to fine soil or sediment particles or organic matter with high surface to volume ratios, plutonium is primarily adsorbed to particulates and transported via surface water runoff.

F.3 Human Health Screening Assessment

The human health screening assessment was performed according to guidance outlined in the draft installation work plan (LANL 2000) and in the "Human Health Risk-Based Screening Methodology" (LANL 2002).

The drainages addressed by this interim measure are located on the north facing slope of Pueblo Canyon just north of the airport landfill. The drainages lead from the mesa edge down the side of Pueblo Canyon. Access to the drainages is only from the bottom of Pueblo Canyon; a fence around the airport prevents access from the mesa top. The current and reasonably foreseeable future land use for the drainages is recreational with an adult trial user who hikes up and down

the drainages as the receptor. The potential for exposure is low to moderate because of the steepness of the canyon slope and the unlikely prospect that someone would use the drainages as hiking trails.

F.3.1 Soil Screening Levels

A total of 45 COPCs have been identified in the drainages; 11 inorganic COPCs, 1 radionuclide COPC, and 33 organic COPCs (2 PCBs, 11 pesticides, and 20 SVOCs). These COPCs are evaluated further in this section by comparing the 95% upper confidence limit (UCL) of the mean to the chemical-specific SSLs for each COPC.

The recreational SSLs for a trail user were calculated based on equations modified from US Environmental Protection Agency (EPA 2003) (Table F-3). Table F-4 present toxicity values and exposure parameters used in the calculations, respectively. The residential SSLs are from the New Mexico Environment Department ([NMED] 2000, 68554) and EPA Region 6 (EPA 2003), if NMED does not have SSLs for a COPC. The EPA Region 6 SSLs for carcinogens are adjusted from a 10^{-6} risk level to a 10^{-5} risk level. The residential screening is presented for comparison purposes only.

The SSLs for carcinogens are based on a 10^{-5} cancer risk level and SSLs for noncarcinogens are based on a hazard quotient (HQ) of 1.0 (a HQ is the ratio of the representative concentration for a COPC to the SSL for that COPC) (NMED 2000). The screening action levels (SALs) for radionuclides are based on a dose of 15 mrem/yr and derived according to a Los Alamos National Laboratory report, "Derivation and Use of Radionuclide Screening Action Levels" (LANL 2001). The SALs used were obtained from RESRAD Version 6.21 (LANL 2002).

F.3.2 Representative Concentrations

The representative concentration used in this screening assessment was the 95% UCL of the mean. The 95% UCLs were calculated following EPA guidance "Calculating Exposure Point Concentrations at Hazardous Waste Sites" (EPA 2002) and recommendations in the user's guide for the software program ProUCL (Lockheed Martin 2002) for each COPC in each drainage. For individual chemical COPCs, the UCL calculations were performed using detected concentrations. Nondetected concentrations of inorganic and organic COPCs were included in the calculation using one-half of the detection limits. The radionuclide data were used as reported (detects and nondetects). All sample data were used in this evaluation because the sample collection depths are less than 1.5 ft below ground surface.

The UCLs were calculated using normal, lognormal, or nonparametric (Chebyshev's) tests, depending on which distribution provided the best fit to the data for that COPC. The data distribution was tested by performing the Shapiro-Wilk W-test. If the p-value indicates that the untransformed data are not significantly different from normal (p-value greater than 0.05), then the normal distribution is assumed. If the p-value is less than 0.05, then the normal distribution is rejected and the lognormal distribution is considered. If the log-transformed data are not significantly different from normal, then the lognormal distribution is assumed. If the p-value is less than 0.05, then the lognormal distribution is rejected, and a nonparametric (distribution-free) UCL is used.

For data with a normal distribution, the UCL is based upon the t-statistic. For data with lognormal distribution, the UCL is based upon the Land method, which uses the H-statistic (EPA 2002 & Gilbert 1987). Depending upon the degree of skew present in the data and sample size, an alternative to the H-statistic may be used (EPA 2002 & Lockheed Martin 2002). The alternative is based on the Chebyshev inequality, which uses minimum variance unbiased estimates of the lognormal parameters (EPA 2002). For data distributions that are neither normal nor lognormal, a nonparametric estimate is used. The nonparametric estimate is based on the Chebyshev inequality, which uses the sample mean (arithmetic average) and sample standard deviation

(EPA 2002). Maximum detected concentrations were used as the representative concentration if the 95% UCL exceeded the maximum value (EPA 1989).

The 95% UCL for each COPC was compared with the SSL for carcinogens and radionuclides, and 0.1 SSL for noncarcinogens because more than one noncarcinogenic COPC has been identified. The 95% UCLs used in the screening assessment for inorganic chemicals, radionuclides, and organic chemicals are presented in Table F-5.

F.3.3 Screening Assessment Results

Drainage A

The 95% UCLs of noncarcinogenic COPCs were all less than their respective recreational SSLs and less than one tenth the SSLs, except for Aroclor-1254 (Table F-6). The hazard index (HI) for the noncarcinogenic COPCs (the sum of the ratios of representative concentration divided by the screening value) is approximately 0.3 (Table F-6).

The 95% UCLs of the carcinogenic COPCs were less than their respective recreational SSLs (Table F-7). The total excess cancer risk from exposure to carcinogenic COPCs is approximately $5x10^{-6}$ (Table F-7).

The 95% UCL for plutonium-239 was less than its recreational SAL. The total radionuclide dose is approximately 0.01 mrem/yr (Table F-8).

Drainage B

The 95% UCLs of noncarcinogenic COPCs were all less than their respective recreational SSLs and less than one-tenth the SSLs (Table F-9). The HI for the noncarcinogenic COPCs is approximately 0.04 (Table F-9).

The 95% UCLs of the carcinogenic COPCs were less than their respective recreational SSLs (Table F-10). The total excess cancer risk from exposure to carcinogenic COPCs is approximately 5×10^{-7} (Table F-10).

The 95% UCLs for plutonium-239 was less than its recreational SAL. The total radionuclide dose is approximately 0.016 mrem/yr (Table F-11).

Drainage C

The 95% UCLs of noncarcinogenic COPCs were all less than their respective recreational SSLs and less than one tenth the SSLs (Table F-12). The HI for the noncarcinogenic COPCs is approximately 0.02 (Table F-12).

The 95% UCLs of the carcinogenic COPCs were less than their respective recreational SSLs (Table 30). The total excess cancer risk from exposure to carcinogenic COPCs is approximately 4×10^{-10} (Table F-13).

The 95% UCLs for plutonium-239 was less than its recreational SAL. The total radionuclide dose is approximately 0.039 mrem/yr (Table F-14).

Drainage D2

The 95% UCLs of noncarcinogenic COPCs were all less than their respective recreational SSLs and less than one-tenth the SSLs (Table F-15). The HI for the noncarcinogenic COPCs is approximately 0.06 (Table F-15).

The 95% UCLs of the carcinogenic COPCs were less than their respective recreational SSLs (Table F-16). The total excess cancer risk from exposure to carcinogenic COPCs is approximately 3×10^{-6} (Table F-16).

The 95% UCLs for plutonium-239 was less than its recreational SAL. The total radionuclide dose is approximately 0.012 mrem/yr (Table F-17).

F.3.4 Uncertainty Analysis

The analysis in this human health risk assessment is subject to uncertainties associated with data evaluation, exposure assessment, and toxicity assessment. Each or all of these uncertainties may affect the assessment results.

Data Evaluation

Data evaluation uncertainties may include errors in sampling, laboratory analysis, and data analysis. Because concentrations used in this risk assessment were less than estimated quantitation limits, data evaluation uncertainties have little effect on the assessment results.

Another data evaluation uncertainty relates to the use of the 95% UCL as the representative concentration for each COPC. The 95% UCL assumes that a receptor is exposed to this concentration throughout a drainage. As the data show concentrations vary from top to bottom and from COPC to COPC. Some COPCs have the maximum concentration at the top of the drainage, while other COPCs have the maximum at the bottom. As a result, the 95% UCL tends to overestimate the risk but not nearly as much as the maximum concentration.

Exposure Assessment

Three exposure assessment uncertainties were identified for the risk assessment: (1) the identification of receptors, (2) the applicability of user scenarios, and (3) the assumptions underlying the exposure pathways. The receptor (trail user) and scenario (recreational) used in the assessment are probably subject to exposures (if at all) in a different manner than the exposure assumptions used to derive the SSLs. Assumptions for the SSLs are that the potentially exposed individual is a recreational trail user who is in the drainage for 1 hr/day for 200 days/yr. It is unlikely that a trail user would spend that much time, if any, hiking in either one or more of the drainages, especially since there are no defined trails. Because of the steepness of the canyon slope, the lack of trails, and the dense vegetation, hiking along the drainages is unlikely.

Assumptions underlying the exposure pathways for parameter, route of exposure, amount of contaminated media available for exposure, and intake rates for routes of exposure are consistent with EPA-approved parameters and default values (EPA 2003). In the absence of site-specific data, several upper-bound values for the assumptions may be combined to estimate exposure for any one pathway, and the resulting risk estimate can exceed the 99th percentile. Therefore, uncertainties in the assumptions underlying the exposures may exceed the range that would be reasonably expected.

Toxicity Assessment

The primary uncertainty associated with the screening values relates to the derivation of screening values from EPA toxicity values (RFDs and SFs) (EPA 2001; EPA 1997). Uncertainties were identified in three areas with respect to the toxicity values: (1) extrapolation from animals to humans, (2) extrapolation from one route of exposure to another route of exposure, and (3) interindividual variability in the human population.

The SFs and RFDs are often determined based on extrapolation from animal data to humans, which may result in uncertainties in toxicity values because differences exist in chemical

absorption, metabolism, excretion, and toxic response between animals and humans. The EPA takes into account differences in body weight, surface area, and pharmacokinetic relationships between animals and humans to minimize the possible underestimation of the dose-response relationship. However, it is generally a conservative estimate.

The SFs and RFDs can often contain extrapolations from one route of exposure to another. The extrapolation from the oral route to the inhalation and/or the dermal route is used to derive some screening values. Differences in chemical absorption and/or toxicity between two exposure routes could result in an over- or underestimation of risk or hazard.

For noncarcinogenic effects, the amount of human variability in physical characteristics is important in determining the risks that can be expected at low exposures and in determining the no observed adverse effect level (NOAEL). The NOAEL/uncertainty factor approach incorporates a factor of 10 to reflect the possible interindividual variability in the human population; it is generally a conservative estimate.

Another uncertainty related to toxicity assessment is the assumption of an additive approach, which may over- or underestimate of risk. For noncarcinogens, the effects of a mixture of chemicals are generally unknown and possible interactions could be synergistic or antagonistic. Additionally, the RFDs for different chemicals are not based on the same severity, effect, or target organ. Therefore, the potential for occurrence of noncarcinogenic effects can be overestimated for chemicals that are addressed additively but that act by different mechanisms and on different target organs.

The use of surrogates for some chemicals that do not have EPA-approved or provisional toxicity values also contributes to uncertainty in risk assessment. In this assessment, surrogates were used to establish toxicity values for endrin aldehyde, endrin ketone, endosulfan sulfate, benzo(g,h,i)perylene, 2-methylnaphthalene, and alpha- and gamma-chlordane. The surrogates (endrin, pyrene, naphthalene, and chlordane, respectively) are either the parent compound and/or are structurally similar. The use of the surrogate may over- or underestimates the risk. However, none of these COPCs were risk drivers, and thus using surrogates does not affect the risk-assessment results.

F.3.5 Interpretation

Based on a recreational trail user scenario, the HIs (ranging from 0.02 to 0.3) are less than the NMED target level of 1.0 and the carcinogenic risks (ranging from 4×10^{-10} to 5×10^{-6}) are less than the NMED target level of 1×10^{-5} (NMED 2000). The radiological doses (ranging from 0.01 mrem/yr to 0.039 mrem/yr) are less than the DOE target dose of 15 mrem/yr (DOE 2000). The total dose for a recreational trail user is less than an equivalent total risk of 1×10^{-5}. The screening assessments indicate that no potential for unacceptable risk or dose to human health occurs in Drainages A, B, C, and D2.

F.4 Ecological Screening Assessment

The approach for conducting ecological assessments is described in the "Screening Level Ecological Risk Assessment Methods" (LANL 1999).

The north-facing slope of Pueblo Canyon is a ponderosa pine community with thick undergrowth. No potential for contamination to aquatic receptors exists because no permanent surface water occurs in the drainages. Transport to groundwater is not feasible because of the depth of the regional aquifer (approximately 1000 ft bgs) and the transient nature of the surface water (mainly from storm and snowmelt runoff). The potential contact with contaminants is by root uptake for plants and food web transport, soil ingestion, dermal contact, and dust inhalation for terrestrial receptors.

The purpose of the ecological screening evaluation is to identify chemicals of potential ecological concern (COPECs) for the drainages. The evaluation involves the calculation of HQs for all COPCs and all screening receptors (LANL 1999). The HQs are the ratios of the representative concentrations (95% UCLs) to the ESLs (see Section G-4.2 for description of 95% UCL calculations). The 95% UCLs used in the ecological screening assessment are calculated using all samples because the sample depths are less than 5 ft (LANL 1999). In addition, the 95% UCLs were calculated to represent all of the drainages for the ecological assessment rather than a 95% UCL for each drainage because ecological receptors are not confined to a single drainage (Table F-5). The HI is a sum of HQs. An HQ greater than 1.0 is considered an indication of potential adverse impacts. COPCs with HQs greater than 0.3 are identified as COPECs and are evaluated further.

F.4.1 Ecological Screening Results

The ESLs for terrestrial receptors were obtained from the Laboratory's Ecorisk Database Version 2.0 (LANL 2003) and are presented in Table F-18 for the COPCs in the airport drainages. Soil ESLs are used because there is no permanent water in the drainages and the receptors are terrestrial in nature.

An initial screening of the representative concentrations to the minimum or final ESL for each COPC was conducted to identify COPECs (Table F-19). Antimony, cadmium, copper, lead, mercury, selenium, vanadium, zinc, Aroclor-1254, Aroclor-1260, endrin, endrin aldehyde, endrin ketone, endosulfan sulfate, DDE, acenaphthene, naphthalene, and di-n-butyl phthalate had HQs greater than 0.3 and are retained as COPECs. Cobalt, nickel, alpha-chlordane, gamma-chlordane, DDT, endosulfan I, dieldrin, methoxychlor, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, phenanthrene, pyrene, phenol, dibenzofuran, butylbenzyl phthalate, and plutonium-239 were eliminated as COPECs because the maximum HQs were less than 0.3. Iron, carbazole, and 4,4'-DDD do not have ESLs in the Ecorisk Database and are evaluated in the uncertainty analysis.

The 95% UCLs for the inorganic COPECs were compared to the sediment BVs to see if the representative concentrations exceeded background concentrations in the drainages. Copper and vanadium have 95% UCLs less than their respective sediment BVs and within the range of background concentrations (LANL 1998). Mercury and selenium have 95% UCLs that are equivalent to the BVs (0.1 mg/kg and 0.3 mg/kg, respectively) (LANL 1998). Therefore, copper, mercury, selenium, and vanadium are not retained as COPECs in the airport drainages.

The remaining COPECs are evaluated further in Table F-20. The HQ for each COPEC/receptor combination as well as the HIs for each receptor was calculated. For the purposes of ecological screening, it is assumed that nonradionuclides have common toxicological effects. The HI analysis provides a clearer picture of potential adverse impacts by determining how many receptors may be affected. Based on the analysis in Table F-20, all of the receptors have HIs greater than 1.0.

EPA guidance is predicated on managing the ecological risk to populations rather than on an individual basis, except in the case of threatened and endangered species (EPA 1999). One approach to address the potential effects on populations is to estimate the spatial extent of the area inhabited by the local population that overlaps with the contaminated area. This calculation is based on the individual receptor home range and its dispersal distance (Bowman et al. 2002). Bowman et al. (2002) estimate that the median dispersal distance for mammals is 7 times the linear dimension of the home range (i.e., the square root of the home range area). If only the dispersal distances for the mammals with home ranges within the range of the screening receptors are used (Bowman et al. 2002), the median dispersal distance becomes 3.6 times the square root of the home range (R^2=0.91). If it is assumed that the receptors can disperse the

same distance in any direction, the population area is circular and the dispersal distance is the radius of the circle. Therefore, the population area can be derived by $\pi(3.6\sqrt{HR})^2$ or approximately 40HR. Home ranges for receptors are found in EPA's Wildlife Exposure Factors Handbook (EPA 1993).

Using the Bowman et al. relationship results in population areas of 3.0 ha for the deer mouse (0.075 ha × 40), 15.6 ha for the shrew (0.39 ha × 40), 16.8 ha for the robin (0.42 ha × 40), 60 ha for the cottontail (1.5 ha × 40), 524 ha for the kestrel (13.1 ha × 40), and 27960 ha for the fox (699 ha × 40) (Table F-21). Although the drainages are found over a 22 ha area of the north-facing slope of Pueblo Canyon, the area of the drainages (i.e., the contaminated area) is only 1.3 ha (approximately 30 ft × 1200 ft long) or only 6% of the total area. A population area use factor (PAUF) is estimated by dividing the contaminated area (1.3 ha) by the population area for each receptor (Table F-21). The HIs adjusted by the PAUFs for the fox, cottontail, kestrel and herbivorous robin are less than 1.0, while the other HIs are still >1.0, but less than 6. For the wildlife receptors, the exposures and potential risks to receptor populations are overestimated because the drainages are only 6% of the total area and are separated by uncontaminated tracts of land. The COPECs are discussed further in the uncertainty analysis.

HIs for the plant and earthworm are not adjusted by PAUFs because these receptors do not have home ranges for which a PAUF can be developed. The plant HI is 88.4 based primarily on antimony and zinc. The plant community on the canyon slope shows no signs of stress and appears healthy. The earthworm HI of 1.3 is equivalent to 1.0 and does not indicate any potential ecological impacts.

F.4.2 Uncertainty Analysis

The uncertainty analysis describes the key sources of uncertainty related to the screening assessment. This analysis can result in either adding or removing chemicals from the list of COPECs. This narrative contains a qualitative uncertainty analysis of the issues relevant to evaluating the potential ecological risk in the airport drainages.

The 95% UCLs are calculated using all samples because the sample depths are less than 5 ft (LANL 1999). In addition, a 95% UCL was calculated to represent all of the drainages for the ecological assessment rather than a 95% UCL for each drainage because ecological receptors are not confined to a single drainage (Table F-18). As a result, the exposure of individuals within a population was evaluated using this specific concentration, which was assumed constant throughout the exposure area. Therefore, the comparison to 95% UCLs results in an overestimation of the potential risk because concentrations of COPCs varied across the drainages and often were infrequently detected.

The chemical form of the individual COPCs was not determined as part of this investigation largely because of a limitation on analytical quantitation of individual chemical species. Toxicological data are typically based on the most toxic and bioavailable chemical species, which are not likely found in the environment. The inorganic and organic COPECs are not generally 100% bioavailable to receptors in the natural environment due to the adsorption of chemical constituents to matrix surfaces (e.g., soils), or rapid oxidation or reduction changes that render harmful chemical forms unavailable to biotic processes. The ESLs were calculated to ensure a conservative indication of potential risk (LANL 1999) and the values were biased toward overestimating the potential risk to receptors.

Antimony. Antimony was detected in 17 of 68 samples, but only 6 samples had reported concentrations above the BV (0.83 mg/kg). All but one of these samples was 4 times the BV or less (range of 0.96 mg/kg to 3.4 mg/kg) and do not indicate a release. One sample in Drainage A had a reported concentration of 26.8 mg/kg and is localized (nothing as high near it). The PAUF adjusted HQs resulting from antimony are less than 1.0, except for the deer mouse, which has an adjusted HQ of less than 3.0. Because the drainages are only 6% of the total area and are

separated by uncontaminated tracts of land, the exposures and potential risks to receptor populations are overestimated. Based on these reasons, antimony is not retained as a COPEC.

Cadmium. Cadmium was detected in 60 of 68 samples but only 11 samples had reported concentrations above the BV (0.4 mg/kg). Most of these results (9 of 11) were between 0.5 mg/kg and 1.0 mg/kg and are approximately twice the BV or less and do not indicate a release. The remaining two sample results had reported concentrations of 3.1 mg/kg and 49.3 mg/kg, which are localized (nothing as high near it). The PAUF adjusted HQs resulting from cadmium are less than 1.0, except for the deer mouse, which has an adjusted HQ of less than 2.0. Because the drainages are only 6% of the total area and are separated by uncontaminated tracts of land, the exposures and potential risks to receptor populations are overestimated. Based on these reasons, cadmium is not retained as a COPEC.

Lead. Lead was detected in 68 of 68 samples but only 15 samples had reported concentrations above the BV (19.7 mg/kg). Most of these results (10 of 15) were between 20 mg/kg and 36 mg/kg, which correspond to sediment background concentrations (maximum of 25.6 mg/kg) (LANL 1998) and do not indicate a release. The remaining lead concentrations are elevated to as much as 114 mg/kg and are localized (nothing as high near it). In addition, the 95% UCL for lead of 29.7 mg/kg is similar to background concentrations. The HQs for lead are 2.0 or less and with the PAUF adjustments are less than 1.0. Based on these reasons, lead is not retained as a COPEC.

Zinc. Zinc was detected in 68 of 68 samples but only 20 samples had reported concentrations above the BV (60.2 mg/kg). Many of these results (8 of 20) were between 62 mg/kg and 84 mg/kg, which are less than twice the maximum sediment background concentration (56.2 mg/kg) (LANL 1998) and do not indicate a release. The remaining concentrations are elevated to between 100 mg/kg and 300 mg/kg, with one sample reporting a concentration of 2030 mg/kg. The HQs for zinc are less than 10 (most are less than 3.0) and with the PAUF adjustments are less than 1.0. Based on these reasons, zinc is not retained as a COPEC.

Aroclor-1254. Aroclor-1254 was detected in 20 of 68 samples, most at concentrations less than 1 mg/kg. Three concentrations were reported above 1 mg/kg and as high as 12 mg/kg. The higher concentrations are localized in one portion of a drainage so exposure is infrequent. The PAUF adjusted HQs resulting from Aroclor-1254 are less than 1.0, except for the robin insectivore, which has an adjusted HQ of less than 3.0. Because the drainages are only 6% of the total area and are separated by uncontaminated tracts of land, the exposures and potential risks to receptor populations are overestimated. Based on these reasons, Aroclor-1254 is not retained as a COPEC.

Aroclor-1260. Aroclor-1260 was detected in 14 of 68 samples, all at concentrations less than 1 mg/kg (maximum is 0.25 mg/kg). The maximum HQ is 0.5 so Aroclor-1260 is not a risk driver. The PAUF adjusted HQs are all well below 0.01. Based on these reasons, Aroclor-1260 is not retained as a COPEC.

Endrin, endrin aldehyde, endosulfan sulfate, and di-n-butyl phthalate. All 4 of these organic chemicals were detected in only 2 of 68 samples. Reported concentrations were low (<0.1 mg/kg) and were isolated in occurrence. The HQs were approximately 1.0 or less and the PAUF adjusted HQs are less than 0.1, indicating that these are not risk drivers. Based on these reasons, endrin, endrin aldehyde, endosulfan sulfate, and di-n-butyl phthalate are not retained as COPECs.

Endrin ketone. Endrin ketone was detected in 19 of 68 samples at concentrations less than 0.1 mg/kg (maximum is 0.0125 mg/kg). The HQs are less than 0.1 and the PAUF adjusted HQs are less than 0.1, indicating that endrin ketone is not a risk driver. Based on these reasons, endrin ketone is not retained as a COPEC.

DDE. DDE was detected in 28 of 68 samples at concentrations less than 1 mg/kg (maximum is 0.15 mg/kg). The HQs are less than 1.0 and the PAUF adjusted HQs are less than 0.1, indicating that DDE is not a risk driver. Based on these reasons, DDE is not retained as a COPEC.

Acenaphthene. Acenaphthene was detected in 7 of 68 samples at concentrations less than 1 mg/kg (maximum is 0.35 mg/kg). The HQs are less than 0.1 and the PAUF adjusted HQs are less than 0.0001, indicating that acenaphthene is not a risk driver. Based on these reasons, DDE is not retained as a COPEC.

Naphthalene. Naphthalene was detected in 1 of 68 samples at a concentration 0.38 mg/kg. The PAUF adjusted HQs are below 1.0. Based on these reasons, naphthalene is not retained as a COPEC.

There is no ESL available for carbazole so this chemical cannot be evaluated quantitatively. Carbazole was detected in 2 of 60 samples at concentrations of 0.084 mg/kg and 0.29 mg/kg; both below the estimated quantitation limit of 0.35 mg/kg. There are no ESLs for carbazole, but the EPA Region 6 residential SSL is 24 mg/kg (EPA 2003), which indicates very low potential toxicity from this chemical. Phenanthrene has a similar structure to carbazole and has a final ESL of 11 mg/kg for the shrew. Both detected concentrations of carbazole and the 95% UCL (0.2 mg/kg) are well below this ESL. Because of its apparent low toxicity as well as being infrequently detected across the site and detected at trace levels, carbazole does not present a potential ecological risk to receptors and is not retained as a COPEC.

There is no ESL available for iron so it cannot be evaluated quantitatively. Iron was detected in 3 of 68 samples above its sediment BV of 13800 mg/kg (LANL 1998). The NMED residential SSL is 23000 mg/kg (NMED 2000), which indicates very low potential toxicity from this chemical. In addition, the 95% UCL (8583 mg/kg) is similar to background concentrations (range of 1400 mg/kg to 13000 mg/kg) (LANL 1998). Because it is infrequently detected above the BV across the site and the 95% UCL is similar to background concentrations, iron does not present a potential ecological risk to receptors and is not retained as a COPEC.

There is no ESL available for DDD so this chemical cannot be evaluated quantitatively. DDD was detected in 1 of 60 samples at a concentration of 0.0022 mg/kg; slightly above the estimated quantitation limit of 0.0018 mg/kg. Because DDD is a breakdown product of DDT comparison to the final ESL for DDT is appropriate. The final ESL for DDT is 0.09 mg/kg for the robin insectivore. The detected concentration for DDD and the 95% UCL (0.001 mg/kg) are below this ESL. Because of its apparent low toxicity as well as being infrequently detected across the site and detected at trace levels, DDD does not present a potential ecological risk to receptors and is not retained as a COPEC.

F.4.3 Interpretation

The inorganic COPEC concentrations were either similar to background concentrations or infrequently detected at concentrations above background concentrations. Many of the organic COPECs were infrequently detected at trace levels, while others were present across the drainages but at low concentrations; elevated concentrations were localized. In addition, population analysis indicated that no potential ecological impacts were present. The ponderosa pine community appears healthy and unaffected by the presence of residual contamination. The soil invertebrate community (as represented by the earthworm) is also not impacted. As a result of the screening assessment for ecological risk, no COPECs are retained for the airport drainages.

F.5 Conclusions and Recommendations

The COPCs identified in the airport drainages were assessed for their potential to pose unacceptable risks to human and ecological receptors. The human health screening assessment

was based on a recreational trail user scenario. The assessment found that all noncarcinogenic and carcinogenic COPCs had 95% UCLs or maximum concentrations less than their SSLs. The HIs for noncarcinogenic COPCs ranged from 0.02 to 0.3 and the total incremental cancer risk ranged from 4×10^{-10} to 5×10^{-6}. These risk values do not exceed NMED's target levels for systemic hazard (HI=1.0) and cancer risk (1×10^{-5}) (NMED 2000). The total radiological dose ranged from 0.01 mrem/yr to 0.039 mrem/yr, which is less than the DOE's target dose of 15 mrem/yr (DOE 2000).

The ecological screening assessment identified several inorganic and organic COPECs. The COPECs were evaluated in the context of frequency of detection, population exposure, and background. The results found that no COPECs are retained and the contaminants do not to pose a potential adverse impact to ecological receptors.

The risk screening assessments on contaminants in the airport drainages resulted in no potential unacceptable risks or doses to human health and no potential unacceptable risk to ecological receptors. Therefore, neither additional corrective action nor additional sampling is needed for the airport drainages.

F.6 Tables

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Table F-1.
Contaminants of Potential Concern - Risk Screening

Analyte	# samples	# NDs[a]	min ND[b] (mg/kg)	max ND[c] (mg/kg)	# detects	min detect	max detect	mean site	BV[d] (mg/kg)
Antimony	68	51	1	8.1	17	0.16	26.8	2.2	0.83
Cadmium	68	8	0.48	0.56	60	0.039	49.3	1.0	0.4
Cobalt	68	6	0.97	1.1	62	0.38	5.7	1.6	4.73
Copper	68	8	2.5	8.5	60	1.7	39.3	6.4	11.2
Iron	68	0	NA[e]	NA	68	2650	26900	6572	13,800
Lead	68	0	NA	NA	68	5.6	114	19.8	19.7
Mercury	68	32	0.035	0.06	36	0.019	0.24	0.048	0.1
Nickel	68	7	1.8	2.1	61	1	14.7	3.1	9.38
Selenium	68	37	0.3	0.66	31	0.14	0.52	0.40	0.3
Vanadium	68	1	1.3	1.3	67	2.3	35.4	7.9	19.7
Zinc	68	0	NA	NA	68	20.3	2030	93.1	60.2

Analyte	# samples	# NDs[a]	min ND[b] (pCi/g)	max ND[c] (pCi/g)	# detects	min detect	max detect	mean site	BV[d] (pCi/g)
Plutonium-239	72	12	0	0.021	60	0.0082	0.563	0.097	0.068

[a] Number of nondetects
[b] Minimum nondetects
[c] Maximum nondetect
[d] Taken from LANL 1998

Table F-1. (cont.)
Contaminants of Potential Concern - Risk Screening

Analyte	# samples	# NDs[a]	min ND[b] (mg/kg)	max ND[c] (mg/kg)	# detects	min detect	max detect	mean site
4,4'-DDD	60	59	0.0018	0.0022	1	0.0022	0.0022	0.0019
4,4'-DDE	60	32	0.0018	0.0021	28	0.0018	0.15	0.0072
4,4'-DDT	60	37	0.0018	0.019	23	0.0021	0.026	0.0053
Acenaphthene	68	61	0.34	0.44	7	0.043	0.35	0.35
Anthracene	68	55	0.34	0.44	13	0.035	1.2	0.35
Aroclor-1254	68	48	0.034	0.044	20	0.061	12	0.32
Aroclor-1260	68	54	0.034	0.044	14	0.055	0.25	0.060
Benzo(a)anthracene	68	50	0.11	0.39	18	0.081	5.3	0.26
Benzo(a)pyrene	68	49	0.11	0.39	19	0.079	4.9	0.25
Benzo(b)fluoranthene	68	51	0.11	0.39	17	0.072	3.5	0.22
Benzo(g,h,i)perylene	68	55	0.11	0.39	13	0.091	1.6	0.18
Benzo(k)fluoranthene	68	51	0.11	0.39	17	0.089	5	0.25
Butylbenzylphthalate	68	66	0.34	0.44	2	0.088	0.21	0.37
Carbazole	60	58	0.34	0.44	2	0.084	0.29	0.37
Chlordane[alpha-]	68	60	0.0017	0.0022	8	0.0023	0.0035	0.0021
Chlordane[gamma-]	68	55	0.0017	0.0022	13	0.0022	0.072	0.0036

Chrysene	68	48	0.11	0.39	20	0.09	5.5	0.27
Di-n-butylphthalate	68	66	0.34	0.44	2	0.089	0.099	0.36
Dibenz(a,h)anthracene	68	63	0.11	0.39	5	0.072	1	0.16
Dibenzofuran	68	67	0.0018	0.39	1	0.23	0.23	0.15
Dieldrin	68	66	0.0018	0.0039	2	0.0029	0.0038	0.0022
Endosulfan I	68	67	0.0017	0.0022	1	0.0025	0.0025	0.0019
Endosulfan sulfate	68	66	0.0018	0.0039	2	0.002	0.0059	0.0022
Endrin	68	66	0.0018	0.0039	2	0.0024	0.0068	0.0022
Endrin aldehyde	68	66	0.0018	0.0039	2	0.0033	0.0085	0.0022
Endrin ketone	68	49	0.0018	0.0039	19	0.0021	0.012	0.0035
Fluoranthene	68	43	0.11	0.39	25	0.043	8.5	0.37
Fluorene	68	64	0.11	0.39	4	0.047	0.41	0.15
Indeno(1,2,3-cd)pyrene	68	52	0.11	0.39	16	0.073	2	0.19
Methoxychlor[4,4'-]	68	66	0.0034	0.02	2	0.0086	0.011	0.0056
Methylnaphthalene[2-]	68	67	0.11	0.39	1	0.11	0.11	0.15
Naphthalene	68	67	0.11	0.39	1	0.38	0.38	0.16
Phenanthrene	68	49	0.34	0.44	19	0.083	3.2	0.43
Phenol	68	67	0.34	0.44	1	0.11	0.11	0.37
Pyrene	68	45	0.11	0.39	23	0.082	9.1	0.37

[a] Number of nondetects
[b] Minimum nondetects
[c] Maximum nondetect

Table F-2.
Physiochemical Properties Organic Constituents

COPC	Water Solubility (mg/L)[a]	Vapor Pressure at 25°C (mm Hg)[a]	Kow[a, b]	Koc[a, c]
Acenaphthene	3.80E+00	4.93E-06	9.22E+03	4.90E+03
Anthracene	5.37E-02	3.35E-08	2.95E+04	2.35E+04
Aroclor-1254	1.20E-02[d]	7.71E-05[d, e]	3.16E+06[d]	No Data
Aroclor-1260	2.70E-03[d]	4.05E-05[d, e]	6.31E+06[d]	No Data
Benzo(a)anthracene	1.28E-02	2.03E-10	4.77E+05	2.60E+05
Benzo(a)pyrene	1.94E-03	6.43E-12	1.35E+06	9.69E+05
Benzo(b)fluoranthene	4.33E-03	1.06E-10	1.59E+06	8.36E+05
Benzo(g,h,i)perylene	2.60E-04[d]	1.03E-10[d]	3.16E+06[d]	1.58E+06[d]
Benzo(k)fluoranthene	8.00E-04	1.32E-12	1.56E+06	8.32E-05
Butylbenzylphthalate	2.58E+00	1.58E-08	2.59E+04	1.37E+04
Carbazole	No data	1.37E-06[f]	No data	No data
Chlordane[alpha-]	5.51E-01	3.55E-08	8.66E+05	5.13E+04
Chlordane[gamma-]	5.51E-01	3.55E-08	8.66E+05	5.13E+04
Chrysene	1.94E-03	1.03E-11	5.48E+05	2.97E+05
DDD[4,4'-]	7.33E-02	1.14E-09	1.32E+06	4.58E+04
DDE[4,4'-]	1.92E-02	7.45E-09	1.80E+06	8.64E+02
DDT[4,4'-]	3.41E-03	5.17E-10	1.17E+06	6.78E+05
Dibenz(a,h)anthracene	6.70E-04	2.70E-14	3.53E+06	1.79E+06
Dibenzofuran	4.22E+00[f]	4.40E-03[f]	1.32E+04[f]	No data
Dieldrin	1.87E-01	1.31E-09	1.86E+05	2.55E+04
Di-n-butylphthalate	1.08E+01	5.55E-08	5.25E+04	1.57E+03
Endosulfan I	2.31E-01	1.72E-11	3.02E+03	2.04E+03
Endosulfan sulfate	2.20E-01[d]	1.00E-05[d]	4.57E+03[d]	No data
Endrin	2.46E-01	7.68E-10	7.79E+04	1.08E+04
Endrin aldehyde	5.00E+01[d]	2.00E-07[d]	1.40E+03[d]	6.31E+04[d]
Endrin ketone[g]	2.46E-01	7.68E-10	7.79E+04	1.08E+04
Fluoranthene	2.32E-01	1.07E-08	1.21E+05	4.91E+04
Fluorene	1.90E+00	8.17E-07	1.47E+04	7.71E+03
Indeno(1,2,3-cd)pyrene	1.07E-02	1.88E-13	8.22E+06	4.11E+06
Methylnaphthalene[2-]	2.46E+01[d]	6.80E-02[d]	7.24E+03[d]	2.45E+03[d]
Methoxychlor[4,4'-]	8.84E-02	1.62E-09	3.36E+04	8.00E+04
Naphthalene	3.11E+01	1.17E-04	2.36E+03	1.19E+03
Phenanthrene	1.28E+00	1.35E-03	3.55E+04	2.09E+02
Phenol	9.08E+04	5.74E-04	3.00E+01	2.20E+01
Pyrene	1.30E-01	5.59E-09	1.00E+05	6.80E+04

[a] Reference information from http://www.epa.gov/earth1r6/6pd/rcra_c/pd-o/appd1a.pdf
[b] Kow – octanol water partition coefficient
[c] Koc – adsorption coefficient
[d] Reference information from http://www.atsdr.cdc.gov/toxprofiles
[e] Data on temperature not available
[f] Hazardous Substance Data Bank available at http://toxnet.nlm.nih.gov
[g] Values for endrin ketone are the same as those for endrin

Table F-3.
Derived Recreational Soil Screening Levels – Risk Screening

Noncarcinogenic SSLs	
Soil Ingestion	$\frac{BW \times AT}{1/RFD_o \times 10^{-6}\ kg/mg \times EF \times ED\ (IR \times FI)}$
Inhalation	$\frac{BW \times AT}{1/RFD_i \times EF \times ED \times ET \times Inh \times 1/PEF}$
Dermal Contact	$\frac{BW \times AT}{1/RFD_o \times 10^{-6}\ kg/mg \times EF \times ED \times SA \times AF \times ABS}$
Carcinogenic SSLs	
Soil Ingestion	$\frac{BW \times AT}{SF_o \times 10^{-6}\ kg/mg \times EF \times ED\ (IR \times FI)}$
Inhalation	$\frac{BW \times AT}{SF_i \times EF \times ED \times ET \times Inh \times 1/PEF}$
Dermal Contact	$\frac{BW \times AT}{SF_o \times 10^{-6}\ kg/mg \times EF \times ED \times SA \times AF \times ABS}$
Combined Pathway SSLs	
Soil ingestion + Inhalation + Dermal Contact	$\frac{1}{1/Ingestion\ SSL + 1/Inhalation\ SSL + 1/Dermal\ SSL}$

[a] Modified from EPA 2003, 81724

Table F-4.
Toxicity Values and Exposure Parameters

COPCs	Oral RFD (mg/kg-d)	Source	Inhalation RFD (mg/kg-d)	Source	Oral SF $(mg/kg\text{-}d)^{-1}$	Source	Inhalation SF $(mg/kg\text{-}d)^{-1}$	Source
Antimony	4.0E-04	IRIS						
Cadmium	1.0E-03	IRIS					6.3E+00	IRIS
Cobalt	2.0E-02	PPRTV	5.7E-06	PPRTV			9.8E+00	PPRTV
Copper	3.7E-02	HEAST						
Iron	3.0E-01	NCEA						
Mercury	3.0E-04	IRIS	8.6E-05	IRIS				
Nickel	2.0E-02	IRIS						
Selenium	5.0E-03	IRIS						
Vanadium	7.0E-03	HEAST						
Zinc	3.0E-01	IRIS						
Chlordanes (mixed)	5.0E-04	IRIS	2.0E-04	IRIS	3.5E-01	IRIS	3.5E-01	IRIS
DDD[4,4'-]					2.4E-01	IRIS	2.4E-01	R-R ext.
DDE[4,4'-]					3.4E-01	IRIS	3.4E-01	R-R ext.
DDT[4,4]	5.0E-04	IRIS			3.4E-01	IRIS	3.4E-01	IRIS
Aroclor-1254	2.0E-05	IRIS	2.0E-05	R-R ext.				
Aroclor-1260					2.0E+00	IRIS	2.0E+00	IRIS
Acenaphthene	6.0E-02	IRIS	6.0E-02	R-R ext.				
Anthracene	3.0E-01	IRIS	3.0E-01	R-R ext.				
Benz(a)anthracene					7.3E-01	NCEA	3.1E-01	NCEA
Benzo(a)pyrene					7.3E+00	IRIS	3.1E+00	NCEA
Benzo(b)fluoranthene					7.3E-01	NCEA	3.1E-01	NCEA
Benzo(k)fluoranthene					7.3E-02	NCEA	3.1E-02	NCEA
Carbazole					2.0E-02	HEAST	2.0E-02	R-R ext.
Chrysene					7.3E-03	NCEA	3.1E-03	NCEA
Di-n-butylphthalate	1.0E-01	IRIS	1.0E-01	R-R ext.				
Dibenz(a,h)anthracene					7.3E+00	NCEA	3.1E+00	NCEA
Dibenzofuran	2.0E-03	NCEA	2.0E-03	R-R ext.				
Dieldrin	5.0E-05	IRIS	5.0E-05	R-R ext.	1.6E+01	IRIS	1.6E+01	IRIS

Table F-4. (cont.)
Toxicity Values and Exposure Parameters

COPCs	Oral RFD (mg/kg-d)	Source	Inhalation RFD (mg/kg-d)	Source	Oral SF $(mg/kg\text{-}d)^{-1}$	Source	Inhalation SF $(mg/kg\text{-}d)^{-1}$	Source
Endosulfan	6.0E-03	IRIS	6.0E-03	R-R ext.				
Endrin	3.0E-04	IRIS	3.0E-04	R-R ext.				
Fluoranthene	4.0E-02	IRIS	4.0E-02	R-R ext.				
Fluorene	4.0E-02	IRIS	4.0E-02	R-R ext.				
Indeno(1,2,3-cd)pyrene					7.3E-01	NCEA	3.1E-01	NCEA
Methylnaphthalene[2-]	2.0E-02	NCEA	8.6E-04	SURR				
Methoxychlor	5.0E-03	IRIS	5.0E-03	R-R ext.				
Naphthalene	2.0E-02	IRIS	8.6E-04	IRIS				
Phenanthrene	3.0E-02	SURR	3.0E-02	R-R ext.				
Phenol	3.0E-01	IRIS						
Pyrene	3.0E-02	IRIS	3.0E-02	R-R ext.				
Butyl benzyl phthalate	2.0E-01	IRIS	2.0E-01	R-R ext.				
	Ingestion DCF mrem/pCi	**Source**	**Inhalation DCF mrem/pCi**	**Source**	**External Irradiation DCF mrem-g/pCi-yr[b]**	**Source**		
Plutonium-239	0.00354	RESRAD 6.21	0.429	RESRAD 6.21	2.95E-04	RESRAD 6.21		

IRIS: EPA's Integrated Risk Information System
HEAST: EPA's Health Effects Assessment Summary Tables
NCEA: EPA's National Center for Environmental Assessment
SURR: Surrogate chemical used to evaluate toxicity
R-R ext.: Route-to-route extrapolation used to obtain route-specific toxicity value for organic chemicals.
PPRTV: Provisional peer-reviewed toxicity value

Table F-4. (cont.)
Toxicity Values and Exposure Parameters

Parameter	Units	Symbol	Value	Rationale/Source
Soil ingestion	mg/day	IR	100	EPA 1991
Inhalation rate	m^3/hr	Inh	1.6	EPA 1997
Surface area	cm^2	SA	5,700	EPA 2003
Adherence factor	mg/cm^2-d	AF	0.07	EPA 2003
Skin absorption	unitless	ABS	0.1 for SVOCs or chemical-specific	EPA 2003; NMED 2000
Exposure time	hr/day	ET	1	Best Professional Judgment (BPJ) (EPA 1997)
Fraction ingestion from source	unitless	FI	0.125	BPJ; time on trail divided by portion of day that could be spent walking per day (1 hr/8hr)
Exposure frequency	d/yr	EF	200	BPJ; assumes four days a week for 50 weeks
Exposure duration	yr	ED	30	EPA 1991
Body weight	kg	BW	70	EPA 1991
Particulate emission factor	m^3/kg	PEF	1.36E+09	NMED 2000
Averaging time carcinogens	days	AT	70 × 365	EPA 1989
Averaging time noncarcinogens	days	AT	30 × 365	EPA 1989

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Table F-5.
95% Upper Confidence Limits – Risk Screening

COPC	All Drainages			Drainage A			Drainage B			Drainage C			Drainage D2		
	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]
Antimony	68	3.1	none	15	13.4	none	Not a COPC			Not a COPC			20	2.8	none
Cadmium	68	5.5	none	15	23.9	none	18	0.58	logN	15	0.21	none	20	1.0	none
Cobalt	68	1.8	logN	15	2.8	logN	Not a COPC			Not a COPC			Not a COPC		
Copper	68	9.7	none	15	16.1	none	Not a COPC			Not a COPC			Not a COPC		
Iron	68	8583	none	15	14270	none	18	11850	none	Not a COPC			Not a COPC		
Lead	68	29.7	none	15	55.6	none	18	18.7	norm	15	15.5	norm	20	46.7	none
Mercury	68	0.06	none	15	0.10	none	Not a COPC			Not a COPC			20	0.11	none
Nickel	68	3.4	logN	15	4.6	logN	Not a COPC			Not a COPC			Not a COPC		
Selenium	68	0.30	none	15	0.34	logN	18	0.28	norm	15	0.30	norm	20	0.30	none
Vanadium	68	11.2	none	15	9.4	logN	18	13.3	logN	Not a COPC			20	13.9	logN
Zinc	68	222.5	none	15	1013	none	18	174.4	none	15	83.5	none	20	107.4	none

[a] Number of samples

[b] 95% UCL calculated based on normal, lognormal, or nonparametric (Chebyshev's) tests

COPC	All Drainages			Drainage A			Drainage B			Drainage C			Drainage D2		
	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (pCi/g)	Dist[b]	n[a]	95% UCL (pCi/g)	Dist[b]	n[a]	95% UCL (pCi/g)	Dist[b]	n[a]	95% UCL (pCi/g)	Dist[b]
Plutonium-239	72	0.20	logN	16	0.15	norm	19	0.23	logN	16	0.56	logN	21	0.17	logN

[a] Number of samples

[b] 95% UCL calculated based on normal, lognormal, or nonparametric (Chebyshev's) tests

Table F-5. (cont.)
95% Upper Confidence Limits – Risk Screening

COPC	All Drainages			Drainage A			Drainage B			Drainage C			Drainage D2		
	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]
4,4'-DDD	60	0.0011	none	Not a COPC			Not a COPC			Not a COPC			15	0.0014	none
4,4'-DDE	60	0.023	none	15	0.079	none	15	0.020	none	15	0.0050	none	15	0.0043	norm
4,4'-DDT	60	0.0096	none	Not a COPC			15	0.012	none	15	0.0045	none	15	0.015	norm
Acenaphthene	68	0.20	none	Not a COPC			18	0.19	norm	Not a COPC			20	0.23	none
Anthracene	68	0.28	none	Not a COPC			18	0.19	norm	Not a COPC			20	0.47	none
Aroclor-1254	68	1.4	none	15	9.2	none	Not a COPC			Not a COPC			20	0.15	none
Aroclor-1260	68	0.076	none	Not a COPC			18	0.039	none	Not a COPC			20	0.22	none
Benzo(a)anthracene	68	0.54	none	15	0.080	none	18	0.13	none	Not a COPC			20	2.1	none
Benzo(a)pyrene	68	0.52	none	15	0.075	none	18	0.13	none	Not a COPC			20	0.88	logN
Benzo(b)fluoranthene	68	0.39	none	15	0.080	none	18	0.14	none	Not a COPC			20	1.4	none
Benzo(g,h,i)perylene	68	0.23	none	Not a COPC			18	0.13	none	Not a COPC			20	0.59	none
Benzo(k)fluoranthene	68	0.52	none	15	0.090	none	18	0.13	none	Not a COPC			20	2.0	none
Butylbenzylphthalate	68	0.19	none	Not a COPC			Not a COPC			15	0.088[c]	none	20	0.20	none
Carbazole	68	0.20	none	Not a COPC			Not a COPC			Not a COPC			15	0.23	none
Chlordane[alpha-]	68	0.0016	none	Not a COPC			Not a COPC			Not a COPC			20	0.0028	none
Chlordane[gamma-]	68	0.0076	none	15	0.038	none	Not a COPC			Not a COPC			20	0.0036	none
Chrysene	68	0.57	none	15	0.087	none	18	0.14	none	15	0.075	none	20	0.97	logN
Di-n-butylphthalate	68	0.19	none	15	0.099[c]	none	Not a COPC			15	0.089[c]	none	Not a COPC		
Dibenz(a,h)anthracene	68	0.15	none	Not a COPC			18	0.13	none	Not a COPC			20	0.34	none
Dibenzofuran	68	0.10	none	Not a COPC			Not a COPC			Not a COPC			20	0.16	none
Dieldrin	68	0.0014	none	Not a COPC			18	0.0018	none	Not a COPC			20	0.0020	none
Endosulfan I	68	0.0011	none	15	0.0015	none	Not a COPC			Not a COPC			Not a COPC		
Endosulfan sulfate	68	0.0015	none	15	0.0028	none	Not a COPC			Not a COPC			Not a COPC		
Endrin	68	0.0016	none	15	0.0032	none	Not a COPC			Not a COPC			Not a COPC		
Endrin aldehyde	68	0.0017	none	15	0.0039	none	Not a COPC			Not a COPC			Not a COPC		
Endrin ketone	68	0.0044	none	15	0.010	none	Not a COPC			15	0.0016	none	20	0.0077	logN
Fluoranthene	68	1.1	none	15	0.13	none	18	0.15	none	15	0.095	none	20	1.9	logN
Fluorene	68	0.11	none	Not a COPC			18	0.13	none	Not a COPC			20	0.19	none
Indeno(1,2,3-cd)pyrene	68	0.27	none	Not a COPC			18	0.13	none	Not a COPC			20	0.42	logN
Methoxychlor[4,4'-]	68	0.0044	none	15	0.0061	none	Not a COPC			Not a COPC			Not a COPC		
Methylnaphthalene[2-]	68	0.099	none	Not a COPC			Not a COPC			Not a COPC			20	0.14	none

Table F-5. (cont.)
95% Upper Confidence Limits – Risk Screening

COPC	All Drainages			Drainage A			Drainage B			Drainage C			Drainage D2		
	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]	n[a]	95% UCL (mg/kg)	Dist[b]
Naphthalene	68	0.11	none	Not a COPC			Not a COPC			Not a COPC			20	0.19	none
Phenanthrene	68	0.53	none	15	0.21	none	18	0.20	none	15	0.20	norm	20	0.89	logN
Phenol	68	0.19	none	Not a COPC			Not a COPC			15	0.22	none	Not a COPC		
Pyrene	68	1.2	none	15	0.12	none	18	0.14	none	15	0.095	none	20	1.8	logN

[a] Number of samples
[b] 95% UCL calculated based on normal, lognormal, or nonparametric (Chebyshev's) tests
[c] Maximum detected concentration

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Table F-6.
Drainage A - Comparison of UCLs and Derived Soil Screening Levels

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	0.1 Recreational SSL (mg/kg)	HQ	Residential SSL[b] (mg/kg)	HQ
Antimony	13.4	4100	410	3.3E-03	30	0.5
Cadmium	23.9	9900	990	2.4E-03	70	0.3
Cobalt	2.8	47000	4700	6.0E-05	4500	0.0006
Copper	16.1	380000	38000	4.2E-05	2800	0.006
Iron	14270	1000000[c]	100000	1.4E-02	23000	0.6
Lead	55.6	800[d]	80	7.0E-02	400	0.1
Mercury	0.1	3100	310	3.2E-05	23[e]	0.004
Nickel	4.6	200000	20000	2.3E-05	1500	0.003
Selenium	0.34	51000	5100	6.7E-06	380	0.0009
Vanadium	9.4	72000	7200	1.3E-04	530	0.02
Zinc	1013	1000000[c]	100000	1.0E-03	23000	0.04
Aroclor-1254	9.2	37	3.7	2.5E-01	1.1	8.4
Di-n-butyl phthalate	0.099[f]	230000	23000	4.3E-06	6100	0.00002
Endrin	0.003	600	60	5.0E-06	18	0.0002
Endrin aldehyde	0.004	600[g]	60	6.7E-06	18[g]	0.0002
Endrin ketone	0.01	600[g]	60	1.7E-05	18[g]	0.0006
Endosulfan I	0.002	12000	1200	1.7E-07	370	0.000005
Endosulfan sulfate	0.003	600[g]	60	5.0E-06	18[g]	0.0002
Fluoranthene	0.13	78000	7800	1.7E-06	2300	0.00006
Methoxychlor	0.006	9900	990	6.0E-06	310[e]	0.00002
Phenanthrene	0.2	59000	5900	3.4E-06	1800	0.0001
Pyrene	0.2	59000	5900	3.4E-06	1800	0.0001
			HI	**0.3**	**HI**	**10**

[a] Value from risk calculations

[b] Value from NMED – Residential (NMED 2000)

[c] Maximum value used is 1.0E+06 mg/kg.

[d] Lead SSL is for an industrial outdoor worker (EPA 2003)

[e] Value from EPA Region VI Residential (EPA 2003)

[f] Maximum detected concentration

[g] Endrin used as a surrogate for endrin aldehyde and endrin ketone because they are breakdown products of endrin and for endosulfan sulfate based on structural similarity

Table F-7.
Drainage A - Calculation of Carcinogenic Risks

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	Cancer Risk	Residential SSL[b] (mg/kg)	Cancer Risk
Cobalt	2.8	260000	1×10^{-10}	9000[c]	3.11×10^{-9}
Aroclor-1254	9.2	22	4.3×10^{-6}	2.2[c]	4.2×10^{-5}
DDE	0.079	360	2.2×10^{-9}	17	4.6×10^{-8}
Alpha-chlordane	0.001	300[d]	3.3×10^{-11}	16[d]	6.3×10^{-10}
Gamma-chlordane	0.038	300[d]	1.3×10^{-9}	16[d]	2.4×10^{-8}
Benzo(a)anthracene	0.08	63	1.3×10^{-8}	6.2	1.3×10^{-7}
Benzo(a)pyrene	0.075	6.3	1.3×10^{-7}	0.62	1.2×10^{-6}
Benzo(b)fluoranthene	0.08	63	1.3×10^{-8}	6.2	1.3×10^{-7}
Benzo(k)fluoranthene	0.09	630	1.4×10^{-9}	62	1.5×10^{-8}
Chrysene	0.087	6300	1.4×10^{-10}	610	1.4×10^{-9}
		Total Excess Cancer Risk	**5×10^{-6}**	**Total Excess Cancer Risk**	**4×10^{-5}**

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000)
[c] Value from EPA Region VI Residential (EPA 2003)
[d] Chlordane used as a surrogate based on structural similarity

Table F-8.
Drainage A - Calculation of Radionuclide Dose

Radionuclide	95% UCL	Recreational SAL[a] (pCi/g)	Total Dose (mrem/yr)	Residential SAL[a] (pCi/g)	Total Dose (mrem/yr)
Plutonium-239	0.15	218	0.01	44	0.05
		Total Dose	**0.01**	**Total Dose**	**0.05**

[a] From RESRAD 6.21

Table F-9.
Drainage B - Comparison of Noncarcinogenic 95% UCLs and Derived Soil Screening Levels

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	0.1 Recreational SSL (mg/kg)	HQ	Residential SSL[b] (mg/kg)	HQ
Cadmium	0.58	9900	990	5.9E-05	70	8.3E-03
Iron	11850	1000000[c]	100000	1.2E-02	23000	0.5
Lead	18.7	800[d]	80	2.3E-02	400	0.05
Selenium	0.28	51000	5100	5.5E-06	380	7.4E-04
Vanadium	13.3	70000	7000	1.9E-04	530	0.03
Zinc	174.4	1000000[c]	100000	1.7E-04	23000	7.6E-03
Aroclor-1254	0.019	37	3.7	5.1E-04	1.1	1.7E-02
Acenaphthene	0.19	120000	12000	1.6E-06	2800	6.8E-05
Anthracene	0.19	530000	53000	3.6E-07	16000	1.2E-05
Benzo(g,h,i)perylene	0.13	59000[e]	5900	2.2E-06	1800[e]	7.2E-05
Fluoranthene	0.16	78000	7800	2.1E-06	2300	7E-05
Fluorene	0.13	78000	7800	1.7E-06	2100	6.2E-05
Phenanthrene	0.2	59000	5900	3.4E-06	1800	1.1E-04
Pyrene	0.19	59000	5900	3.2E-06	1800	1.1E-04
			HI	**0.04**	**HI**	**0.6**

[a] Value from EPA Region VI Industrial - Outdoor Worker (EPA 2003)
[b] Value from NMED – Residential (NMED 2000)
[c] Maximum value used is 1.0E+06 mg/kg
[d] Lead SSL is for an industrial outdoor worker (EPA 2003)
[e] Pyrene used as a surrogate based on structural similarity

Table F-10.
Drainage B - Calculation of Carcinogenic Risks

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	Cancer Risk	Residential SSL[b] (mg/kg)	Cancer Risk
Aroclor-1254	0.019	22	8.6×10^{-9}	2.2	8.6×10^{-8}
Aroclor-1260	0.039	22	1.8×10^{-8}	2.2	1.8×10^{-7}
DDE	0.02	360	5.6×10^{-10}	17	1.2×10^{-8}
DDT	0.012	360	3.3×10^{-10}	17	7.1×10^{-9}
Dieldrin	0.002	2.9	6.9×10^{-9}	0.3	6.7×10^{-8}
Benzo(a)anthracene	0.13	63	2.1×10^{-8}	6.2	2.1×10^{-7}
Benzo(a)pyrene	0.14	6.3	2.2×10^{-7}	0.62	2.3×10^{-6}
Benzo(b)fluoranthene	0.14	63	2.2×10^{-8}	6.2	2.3×10^{-7}
Benzo(k)fluoranthene	0.13	630	2.1×10^{-9}	62	2.1×10^{-8}
Chrysene	0.14	6300	2.2×10^{-10}	610	2.3×10^{-9}
Dibenz(a,h)anthracene	0.13	6.3	2.1×10^{-7}	0.62	2.1×10^{-6}
Indeno(1,2,3-cd)pyrene	0.14	63	2.2×10^{-8}	6.2	2.3×10^{-7}
	Total Excess Cancer Risk		**5×10^{-7}**	**Total Excess Cancer Risk**	**5×10^{-6}**

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000, 68554)

Table F-11.
Drainage B - Calculation of Radionuclide Dose

Radionuclide	95% UCL	Recreational SAL[a] (pCi/g)	Total Dose (mrem/yr)	Residential SAL[a] (pCi/g)	Total Dose (mrem/yr)
Plutonium-239	0.23	218	0.016	44	0.078
		Total Dose	**0.016**	**Total Dose**	**0.078**

[a] From RESRAD 6.21

Table F-12.
Drainage C - Comparison of Noncarcinogenic 95% UCLs and Derived Soil Screening Levels

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	0.1 Recreational SSL (mg/kg)	HQ	Residential SSL[b] (mg/kg)	HQ
Cadmium	0.21	9900	990	2.1E-05	70	0.003
Lead	15.5	800[c]	80	1.9E-02	400	0.04
Selenium	0.3	51000	5100	5.9E-06	380	7.9E-04
Vanadium	7.5	70000	7000	1.1E-04	530	0.01
Zinc	83.5	1000000[d]	100000	8.4E-05	23000	3.6E-03
Di-n-butyl phthalate	0.089[e]	230000	23000	3.9E-07	6100	1.5E-05
Butylbenzyl phthalate	0.088[e]	440000	44000	2.0E-07	240[f]	3.7E-04
Endrin ketone	0.002	600[g]	60	3.3E-06	18[g]	1.1E-04
Fluoranthene	0.095	78000	7800	1.2E-06	2300	4.1E-05
Phenanthrene	0.2	59000	5900	3.4E-06	1800	1.1E-04
Phenol	0.22	510000	51000	4.3E-07	37000	5.9E-06
Pyrene	0.095	59000	5900	1.6E-06	1800	5.3E-05
			HI	**0.02**	**HI**	**0.06**

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000, 68554)
[c] Lead SSL is for an industrial outdoor worker (EPA 2003, 81724)
[d] Maximum value used is 1.0E+06 mg/kg
[e] Maximum detected concentration
[f] Value from EPA Region VI Residential (EPA 2003, 81724)
[g] Endrin used as a surrogate because endrin ketone is a breakdown product

Table F-13.
Drainage C - Comparison of Carcinogenic 95% UCLs and Derived Soil Screening Levels

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	Cancer Risk	Residential SSL[b] (mg/kg)	Cancer Risk
DDE	0.005	360	1.4×10^{-10}	17	2.9×10^{-9}
DDT	0.005	360	1.4×10^{-10}	17	2.9×10^{-9}
Chrysene	0.075	6300	1.2×10^{-10}	610	1.2×10^{-9}
		Total Excess Cancer Risk	$\mathbf{4 \times 10^{-10}}$	**Total Excess Cancer Risk**	$\mathbf{7 \times 10^{-9}}$

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000)

Table F-14.
Drainage C - Comparison of ^{239}Plutonium 95% UCL and Screening Action Limit

Radionuclide	95% UCL	Recreational SAL[a] (pCi/g)	Total Dose (mrem/yr)	Residential SAL[a] (pCi/g)	Total Dose (mrem/yr)
Plutonium-239	0.56	218	0.039	44	0.19
		Total Dose	**0.039**	**Total Dose**	**0.19**

[a] From RESRAD 6.21

Table F-15.
Drainage D2 - Comparison of Carcinogenic 95% UCLs and Derived Soil Screening Levels

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	0.1 Recreational SSL (mg/kg)	HQ	Residential SSL[b] (mg/kg)	HQ
Antimony	2.8	41000	4100	6.8E-05	30	0.09
Cadmium	1.0	9900	990	1E-04	70	0.014
Copper	13.7	380000	38000	3.6E-05	2800	4.9E-03
Lead	46.7	800[c]	80	0.058	400	0.12
Mercury	0.11	3100	310	3.5E-05	23[d]	4.8E-03
Selenium	0.3	51000	5100	5.9E-06	380	7.9E-04
Vanadium	13.9	70000	7000	2E-04	530	0.026
Zinc	107.4	1000000[e]	100000	1.1E-04	23000	4.7E-03
Aroclor-1254	0.15	37	3.7	4E-03	1.1	0.14
Endrin ketone	0.008	600[f]	60	1.3E-05	18[f]	4.4E-04
Butylbenzyl phthalate	0.2	440000	44000	4.5E-07	240[d]	8.3E-04
Acenaphthene	0.23	120000	12000	1.9E-06	2800	8.2E-05
Anthracene	0.47	530000	53000	8.9E-07	16000	2.9E-05
Benzo(g,h,i)perylene	0.59	59000[g]	5900	1E-05	1800[f]	3.3E-04
Dibenzofuran	0.16	4000	400	4E-05	150[d]	0.001
Fluoranthene	1.9	78000	7800	2.4E-05	2300	8.3E-04
2-Methylnaphthalene	0.15	39000	3900	3.8E-06	53[h]	2.8E-03
Naphthalene	0.19	39000	3900	4.9E-06	53	3.6E-03
Phenanthrene	0.89	59000	5900	1.5E-05	1800	4.9E-04
Pyrene	1.8	59000	5900	3.1E-05	1800	0.001
			HI	**0.06**	**HI**	**0.4**

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000, 68554)
[c] Lead SSL is for an industrial outdoor worker (EPA 2003, 81724)
[d] Value from EPA Region VI Residential (EPA 2003, 81724)
[e] Maximum value used is 1.0E+06 mg/kg
[f] Endrin used as a surrogate because endrin ketone is a breakdown product
[g] Pyrene used as a surrogate based on structural similarity
[h] Naphthalene used as a surrogate based on structural similarity

Table F-16.
Drainage D2 – Calculation of Carcinogenic Risks

COPC	95% UCL (mg/kg)	Recreational SSL[a] (mg/kg)	Cancer Risk	Residential SSL[b] (mg/kg)	Cancer Risk
Aroclor-1254	0.15	22	6.8×10^{-8}	2.2	6.8×10^{-7}
Aroclor-1260	0.22	22	1×10^{-7}	2.2	1×10^{-6}
DDD	0.001	510	2×10^{-11}	24	4.2×10^{-10}
DDE	0.004	360	1.1×10^{-10}	17	2.4×10^{-9}
DDT	0.015	360	4.2×10^{-10}	17	8.8×10^{-9}
Alpha-chlordane	0.003	300[d]	1×10^{-10}	16[d]	1.9×10^{-9}
Gamma-chlordane	0.004	300[d]	1.3×10^{-10}	16[d]	2.5×10^{-9}
Dieldrin	0.002	2.9	6.9×10^{-9}	0.3	6.7×10^{-8}
Benzo(a)anthracene	2.1	63	3.3×10^{-7}	6.2	3.4×10^{-6}
Benzo(a)pyrene	0.9	6.3	1.4×10^{-6}	0.62	1.5×10^{-5}
Benzo(b)fluoranthene	1.4	63	2.2×10^{-7}	6.2	2.3×10^{-6}
Benzo(k)fluoranthene	2.0	630	3.2×10^{-8}	62	3.2×10^{-7}
Chrysene	0.97	6300	1.5×10^{-9}	610	1.6×10^{-8}
Dibenz(a,h)anthracene	0.34	6.3	5.4×10^{-7}	0.62	5.5×10^{-6}
Indeno(1,2,3-cd)pyrene	0.42	63	6.7×10^{-8}	6.2	6.8×10^{-7}
Carbazole	0.23	280	8.2×10^{-9}	24[c]	9.6×10^{-8}
		Total Excess Cancer Risk	**3×10^{-6}**	**Total Excess Cancer Risk**	**3×10^{-5}**

[a] Value from risk calculations
[b] Value from NMED – Residential (NMED 2000)
[c] Chlordane used as a surrogate based on structural similarity
[d] Value from EPA Region VI Residential (EPA 2003)

Table F-17.
Drainage D2 - Comparison of Carcinogenic 95% UCLs and Derived Soil Screening Levels

Radionuclide	95% UCL	Recreational SAL[a] (pCi/g)	Total Dose (mrem/yr)	Residential SAL[a] (pCi/g)	Total Dose (mrem/yr)
Plutonium-239	0.17	218	0.012	44	0.058
		Total Dose	**0.012**	**Total Dose**	**0.058**

[a] From RESRAD 6.21

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Table F-18.
Ecological Screening Levels

COPCs	Fox	Carnivorous Kestrel	Omnivorous Kestrel	Herbivorous Robin	Omnivorous Robin	Insectivorous Robin	Cottontail	Shrew	Deer Mouse	Earthworm	Plant
Antimony	4.60E+01	NA[c]	NA	NA	NA	NA	2.90E+00	2.70E-01	4.80E-01	7.80E+01	5.00E-02
Cadmium	5.7E+02	7.7E+02	5.9E+00	1.0E+01	1.5E+00	8.3E-01	2.2E+01	6.7E-01	1.2E+00	1.5E+02	2.9E+01
Cobalt	3.9E+03	2.3E+03	1.4E+02	1.7E+02	3.5E+01	1.9E+01	1.8E+03	3.3E+01	6.9E+01	NA	1.3E+01
Copper	3.9E+03	1.4E+03	2.1E+02	1.6E+01	2.0E+01	2.4E+01	1.3E+02	7.5E+01	7.6E+01	1.3E+01	1.0E+01
Lead	4.60E+03	8.00E+02	1.40E+02	3.00E+01	2.10E+01	1.60E+01	9.30E+02	1.00E+02	2.20E+02	1.70E+03	2.10E+02
Mercury (inorganic)	4.5E+02	3.1E+00	1.1E+00	3.8E-01	2.2E-01	1.5E-01	2.5E+02	2.0E+01	4.4E+01	5.0E-02	3.4E+01
Nickel	3.40E+04	1.00E+04	2.70E+03	4.60E+02	3.40E+02	2.70E+02	8.70E+03	9.80E+02	2.30E+03	1.00E+02	2.00E+01
Selenium	1.10E+02	1.40E+02	8.40E+00	1.00E+01	2.00E+00	1.10E+00	5.50E+01	9.10E-01	1.90E+00	7.70E+00	1.00E-01
Vanadium	1.5E+03	5.1E+02	2.1E+01	2.8E+01	5.1E+00	2.8E+00	7.9E+02	9.6E+00	2.0E+01	NA	2.5E-02
Zinc	1.1E+04	1.5E+03	2.0E+02	6.7E+01	4.2E+01	3.0E+01	9.1E+02	1.8E+02	2.5E+02	1.9E+02	1.0E+01
Acenaphthene	7.8E+04	NA	NA	NA	NA	NA	1.1E+03	1.6E+02	2.6E+02	NA	2.5E-01
Anthracene	6.1E+04	NA	NA	NA	NA	NA	2.8E+03	2.2E+02	3.9E+02	NA	NA
Aroclor-1254	1.50E-01	2.20E-01	1.70E-01	1.40E+00	8.00E-02	4.10E-02	5.60E+01	4.40E-01	8.80E-01	NA	1.60E+02
Aroclor-1260	1.40E-01	4.60E+00	3.70E+00	3.10E+01	1.70E+00	8.80E-01	1.30E+03	1.00E+01	2.00E+01	NA	NA
Benzo(a)anthracene	3.2E+01	NA	NA	NA	NA	NA	1.2E+01	3.0E+00	4.9E+00	NA	1.8E+01
Benzo(a)pyrene	6.8E+01	NA	NA	NA	NA	NA	9.6E+01	9.6E+00	1.8E+01	NA	NA
Benzo(b)fluoranthene	2.5E+02	NA	NA	NA	NA	NA	4.1E+02	3.8E+01	7.4E+01	NA	1.8E+01
Benzo(k)fluoranthene	4.0E+02	NA	NA	NA	NA	NA	7.4E+02	6.2E+01	1.2E+02	NA	NA
Benzo(g,h,i)perylene	4.7E+01	NA	NA	NA	NA	NA	1.0E+03	1.2E+01	2.5E+01	NA	NA
Butylbenzyl phthalate	7.3E+03	NA	NA	NA	NA	NA	5.8E+03	3.4E+02	6.3E+02	NA	NA

Table F-18. (cont.)
Ecological Screening Levels

COPCs	Fox	Carnivorous Kestrel	Omnivorous Kestrel	Herbivorous Robin	Omnivorous Robin	Insectivorous Robin	Cottontail	Shrew	Deer Mouse	Earthworm	Plant
Chlordane-alpha	1.1E+01	9.6E+00	8.8E+00	3.4E+01	4.1E+00	2.2E+00	1.3E+02	2.1E+00	4.3E+00	NA	2.2E+00
Chlordane-gamma	1.1E+01	9.6E+00	8.8E+00	3.4E+01	4.1E+00	2.2E+00	1.3E+02	2.1E+00	4.3E+00	NA	2.2E+00
Chrysene	NA	NA	NA	NA	NA	NA	1.2E+01	NA	4.1E+00	NA	NA
4,4'-DDE	2.30E+01	9.00E-02	1.00E-01	1.50E+00	6.30E-02	3.20E-02	1.40E+03	6.60E+00	1.30E+01	NA	NA
4,4'-DDT	3.00E+00	3.10E-01	3.10E-01	4.10E+00	1.70E-01	9.00E-02	1.30E+02	7.10E-01	1.40E+00	NA	3.70E+00
Dibenzo(a,h)anthracene	5.4E+01	NA	NA	NA	NA	NA	1.8E+02	1.2E+01	2.6E+01	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.1E+00
Dieldrin	4.0E-01	9.6E-01	4.9E-01	8.0E-01	1.6E-01	9.1E-02	8.3E-01	3.0E-02	5.8E-02	NA	1.0E+01
Di-n-butylphthalate	7.70E+04	3.70E+00	1.10E+00	8.90E-01	2.90E-01	1.70E-01	4.00E+04	2.90E+03	5.30E+03	NA	1.60E+02
Endosulfan I	1.4E+01	4.4E+02	8.8E+01	4.4E+01	2.0E+01	1.3E+01	2.9E+00	3.5E-01	5.7E-01	NA	NA
Endosulfan sulfate[b]	3.3E+00	1.6E-01	6.9E-02	8.5E-02	2.1E-02	1.1E-02	4.0E+00	1.9E-01	3.6E-01	NA	3.4E-03
Endrin	3.3E+00	1.6E-01	6.9E-02	8.5E-02	2.1E-02	1.1E-02	4.0E+00	1.9E-01	3.6E-01	NA	3.4E-03
Endrin aldehyde[b]	3.3E+00	1.6E-01	6.9E-02	8.5E-02	2.1E-02	1.1E-02	4.0E+00	1.9E-01	3.6E-01	NA	3.4E-03
Endrin ketone[b]	3.3E+00	1.6E-01	6.9E-02	8.5E-02	2.1E-02	1.1E-02	4.0E+00	1.9E-01	3.6E-01	NA	3.4E-03
Fluoranthene	4.3E+02	NA	NA	NA	NA	NA	5.7E+02	2.6E+01	4.9E+01	NA	NA
Fluorene	1.0E+04	NA	NA	NA	NA	NA	2.7E+03	2.9E+02	4.8E+02	1.7E+00	NA
Indeno(1,2,3-cd)pyrene	2.7E+02	NA	NA	NA	NA	NA	9.9E+02	6.2E+01	1.2E+02	NA	NA
Methoxychlor	1.4E+02	4.2E+02	1.7E+02	2.2E+02	5.4E+01	3.0E+01	1.7E+02	8.4E+00	1.5E+01	NA	NA
Methylnaphthalene[2-]	2.9E+02	NA	NA	NA	NA	NA	3.9E+01	5.9E+00	9.2E+00	NA	NA
Naphthalene	9.1E+01	1.2E+00	1.3E-01	3.4E-02	2.5E-02	2.0E-02	5.2E+00	1.2E+00	1.7E+00	NA	NA

Table F-18. (cont.)
Ecological Screening Levels

COPCs	Fox	Carnivorous Kestrel	Omnivorous Kestrel	Herbivorous Robin	Omnivorous Robin	Insectivorous Robin	Cottontail	Shrew	Deer Mouse	Earthworm	Plant
Phenanthrene	3.1E+02	NA	NA	NA	NA	NA	1.4E+02	1.1E+01	2.0E+01	NA	NA
Phenol	2.9E+04	NA	NA	NA	NA	NA	1.2E+02	1.8E+02	8.5E+01	1.8E+00	7.9E-01
Pyrene	2.6E+02	NA	NA	NA	NA	NA	3.4E+02	1.5E+01	2.9E+01	NA	NA
Plutonium-239	3.3E+04	1.6E+05	3.4E+04	8.6E+03	2.1E+03	2.1E+03	1.7E+05	1.1E+05	1.5E+05	4.7E+01	1.6E+05

[a] Endosulfan used as a surrogate for endosulfan I
[b] Endrin used as a surrogate for endrin aldehyde and endrin ketone and endosulfan sulfate
[c] NA = No ESL value for this receptor

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Table F-19.
Contaminants of Potential Ecological Concern

COPC	95% UCL	Final ESL	Receptor	Hazard Quotient
Inorganic COPCs (mg/kg)				
Antimony	3.1	0.05	Plant	**62**
Cadmium	5.5	0.67	Shrew	**8.2**
Cobalt	1.8	13	Plant	0.1
Copper	9.7	10	Plant	**1.0**
Lead	29.7	16	Robin (Insectivore)	**1.9**
Mercury	0.06	0.05	Earthworm	**1.2**
Nickel	3.4	20	Plant	0.2
Selenium	0.3	0.1	Plant	**3.0**
Vanadium	11.2	0.025	Plant	**452**
Zinc	222.5	10	Plant	**22.3**
Organic COPCs (mg/kg)				
Aroclor-1254	1.4	0.041	Robin (Insectivore)	**34**
Aroclor-1260	0.076	0.14	Fox	**0.5**
Alpha-chlordane	0.002	2.1	Shrew	0.001
Gamma-chlordane	0.008	2.1	Shrew	0.004
Endrin	0.002	0.0034	Plant	**0.6**
Endrin aldehyde	0.002	0.0034	Plant	**0.6**
Endrin ketone	0.004	0.0034	Plant	**1.2**
Endosulfan I	0.001	0.35	Shrew	0.003
Endosulfan sulfate	0.002	0.0034	Plant	**0.6**
DDE	0.023	0.032	Robin (Insectivore)	**0.7**
DDT	0.01	0.09	Robin (Insectivore)	0.1
Dieldrin	0.001	0.03	Shrew	0.03
Methoxychlor	0.004	8.4	Shrew	0.0005
Acenaphthene	0.2	0.25	Plant	**0.8**
Anthracene	0.28	220	Shrew	0.001
Benzo(a)anthracene	0.54	3.0	Shrew	0.2
Benzo(a)pyrene	0.52	9.6	Shrew	0.05
Benzo(b)fluoranthene	0.39	18	Plant	0.02
Benzo(k)fluoranthene	0.52	62	Shrew	0.008
Benzo(g,h,i)perylene	0.23	12	Shrew	0.02
Dibenz(a,h)anthracene	0.15	12	Shrew	0.01
Chrysene	0.57	4.1	Deer mouse	0.1
Fluoranthene	1.1	26	Shrew	0.04
Fluorene	0.1	1.7	Earthworm	0.06

Table F-19. (cont.)
Contaminants of Potential Ecological Concern

COPC	95% UCL	Final ESL	Receptor	Hazard Quotient
Organic COPCs (mg/kg) (continued)				
Indeno(1,2,3-cd)pyrene	0.27	62	Shrew	0.004
2-Methylnaphthalene	0.099	5.9	Shrew	0.02
Naphthalene	0.11	0.02	Robin (Insectivore)	**5.5**
Phenanthrene	0.53	11	Shrew	0.05
Pyrene	1.2	15	Shrew	0.08
Dibenzofuran	0.1	6.1	Plant	0.02
Di-n-butyl phthalate	0.19	0.17	Robin (Insectivore)	**1.1**
Butylbenzyl phthalate	0.19	340	Shrew	0.0006
Phenol	0.19	0.79	Plant	0.2
Radionuclide COPCs (pCi/g)				
Plutonium-239	0.2	47	Earthworm	0.004

Note: HQs greater than 0.3 are bolded.

Table F-20.
Comparison of Hazard Quotient and Hazard Indices for Ecological Receptors

Receptor	95% UCL	Fox	Carnivorous Kestrel	Omnivorous Kestrel	Herbivorous Robin	Omnivorous Robin	Insectivorous Robin	Cottontail	Shrew	Deer Mouse	Earthworm	Plant
Antimony	3.1	0.07	NA	NA	NA	NA	NA	1.1	11.5	6.5	0.04	62
Cadmium	5.5	0.001	0.007	0.9	0.55	3.7	6.6	0.3	8.2	4.6	0.04	0.2
Lead	29.7	0.0007	0.04	0.2	1.0	1.4	1.9	0.03	0.3	0.1	0.02	0.1
Zinc	222.5	0.02	0.2	1.1	3.3	5.3	7.4	0.2	1.2	0.9	1.2	22.3
Aroclor-1254	1.4	9.3	6.4	8.2	1.0	17.5	34	0.03	3.2	1.6	NA	0.009
Aroclor-1260	0.076	0.5	0.02	0.02	0.002	0.04	0.09	0.00006	0.008	0.004	NA	NA
Endrin	0.002	0.0006	0.01	0.03	0.02	0.1	0.2	0.0005	0.01	0.006	NA	0.6
Endrin aldehyde	0.002	0.0006	0.01	0.03	0.02	0.1	0.2	0.0005	0.01	0.006	NA	0.6
Endrin ketone	0.004	0.001	0.03	0.06	0.05	0.2	0.4	0.001	0.02	0.01	NA	1.2
Endosulfan sulfate	0.002	0.0006	0.01	0.03	0.02	0.1	0.2	0.0005	0.01	0.006	NA	0.6
DDE	0.023	0.001	0.3	0.23	0.02	0.4	0.7	0.00002	0.003	0.002	NA	NA
Acenaphthene	0.2	0.000003	NA	NA	NA	NA	NA	0.0002	0.001	0.0008	NA	0.8
Naphthalene	0.11	0.001	0.09	0.8	3.2	4.4	5.5	0.02	0.09	0.06	NA	NA
Di-n-butyl phthalate	0.19	0.000008	0.05	0.2	0.2	0.7	1.1	0.000005	0.00007	0.00004	NA	0.001
HI for Receptor		**9.9**	**7.1**	**11.8**	**9.4**	**33.9**	**58.3**	**1.7**	**24.6**	**13.8**	**1.3**	**88.4**

Note: NA = Not available

Table F-21.
Density of Key Species

Receptor	Unadjusted HI	Population Area (acres [ha])	Population Area Use Factor (PAUF)	Adjusted HI
Deer Mouse	13.8	3.0	0.4	5.5
Shrew	24.6	15.6	0.08	2.0
Cottontail	1.7	60	0.02	0.03
Fox	9.9	27960	0.00005	0.0005
Robin, Herbivore	9.4	16.8	0.08	0.8
Robin, Insectivore	58.3	16.8	0.08	4.7
Robin, Omnivore	333.9	16.8	0.08	2.7
Kestrel, Carnivore	7.1	524	0.002	0.01
Kestrel, Omnivore	11.8	524	0.002	0.02