FINAL REPORT
VOLUME I

QUALITY CONTROL SUMMARY REPORT FOR SWMUs 229 AND 230

HOLLOMAN AFB
ALAMOGORDO,
NEW MEXICO

June 1994

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1.0
INTRODUCTION

1.1 SCOPE

RCRA Facility Investigation (RFI) field activities were performed at Holloman Air Force Base in Alamogordo, New Mexico, by Woodward-Clyde (W-C) as contracted by the U.S. Army Corps of Engineers (USACE). The RFI was authorized as part of the W-C Indefinite Delivery Contract No. DACW45-93-D-0005, Delivery Order 000D with the USACE.

This Quality Control Summary Report (QCSR) includes a description of the project as well as the field and laboratory quality control activities. The analytical data are summarized and review of the data quality and usability is provided.

To assess the reliability of the data, certain quality assurance/quality control (QA/QC) procedures were implemented as identified in the Holloman AFB RFI QAPP (W-C 1993). These procedures included the documentation of field and laboratory procedures and the collection and analysis of QA/QC samples. The documentation provided a historical record of activities conducted during the field investigation and provide a mechanism for tracking samples from collection through laboratory analysis. The QC samples included field duplicates, rinsates, matrix spike/matrix spike duplicate (MS/MSD), and trip blank samples. All analyses were performed by W-C's subcontract laboratory, NDRC Laboratories of Richardson, Texas. Quality Assurance (QA) samples, which consisted of split/duplicates, rinsate, and trip blank samples, were analyzed by the USACE Missouri River Division Laboratory (MRDL). The QA sample results were used to access precision and accuracy of the data collected from each Solid Waste Management Unit (SWMU). However, QA sample results are not currently available to W-C and, therefore, are not discussed in this report.

1.2 FIELD INVESTIGATION OBJECTIVES

The purpose of this RFI was to provide a preliminary determination of the presence or absence of fuel-related contamination, the nature and extent of fuel constituents, and completion of a baseline risk assessment at these SWMUs. Data collected during these investigations will also be used in support of a Corrective Measures Study (CMS). The primary goals of the RFI include:

- Verify if the SWMUs are sources of fuel-related contamination
- Determine concentrations and the approximate vertical and horizontal extent of fuel-related contaminants present in soil above groundwater
- Determine the presence and approximate thickness of free product or light NAPL (nonaqueous-phase liquid) on the groundwater table
- Determine the concentrations and approximate lateral extent of fuel-related contamination in groundwater
- Evaluate the hydrogeologic regime at each SWMU
- To provide data for baseline risk assessment to determine the potential risk to human health or the environment
- Identify the need for further investigation or corrective measures at each SWMU based on the results of the analytical sampling program and/or data gaps identified by the risk assessment

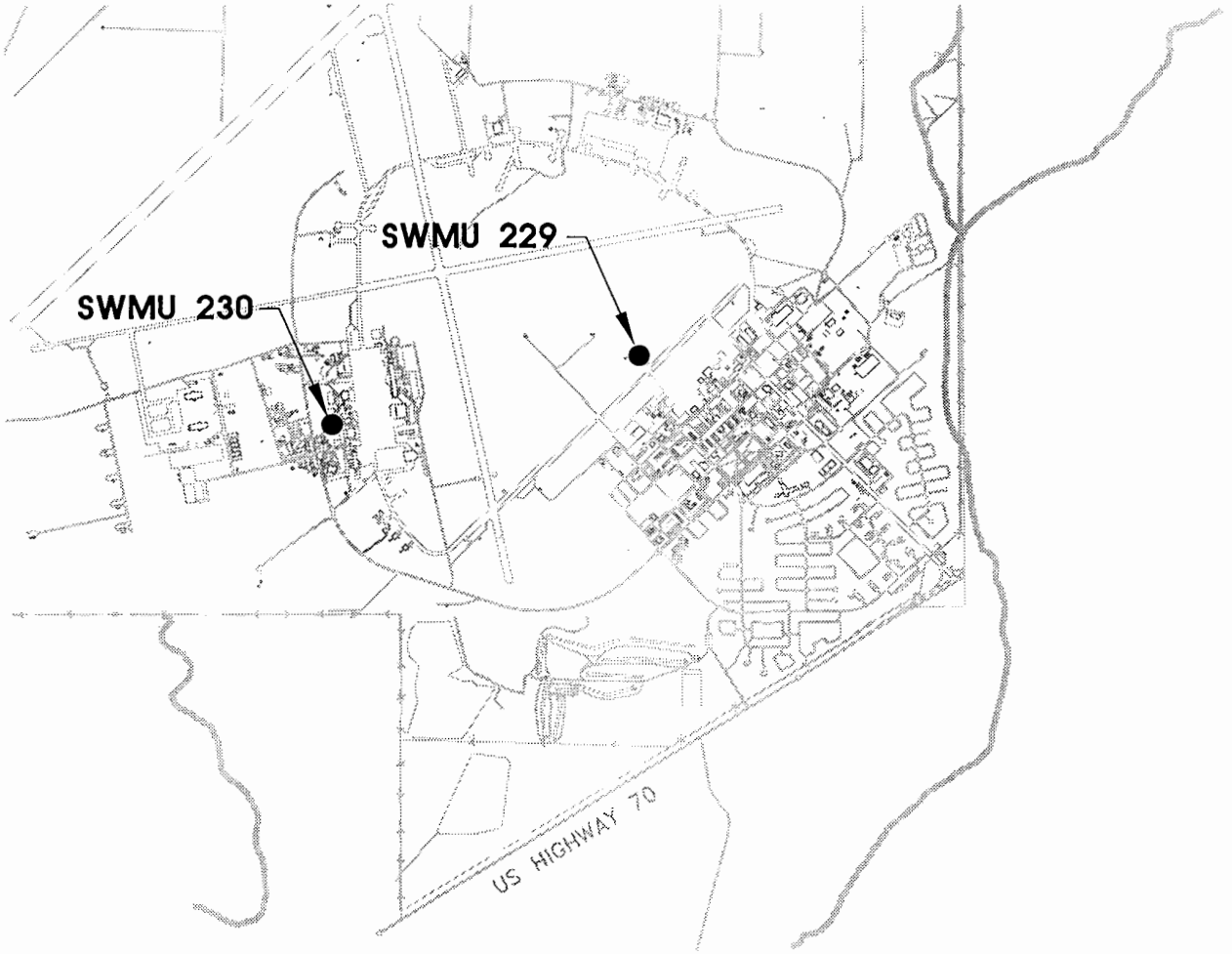
The rationale for sampling locations, number of samples and analytical parameters was presented in the Holloman AFB RFI Field Sampling Plan (FSP) (W-C 1993). The FSP was a compilation of the procedures and protocols for conducting the field investigation at Holloman AFB.

If contamination was suspected in samples collected at the planned maximum depths of a soil boring, additional sampling was conducted below this depth in either the same boring or in a boring drilled adjacent (approximately 2 to 5 feet away) to the original boring. Additional samples collected were analyzed for the same parameters as those taken above.

1.3 Report Integration

This QCSR addresses quality control practices employed for this RFI. Issues covered in the document include a discussion of all data points which may have been influenced or compromised and their impact on the data quality objectives or remedial decisions.

While each is a stand-alone document, the QCSR and RFI reports will be submitted as a single deliverable to meet USACE scope of services requirements. Sections of these documents may be similar in content; however, each document addresses specific topics required to meet appropriate guidance for the respective documents.



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SCALE IN FEET

DRN BY: CJG	DATE: 10/05/93	SWMU LOCATION PLAN HOLLOMAN AIR FORCE BASE NEW MEXICO	PROJECT NO. C3M11K	FIG. NO. 1-1
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2.0
BACKGROUND

Holloman AFB is located in south-central New Mexico, approximately 5 miles southwest of Alamogordo in Otero County (see Figure 1-1). Las Cruces is the closest large town and is located about 70 miles to the southwest. El Paso, Texas is about 80 miles to the south-southwest and Albuquerque is about 200 miles to the north-northwest. The major highway serving Holloman AFB is U.S. Highway 70 which runs from the northeast to the southwest along the southern Base boundary.

Holloman AFB is the headquarters of the Air Combat Command 49th Fighter Wing whose primary mission is the training of tactical fighter air crews. Holloman AFB, formerly known as the Alamogordo Army Air Field, was initiated in 1942 as a wartime temporary facility. Following a brief period of inactivity after World War II, Holloman AFB was transferred in 1947 to the Air Material Command with the mission of providing facilities, development, and testing of pilotless aircraft, guided missiles, and allied equipment in support of the Air Material Command Research and Development Program (A.T. Kearney 1988, CH2M Hill 1983).

In 1951, Holloman AFB was placed under the guidance of the Air Force Missile Test Center located at Patrick AFB, Florida. In 1952, Holloman AFB was named one of the development centers of the Air Research and Training Development Command and became Holloman Air Development Center. In 1957, the center was designated as the Air Force Missile Development Center under the Air Force Systems Command (AFSC). The 49th Tactical Fighter Wing was assigned to Holloman AFB in 1968. Prior to this addition, the flying mission was oriented principally toward research and development (A.T. Kearney 1988; CH2M Hill 1983).

The 833rd Air Division was activated in 1964, but deactivated in 1969 due to budgetary restrictions. In 1971, Holloman AFB was transferred from AFSC to the Tactical Air Command (TAC) with the 49th Tactical Fighter Wing assuming host responsibilities. In 1977, the 479th Tactical Training Wing was assigned to Holloman AFB. In 1980, the 833rd

Air Division was reactivated and became operational providing command supervision. (A.T. Kearney 1988; CH2M Hill 1983).

In 1991, the 49th Fighter Wing resumed host responsibilities. In 1992, Holloman AFB was transferred from TAC to the current Air Combat Command (ACC). ACC organizations include the 49th Tactical Fighter Wing, 479th Tactical Training Wing, 833rd Air Division, and 4449th Mobile Support Squadron.

Holloman AFB supports some additional units of various Air Force commands, as well as U.S. Army units and the New Mexico University Primate Research Laboratory. Aerospace research continues at Holloman AFB through activities at the Test Track Sled Facilities (Radian 1992).

2.1 SOLID WASTE MANAGEMENT UNITS (SWMUs) INVESTIGATED

The following sections provide a description of each SWMU investigated during the RFI at Holloman AFB and will address the following information as follows:

- SWMU identification and description
- Field sampling activities performed
- A summary table containing:
  - boring identification
  - sampling depths
  - sample types (e.g., analytical or geophysical test)
  - associated field QA/QC samples
  - sampling data
  - analytical parameters

A W-C geotechnical engineer supervised the drilling operations, logged the borings, and collected the surface and subsurface soil samples. All borings were drilled by Southwest Engineering Incorporated of Las Cruces, New Mexico, with a truck-mounted auger rig using

hollow-stem augers. All subsurface samples were collected with a 3- or 2-inch-nominal-outer-diameter (OD) steel split spoon. All surface and subsurface samples were screened in the field with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) for the presence of any volatile organic vapors.

All sampling equipment was decontaminated between sampling events. The rig, augers, and any other downhole equipment were decontaminated between borings in accordance with SOP No. 1 - Equipment Decontamination. This SOP is contained in Appendix A of the Holloman AFB RFI QAPP (W-C 1993). All analytical samples were sent to NDRC in Richardson, Texas. All geotechnical analysis samples were sent to Midwest Laboratories in Omaha, Nebraska.

The activities performed at each SWMU were conducted as outlined in the Field Sampling Plan (FSP), RCRA Facility Investigation, Holloman AFB, Alamogordo, New Mexico (W-C 1993).

All field boring logs and field sample collection sheets are provided in Appendix D of the Holloman AFB RFI Report (W-C 1993).

2.2 SWMU BACKGROUND

2.2.1 SWMU 229 Site Description

The T-38 Test Cell (SWMU 229) is located within the Holloman AFB airfield, northeast of Building 638, and along the northwest edge of Taxiway A, which runs northeast-southeast (see Figure 2.2-1). The nearest major facility is a radar station (Building 642) about 800 feet to the northwest. The test cell area is bordered by an access road about 1,500 feet to the southwest, a runway about 2,500 feet to the north, and Taxiway A to the southeast.

A site plan of the T-38 Test Cell and surrounding area is shown in Figure 2.2-1. The test cell, also identified as Building 639, is used to periodically test jet engines. Next to the test cell is an outdoor pad where T-38 planes are brought for power checks. Both the test cell and power check pad are fitted with sound suppression systems. A 5,000-gallon above-

ground fuel tank, used to supply JP-4 for the engine tests, is located at the east corner of the test cell. Two oil/water separators exist on-site; one connected to the floor drains of Building 639, and one just south of the power check pad. An abandoned water storage tank, used years ago as part of a wet sound suppression system is situated just southwest of Building 638. Building 638 is used for general support and site maintenance. Other site features include an electrical transformer and electrical junction boxes; an air compressor and tank; and a small trailer used to store hazardous materials such as paints, lubricants, and oils.

Much of the area around the test cell is covered by asphalt. Both the test cell and power check pad are situated on a concrete surface. Topography generally slopes to the southwest at slightly less than 1 percent, except for paved areas which are nearly level. Surrounding vegetation is sparse.

Field activities were conducted at the T-38 Test Cell from June 7, 1993 to July 20, 1993. A summary list of the chemical and geotechnical analyses performed, as well as the number of samples and associated QA/QC samples collected at T-38 Test Cell is given in Tables 6-1 and 6-2. The location of these samples are shown on Figure 2.2-1

2.2.2 SWMU 230 Site Description

Building 828 (SWMU 230) is located in the west Base area of Holloman AFB, next to Buildings 821 and 827, and along Bunyap Place about one block east of 49er Avenue and one block north of Black Sheep Way (see Figure 2.3-1) Building 828 is operated as part of the Aerospace Ground Equipment (AGE) maintenance facility, which includes Building 822 across Bunyap Place to the east.

A site plan of Building 828 and the surrounding area is shown in Figure 2.3-1. Both Buildings 827 and 828 are within a fenced compound, used for refueling, maintenance, and storage of aircraft ground support equipment such as ladder lifts, power generators, and other testing equipment for which AGE is responsible. Just south of Building 828 is a fuel pump island and to the east are three concrete pads below which are three abandoned underground storage tanks. At the northwest corner of the compound are three 6,000 above-ground fuel tanks, which have replaced the underground tanks. West of Building 828, outside the

northeast corner of Building 827 is a concrete pad washrack which connects to an oil/water separator directly to the south. Just outside the fence south of the compound is Building 821, which appears to be used mainly for storage.

Most of the area is covered by asphalt pavement. Curbs and sidewalks are concrete. Topography generally slopes to the southwest at less than 1 percent. West of the compound towards 49er Avenue is undeveloped or formerly developed land where vegetation is very sparse.

Field sampling activities were conducted at Building 828 from June 7, 1993 to July 16, 1993. A summary list of the chemical and geotechnical analyses performed, as well as the number of samples and QA/QC samples collected at this SWMU is given in Tables 6.2-1 and 6.2-2. The locations of these samples are shown on Figure 2.3-1.

TO VIEW THE MAP AND/OR MAPS WITH THIS DOCUMENT, PLEASE CALL THE HAZARDOUS WASTE BUREAU AT 505-476-6000 TO MAKE AN APPOINTMENT

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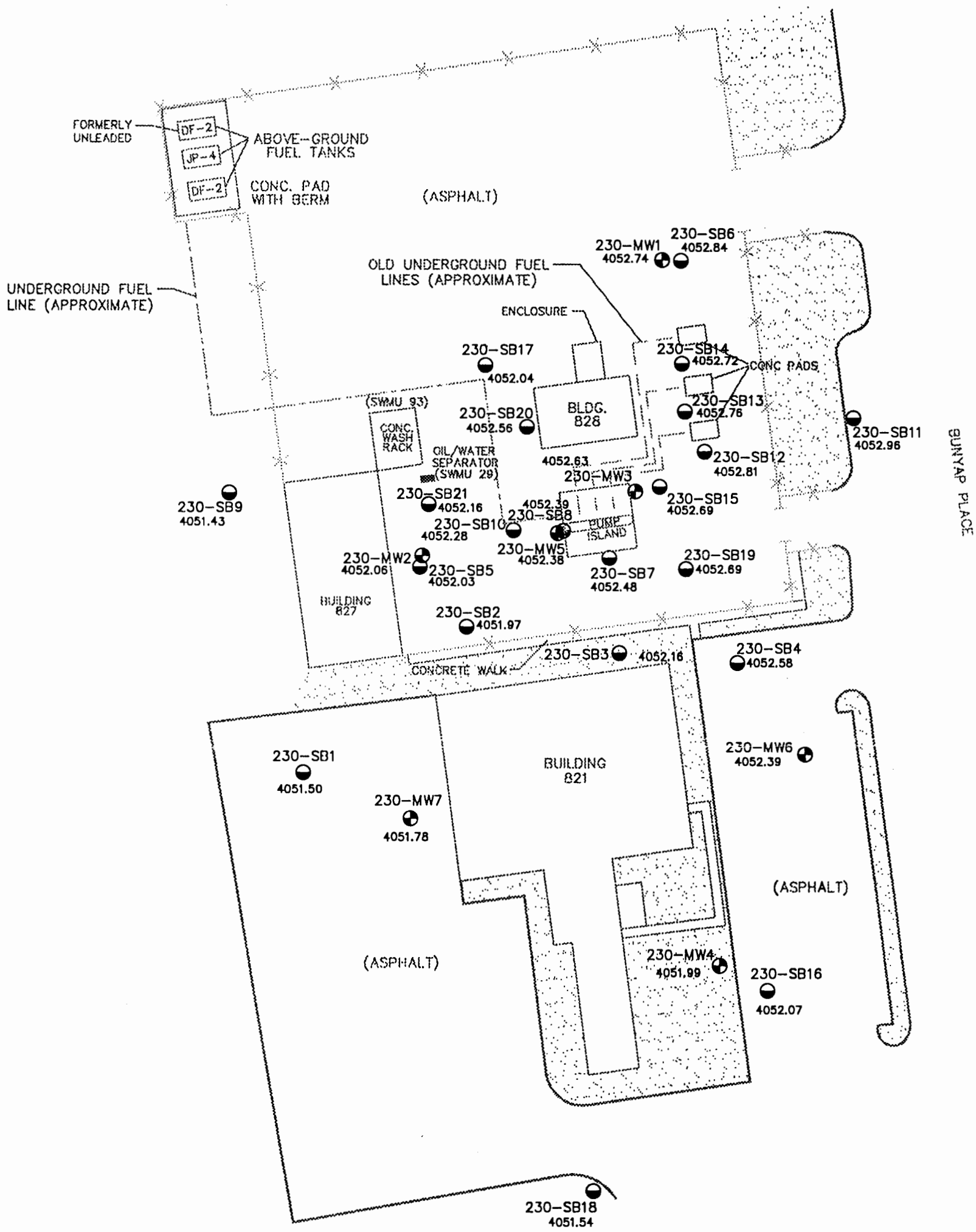

LEGEND

4052.63 MONITORING WELL LOCATION (WITH GROUND SURFACE ELEVATION)

4051.50 SOIL BORING LOCATION (WITH GROUND SURFACE ELEVATION)

GRAVEL SURFACE

DRN. BY: CJG	DATE: 09/07/93	BUILDING 828 – SWMU 230 SITE LOCATION PLAN HOLLOMAN AIR FORCE BASE NEW MEXICO	PROJECT NO. C3M11K
CHK'D. BY:	REVISION: 0		FIG. NO. 2-3.1

3.0
SAMPLING PROCEDURES

The purpose of sampling activities for the project was to obtain site-specific geotechnical and chemical data that represent the physical/chemical conditions at the site during the time of sample/measurement acquisition. The primary field QC activity was the implementation of Standard Operating Procedures (SOPs). The following SOPs implemented for the field activities for this task are contained in Appendix B of the Holloman AFB RFI QAPP (W-C 1993). A listing of the SOPs used during this investigation were as follows:

SOP No. 1	Soil Sampling
SOP No. 2	Monitoring Well Installation and Development
SOP No. 3	Water Sampling
SOP No. 4	Monitoring Well Sampling Using a Dedicated Submersible Pump
SOP No. 6	Sampling Identification, Handling, and Documentation
SOP No. 7	Decontamination
SOP No. 8	Boring Abandonment
SOP No. 9	Water Level Measurement
SOP No. 12	Slug Testing
SOP No. 13	Physical Property Testing
SOP No. 14	Identification and Description of Sampling Points
SOP No. 15	Headspace Analysis
SOP No. 16	Permits and Clearances
SOP no. 17	Investigation-Derived Waste

3.1 FIELD SAMPLING

This section provides a discussion of the sampling equipment and procedures, sample designation, sample handling, documentation, and analysis during the sampling activities.

Before each sampling event, the field manager met with the assigned sampling personnel and reviewed the purpose and objectives of the event. This meeting provided clarification of the sampling event specifies. Topics of discussion and review included:

- Sampling locations, equipment, and requirements
- Number and types of samples
- Sample identification
- Preservation requirements
- Analytical parameters
- Equipment decontamination procedures
- Chain-of-custody requirements

Field activities at the T-38 Test Cell and Building 828 sites included soil boring sampling and sampling, monitoring well installation, groundwater sampling, water level survey, aquifer slug testing, bail down testing, and location surveys.

The RFI field program consisted of:

- Drilling and sampling soil from 56 soil borings (some for determining the presence of floating product only)

- Installing and developing 19 wells and taking soil samples from the borings

- Collecting and analyzing groundwater from 14 wells and collecting and analyzing samples of floating product from 4 wells

- Completing slug tests at 12 monitoring wells

- Completing bail down tests at 5 monitoring wells

- Measuring water and flooring product levels in 19 monitoring wells

- Measuring oxygen levels in the vadose zone at 3 sampling points

- Determining horizontal and vertical control at all sampling locations

All field activities were done using Holloman AFB Standard Operating Procedures included in the Field Sampling Plan (FSP) and addendum dated June and July 1993.

3.1.1 Soil Boring Drilling and Sampling

A total of 56 soil borings and 19 monitoring well borings were drilled at Holloman AFB. Soil borings were advanced using 3-3/4-inch inside diameter (ID), 8-inch nominal outside diameter (OD) hollow-stem augers (HSA). This drilling method allowed for the collection of soil samples.

Specific procedures and techniques for soil sampling are provided in SOPs No. 1 (Soil Sampling), No. 6 (Sample Identification, Handling, and Documentation), No. 7 (Decontamination), No. 8 (Boring Abandonment), No. 15 (Headspace Analysis), No. 16 (Permits and Clearances) and No. 17 (Investigation Derived Wastes). These SOPs are contained in the FSP and addendum (W-C 1993). There were no deviations from the SOPs for soil boring, drilling, and sampling. Results of soil boring sampling are presented in the SWMU-specific sections.

3.1.2 Monitoring Well Installation

Nineteen new groundwater monitoring wells were installed at Holloman AFB. Brief summaries of the procedures used for installation of monitoring wells are provided in the following subsections. State and local requirements were met pertaining to the installation of monitoring wells.

3.1.2.1 Monitoring Well Installation

Borings for the monitoring wells were drilled using 8-inch nominal OD HSA. Borings were advanced to depths ranging from 16 to 28 feet below the ground surface. After the borings had been advanced to the planned depth, the screen and casing were assembled as they were lowered into the boring within the HSA. Specific procedures and techniques for monitoring well installation are provided in SOPs No. 3 (Monitoring Well Installation and Development), No. 7 (Decontamination), and No. 17 (Investigation Derived Waste). These SOPS are contained in the FSP and addendum. There were no deviations from the SOPs for monitoring well installation.

3.1.2.2 Monitoring Well Development

Well development was accomplished by surging and bailing. The wells were partially developed immediately after placement of filter pack. Wells were surged and bailed for about 15 minutes with a PVC bailer to facilitate settling of the filter pack before completion of the well. Specific procedures and techniques for monitoring well development are included in SOPs No. 3 (Monitoring Well Installation and Development), No. 7 (Decontamination), and No. 17 (Investigation Derived Waste). These SOPs are contained in the FSP and addendum. There were no deviations from the SOPs for monitoring well development.

3.1.3 Groundwater Level Measurement Survey

Groundwater level measurements were taken using an electronic water level indicator at 12 wells not containing floating product and at 7 wells containing floating product with an oil/water interface probe. Water-level measurements were collected as specified in SOP No. 9 (Water Level Measurement) contained in the FSP. There were no deviations from the SOP for water level measurement.

3.1.4 Groundwater Sampling

Groundwater samples for chemical analysis were collected from 14 monitoring wells. Specific procedures and techniques used for groundwater sampling and decontamination are

provided in SOPs No. 4 (Water Sampling), No. 6 (Sample Identification, Handling, and Documentation), No. 7 (Decontamination), and No. 17 (Investigation Derived Waste) contained in the FSP and addendum. The only deviation from the listed SOPs was the use of a PVC and disposable bailer instead of the stainless-steel bailer as stated in SOP No. 4.

3.1.5 Bail-Down Testing

Specific procedures and techniques for bail-down testing are provided in SOPs No. 11 (Bail-down testing) and No. 7 (Decontamination). These SOPS are contained in the FSP and addendum. There were no deviations from the SOPs for bail-down testing.

3.1.6 Vadose Zone Oxygen Measurement

Oxygen levels in the vadose zone were measured at 3 monitoring points using a Gastech combustible gas indicator. A total of 2 monitoring point air volumes were removed using the flow rate of the meter before a final oxygen level reading was recorded. Standard operating procedure, not included in the FSP or addendum, was established verbally with the USACE.

3.1.7 Surveying

Southwest Engineering, Inc. provided professional surveying services to establish the locations of soil borings, monitoring wells, control monuments, and other appropriate data points. Surveying included horizontal and vertical coordinates.

3.1.8 Chemical Analyses

The chemical analyses performed on samples collected during the field sampling activities are as follows: EPA 8020 - aromatic volatile organics, EPA 418.1 - TRPH, EPA 6010 - total metals, EPA 310.0 - alkalinity, EPA 325.3 - chloride, EPA 340.2 - fluoride, EPA 353.3 - nitrate/nitrate, EPA -365.3 - phosphate, EPA 375.4 - sulfate, and EPA 160.1 - total dissolved solids.

3.1.9 Sample Labeling

A sample numbering system provided a tracking mechanism to allow retrieval of the sample and sample information and identification of the sampling locations. A unique sample number was assigned to each sample. Procedures for this system are provided in SOP No. 6. There were no deviations from the SOP for sample labeling.

3.1.10 Equipment Decontamination

Equipment decontamination was performed in accordance with SOP No. 7, Equipment Decontamination.

Equipment, which came in direct contact with samples (i.e., bailers, pond sampler, etc.), was cleaned using the following procedures: Alconox water wash, potable water rinse, and deionized water rinse. The drilling rig and associated drilling equipment were steam cleaned prior to use on each site. Split-spoon samplers were cleaned using an Alconox wash, followed by a potable water rinse and deionized water rinse. The pumps used to develop and purge wells were either steam cleaned or thoroughly washed with an Alconox soap mixture followed by a potable rinse. Rope used to raise and lower bailers at each well head was disposed of after completion of sampling each well. There were no deviations from the SOP.

3.1.11 Calibration of Field Equipment

The OVA reading accuracy was confirmed using methane calibration gas. Accuracy was checked prior to each day's use. The pH meter and specific conductivity meter were calibrated as directed in the Holloman AFB RFI QAPP (W-C 1993) and as directed in the user's manual. Calibration standard solutions were used for pH, conductivity, and turbidity. An ASTM certified thermometer was used to measure temperature when required. The water sample collection field sheets in Appendix C of the RFI Report display the field analytical equipment calibration and maintenance. Calibration of field equipment was performed as stated in SOP No. 3, Water Sampling, with no deviations.

3.1.12 Sample Containers, Preservation, and Holding Times

Certified, commercially-cleaned sample containers were obtained from the contract analytical laboratory. Sample bottles for quality assurance/quality control samples (trip blanks, duplicates and USACE splits) were provided by NDRC Laboratories. Required preservatives were prepared and placed in the bottles at the laboratory prior to shipment to the site. The bottles were labeled by the laboratory to indicate the type of sample to be collected.

The liners used to collect the biological soil samples (microbial count) were autoclaved (i.e., sterilized) by BBC Laboratory prior to use in the field.

Sample preservation efforts commenced at the end of sample collection and continued until analyses were performed. Samples were stored on ice at 4°C in coolers immediately following collection. Tables 3-1 and 3-2 display sample containers, preservation, and holding times for the Holloman RFI.

3.1.13 Documentation

Permanent records of all field activities, parameters measured, and samples collected were taken throughout the field investigation. A large portion of all documentation is also present in the field log books. Field log books will be filed in the Holloman AFB project files. Documentation for the Holloman AFB RFI was performed as stated in SOP No. 6 with no deviations.

3.1.13.1 <u>Drilling and Well Construction</u>

HTW drilling logs were used in the field to compile all information as borings were advanced. At the completion of a monitoring well, a monitoring well construction form was completed. These forms are presented in the RFI report Appendix D (W-C 1993).

3.1.13.2 Sampling Forms

In accordance with the Holloman AFB RFI QAPP (W-C 1993), all applicable portions of a Sample Collection Data Sheet were completed for each sample location. These forms are filed in the Holloman AFB project files.

A chain-of-custody form was also completed and shipped with each sample collected for laboratory analysis. All applicable portions of a chain-of-custody were completed prior to shipping.

3.1.13.3 Daily Quality Control Reports

Daily Quality Control Reports (DQCR) are discussed in Section 5.0 of this report.

3.2 LABORATORY ACTIVITIES

3.2.1 Analytical Methods

The general laboratory procedures performed for the RFI at Holloman AFB are summarized in Table 3-1 and include EPA SW-846 and other appropriate EPA methodologies. The specific analyses for each SWMU are presented in Tables 6-1, 6-2, 6-2.1, and 6-2.2. Included in the procedures below are general method-specific DQOs and would be applicable whenever a particular method is specified in the respective sections of the FSP. Specific laboratory practices for the methods listed below, including sample preparation, sample tracking, and documentation controls, are provided in the LQMP in Appendix A of the Holloman AFB RFI QAPP (W-C 1993). Results were reported by the laboratory on a wet-weight basis. To convert to dry weight, use the following equation:

$$\frac{wet\ weight\ result}{\%\ solids} = dry\ weight\ result$$

3.2.1.1 Aromatic Volatile Organic Compounds (VOCs)

Aromatic volatile organic compounds (VOCs) include compounds among the class of compounds associated with fuels (e.g. JP-4 jet fuel) such as benzene, toluene, ethylbenzene, and xylenes (BTEX). The SW-846 Method 8020 is appropriate for the determination of aromatics and nonhalogenated organics where the volatile contaminants of interest are

reasonably defined. This method is a purge-and-trap gas chromatographic (GC) separation method that employs a photoionization detector (PID). This method requires second-column confirmation of detected peaks, unless expertise and familiarization with the contaminants has been established and documented.

3.2.1.2 Petroleum Hydrocarbons

Total petroleum hydrocarbons (TPH) analysis is indicated where suspected or known releases or disposal of fuels, waste petroleum, oil, and lubricants (POL) have occurred. The methodology used for the Holloman AFB RFI, EPA Method 418.1, employs infrared (IR) spectroscopy. Soil samples were prepared by soxhlet extraction Method 9071 prior to analysis.

TPH analysis gives information concerning total petroleum hydrocarbon levels and is useful as an indicator tool, in conjunction with BTEX, for fuel contamination of soil and groundwater.

3.2.1.3 Metals

The metals analyses for the RFI at Holloman AFB consisted of metals on the target analyte list (TAL). Interpretation of metals data can be complex, particularly when background and/or naturally occurring levels complicate the analysis. Groundwater at Holloman AFB sites were analyzed for total recoverable metals to assess the extent and potential for transport and exposures of contaminant metals.

The following are various factors which influence the use of particular methods:

- Detection limits
- Interference
- Stability
- Project-specific DQOs

Most metals, with a few exceptions, were detected at levels appropriate for Holloman AFB DQOs by inductively coupled plasma emission spectroscopy (ICP). Method 6010 was indicated for water and soil for ICP analysis. Atomic absorption (AA) methods for arsenic, lead, mercury, and selenium were indicated to achieve the levels necessary for human health risk evaluations.

3.2.1.4 Groundwater Quality and Other Parameters

Various parameters are analyzed for purposes of assessing groundwater quality at Holloman AFB. The use of these parameters aided in the evaluation of contaminant chemistry and transport in groundwater.

3.2.2 Laboratory QA/QC Samples

3.2.2.1 Method or Preparation Blank

A method blank consists of deionized water and washed sea sand for organic analysis of solids. The method blank is carried through each step of the analytical method. The method blank data were used to evaluate contamination attributed to laboratory operations during analysis.

3.2.2.2 Surrogate Spikes

Surrogate spikes were compounds added to every blank, sample, matrix spike, matrix spike duplicate, and standard when specified in the analytical methodology. The results were utilized to evaluate the accuracy of analytical measurement on a sample-specific basis. Surrogates are generally brominated, fluorinated, or isotopically labeled compounds not expected to be detected in environmental media. Results were expressed as percent recovery (% R) of the surrogate spike. Recoveries outside of criteria are evidence of matrix interference.

3.2.2.3 Laboratory Control Samples (LCS)

Laboratory control samples (LCS) were well-characterized, laboratory-generated samples and were used to monitor the laboratory's day-to-day performance of analytical methods. Certain LCS were used to monitor the precision and accuracy of the analytical process independent of matrix effects. Other LCS were used to identify any background interference or contamination of the analytical system which may have lead to the reporting of elevated concentration levels or false positive results.

The results of the LCS were compared to well-defined evaluation criteria to determine whether the laboratory system is "in control". Controlling lab operations with LCS (rather than surrogates or MS/MSD) offers the advantage of being able to differentiate low recoveries due to procedural errors from those due to matrix effects.

3.2.2.4 Analytical Spike

Although not routinely performed, an analytical spike was performed and utilized in the graphite furnace atomic absorption analyses for lead. Analytical spikes were post-digestion spikes prepared prior to analysis by adding a known quantity of the analyte to an aliquot of the digested sample. The unspiked sample aliquot compensated for any volume change in the spike samples by addition of deionized water to the unspiked sample aliquot. The volume of the spiking solution added did not exceed 10 percent of the analytical sample volume. Both the unspiked and spiked samples were analyzed in identical fashion. Analytical spike recoveries on each sample were utilized to determine whether or not the sample analytical result must be quantified through the method of standard additions. The sample selected for a post-digestion spike was based on a determination by the laboratory on which groundwater sample had the highest TDS for each site.

TABLE 3-1

SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES FOR WATER SAMPLES

Method	Parameter	Number of Containers/Sample	Minimum Sample Size	Preservation	Holding Time
8020	Aromatic volatile organics	2-40 mL glass VOA vials with Teflon-lined septa	40 mL	4°C and 4 drops HCL to pH <2	14 days
418.1	Petroleum hydrocarbons	1-1 L amber glass bottle with Teflon-lined lid	1L	4°C and HCl to pH <2	28 days
6010[1]	Total metals	1-500 mL polyethylene bottle	500 mL	4°C and HNO_3 to pH <2	28 days[2]
310.0	Alkalinity	1-1 L polyethylene bottle	100 mL	4°C	14 days
325.3	Chloride	1-1 L polyethylene bottle	100 mL	4°C	28 days
340.2	Fluoride	1-1 L polyethylene bottle	200 mL	4°C	28 days
353.3	Nitrate/Nitrite	1-500 mL glass bottle	100 mL	4°C and H_2SO_4 to pH <2	28 days
365.3	Phosphate	1-1 L polyethylene bottle	100 mL	4°C and H_2SO_4 to pH <2	28 days
375.4	Sulfate	1-1 L polyethylene bottle	100 mL	4°C	28 days
160.1	Total dissolved solids	1-1 L polyethylene bottle	200 mL	4°C	7 days

[1] In addition to Method 6010, includes 7060 (arsenic), 7421 (lead), 7470 (mercury), and 7740 (selenium)
[2] Holding time based on mercury, all other metals have a 6 month holding time

TABLE 3-2

SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES FOR SOIL SAMPLES

Method	Parameter	Number of Containers/Sample	Minimum Sample Size	Preservation	Holding Time
8010/8020	Aromatic volatile organics	2-4 oz. glass VOA vials with Teflon-lined septa	10g	4°C	14 days
418.1	Petroleum hydrocarbons	1-16 oz. wide-mouth glass jar with Teflon-lined lid	30g	4°C	28 days
8015[1]	Petroleum hydrocarbons	1-16 oz. wide-mouth glass jar with Teflon-lined lid	30g	4°C	28 days
6010[2]	Total metals	1-16 oz. wide-mouth glass jar with Teflon-lined lid	10g	4°C	28 days[3]

[1] Modified Method 8015
[2] In addition to Method 6010, includes 7060 (arsenic, 7421 (lead), 7470 (mercury), and 7740 (selenium)
[3] Holding time based on mercury, all other metals have a 6-month holding time

4.0
QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

The following section summarizes quality assurance procedures related to field and laboratory data and results of quality control samples obtained during the field sampling activities.

Details of the data quality objectives (DQOs) for the overall project are discussed in the Holloman AFB RFI QAPP (W-C 1993), FSP, and SOPs (W-C 1993).

Quality control (QC), as used in this report, refers to activities which provide methods for checking, verifying, or quantifying the quality of an item or piece of data against established standards.

The data review process was implemented to assess the quality of data resulting from the field sampling program with respect to the quality assurance objectives established for the project. Data assessment for each SWMU involved a consideration of the major data uses, the decision types, the identification of data which were qualified or otherwise did not meet Holloman AFB RFI QAPP (W-C 1993) requirements, and limitations on data in order to evaluate the appropriate usage of the data in supporting decisions to be made at each SWMU.

4.1 DATA REVIEW PROCESS

Analytical laboratory results were reviewed following the procedures described below utilizing the quality control (QC) data specified in the Holloman AFB RFI QAPP and Addendum (W-C 1993) for the respective EPA analytical methodologies. The QC elements reviewed in laboratory analytical data packages included the following: completeness of the data package; compliance with required holding times; presence or absence of analytes in method blanks and field blanks; results of laboratory control samples; recoveries of surrogate spikes in samples; results of matrix spike samples, matrix duplicates (metals); and field duplicate samples.

The analytical data received from the laboratory have been summarized and are available in Appendix A of this report. The laboratory flagged data **J** when a result was below reporting limits to indicate that the concentration reported is an estimated value. Also, the laboratory flagged data **D** to indicate sample dilution. The data review procedures used are described in this section. Qualified data are addressed in the text for each SWMU; and the data, including all W-C qualifiers, are presented in the data summary tables for each SWMU.

Based on results of the data review process, sample data may have been qualified as **J** (estimated), **UJ** (not detected/estimated), **NJ** (presumptive presence/estimated), or **R** (rejected). The review process was performed in accordance with the guidelines provided in the EPA Contract Laboratory Program (CLP), National Functional Guidelines for Organic Data Review (EPA 1991) and the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (EPA 1988). Although the data packages provided were not CLP deliverables, the guidance was followed where applicable.

In accordance with these guidelines, professional judgment was invoked in certain areas in determining the need for data qualification. Professional judgment as prescribed by the Functional Guidelines involves a secondary evaluation of data with respect to qualifications, which take into account additional knowledge based on experience with laboratory practices, analyte-specific factors, such as chemical properties, and other current resolution of technical issues addressed in the literature. A **Q** qualifier was used to indicate where professional judgment on the part of the data reviewer indicated that the data may not be SWMU related and the data user is advised of the limitations associated with the data.

The data review process results are presented in the respective analytical results section for each SWMU. Each SWMU-specific QC Review details quality control issues associated with the analysis of the sample, describes what data (if any) qualification was required, and describes how professional judgment was used.

4.1.1 Completeness of Data Package

Data packages were reviewed to make certain that they contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with the requested QC documentation for the respective EPA methods.

4.1.2 Holding Times

Sample holding times were calculated from the date of sampling as determined from the Chain-of-Custody (COC) forms to the date of sample extraction/analysis. Holding times were compared to the criteria specified in Tables 5-1a and 5-1b of the Holloman AFB RFI QAPP and Addendum (W-C, June and July 1993). If the sample analysis was conducted outside of the required holding times, all results for that sample were qualified as estimated **J** or **UJ** or rejected **R**, depending on the severity of the holding time exceedance in accordance with EPA Functional Guidelines.

4.1.3 Blanks and Rinsates

The same guidelines were applied to the results of method blanks, field blanks, and rinsate blanks in the evaluation and usage of blank results. If analytes were reported in the laboratory method blank, but not in samples associated with the method blank, data were not qualified. If analytes were reported in the method blank and in associated samples, the following actions were taken:

- No positive sample results were reported unless the concentration of the analyte in the sample exceeded 10 times (10X) the amount in any blank for the common laboratory contaminants methylene chloride, acetone, 2-butanone, and common phthalate esters, or exceeded 5 times (5X) the amount for other compounds.

- When the sample results were greater than the reporting limit, but less than the required multiple (5X or 10X) of the blank result, sample results were

qualified as not detected **U**, and the reporting limit raised to the sample concentration.

- When the sample results were less than the reporting limits and less than the required multiple of the blank result, sample results were qualified as not detected **U** at the reporting limit. Also, all sample results less than the reporting limits for common laboratory contaminants were qualified as not detected **U** based on professional judgment as described in Section 5.2.

- When the sample results were greater than the required multiple (5X or 10X) of the blank result, sample results were reported without a **U** qualification.

The compounds methylene chloride, acetone, 2-butanone, as well as several phthalate esters which are common laboratory contaminants, were detected in a number of samples throughout the analytical program. In some instances, these analytes were not always identified in the associated blanks, or the analyte in the sample was reported at greater than 10X the concentration reported for the associated blank. When these compounds were reported in a sample, but were not qualified U based on the procedures outlined above, the data reviewer may have qualified the result Q indicating that the compound may not be SWMU-related.

This professional judgment may be based on the compounds prevalence in other blanks or upon knowledge of the typical sources for the occurrence of these compounds in samples. For example, phthalates may result from contamination by gloves, laboratory equipment, or other materials used in the sampling or analytical program.

4.1.4 Surrogates and Laboratory Control Samples

Criteria for recovery of surrogates spiked into samples are listed in Table 4-3 of the Holloman AFB QAPP and Addendum (W-C, June and July 1993). The following qualification of data which did not meet surrogate recovery criteria given in Table 4-3 of the Holloman AFB RFI QAPP (W-C 1993) is based on the EPA Functional Guidelines. If any surrogate for volatile organic analyses were out of specification due to recoveries greater than the upper evaluation limit, positive results for that fraction were qualified as estimated **J**; nondetect data did not

require qualification. If recoveries were less than the lower evaluation limit, but greater then 10 percent, positive results for that fraction were qualified as estimated **J** and nondetect results were qualified as estimated **UJ** unless otherwise noted in the QC review report. If any surrogate in a fraction had a recovery less than 10 percent, positive results were qualified as estimated **J**, and nondetect results for that fraction were qualified as rejected **R**. Surrogate recovery review is not applicable to total petroleum hydrocarbons (TPH) or metals analyses.

For the organics analyses, LCS are a sample of a well-characterized matrix spiked with known amounts of the target compounds appropriate to the method being used. LCS results provide a measure of the accuracy and, if analyzed in duplicate, the precision of the laboratory analysis on target compounds. Sample results associated with LCS which were outside the evaluation limits were qualified **J** as estimated.

4.1.5 Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed for organics and matrix spike/duplicate (MS/D) samples were analyzed for metals. Evaluation criteria for accuracy (percent recovery) and precision (relative percent difference) of these MS/MSD and MS/D samples are listed in Table 4-4 of the Holloman AFB RFI QAPP and Addendum (W-C, June and July 1993).

For organic MS/MSD samples with percent recoveries greater than the upper evaluation limit, nondetect sample results were acceptable, and reported sample values were qualified as estimated **J**. For percent recoveries less than the lower evaluation limit, both nondetect and reported sample results were qualified as estimated **J**. For MS or MSD samples with spike recoveries less than 10 percent for organics and 30 percent for metals analyses, nondetect sample results were rejected **R** and reported values were qualified as estimated **J**. MS and MSD samples where RPDs were greater than 100 percent were qualified as unusable **R**.

In general for soil samples, only the sample results for the sample on which the MS/MSD was prepared were qualified using the above guidelines. However, using informed professional judgment in conjunction with a review of the other QC criteria, the data reviewer may have determined the need for qualification of other sample data for the analytical batch for the

SWMU. In general for water samples, all sample results associated with the MS were qualified using the above guidelines. However, using informed professional judgment in conjunction with a review of the other QC criteria, the data reviewer may have determined that the results of the MS affected only the sample spiked, in which case qualification was limited to only the sample used to prepare the MS. Details of and rationale for such judgments are provided in the QC Review for each SWMU.

4.1.6 Field Duplicate Samples

The first level of evaluation data were compared to the evaluation criteria in Table 4.4 of the Holloman AFB RFI QAPP (W-C 1993). Should these criteria be exceeded, further assessment with respect to project objectives will occur. Precision evaluation criteria of 50 percent relative percent difference (RPD) for soil samples were considered if the analyte concentrations were greater then 5X the reporting limit. For analytical results less than or equal to 5X the reporting limit, precision evaluation limits of ± 2X the reporting limit were utilized. Duplicate results were evaluated on a case-by-case basis to determine if qualification of data was necessary. Where it was determined that qualification based on field duplicate samples was justified, an estimated **J** data qualifier was assigned to the results for the affected analyte in the samples associated with it.

4.2 ASSESSMENT OF PARCC PARAMETERS

4.2.1 Precision

Precision is the measure of variability between individual sample measurements under prescribed conditions. Precision is assessed by replicate measurements of known standards and analysis of duplicate environmental samples. Precision was assessed by evaluating the RPDs obtained from results of laboratory control samples, matrix spike duplicate samples, and field duplicate samples. Evaluation criteria were specified in the Table 4-2 of the Holloman AFB RFI QAPP and Addendum (W-C, June and July 1993). Results are detailed in each SWMU-specific QC Review.

4.2.2 Accuracy

Accuracy is the degree of agreement of a measurement to an accepted reference or true value. Accuracy was assessed by evaluating the percent recoveries of spiked analytes in laboratory control samples, matrix spike samples, and also surrogate compounds which were added to analytical samples. Evaluation criteria were specified in Table 4-2 of the Holloman AFB QAPP and Addendum (W-C, June and July 1993). Results are detailed in each SWMU-specific QC Review.

4.2.3 Completeness

Following the QC review of the data packages for each SWMU, the data were assessed with respect to the fulfillment of quality assurance objectives and usability. The completeness for laboratory analytical data for each SWMU was calculated by the ratio of acceptable (including estimated) analyses requested on the samples submitted for analysis.

$$\%\ Complete = \frac{Valid\ Analytical\ Results\ [including\ estimated\ (J)\ results]}{Total\ Number\ of\ Analytical\ Results\ Requested}$$

The percent completeness with respect to overall project objectives for each SWMU was evaluated for data required to make decisions on a case-by-case basis.

4.2.4 Representativeness

Representativeness is the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness of the analytical results with respect to the medium sampled can be assessed by comparing the results for collocated field duplicate sample pairs collected from a SWMU.

As stated in the EPA Functional Guidelines, there are no review criteria for field duplicate analyses. However, each SWMU-specific QC Review contains a qualitative assessment of data representativeness.

4.2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. Data are comparable when collection techniques and measurement procedures, methods, and reporting are equivalent for the samples within the sample set. Each SWMU-specific QC Review contains a qualitative assessment of data comparability.

4.3 SAMPLE REPORTING LIMITS

The sample reporting limit (RL) is the lowest concentration of an analyte that can be reported by the laboratory to be present in a sample with a specified level of confidence. The RLs are a function of the sample characteristics, method quantitation, and laboratory performance.

Method quantitation limits are determined by the laboratory and defined as the level at which the laboratory can reliably quantitate the concentration of an analyte on multiple analyses. The RLs can be equal to the method quantitation limits, but often are above since method quantitation limit studies are performed using laboratory-prepared samples (spiked deionized [DI] water); whereas, environmental samples are naturally more variable. For the Holloman project, NDRC reporting limits for organics were equal to the practical quantitation limit, and for the metals the reporting limits were equal to the instrument detection limit. Factors which prevent RL from being as low as a method quantitation limit are discussed below.

1. High concentrations of target or nontarget analytes may require that the sample extract be diluted to avoid saturation of the detector or to quantify the analyte concentration within the calibration range of the instrument. Consequently, RLs are elevated in proportion to the dilution factor.

2. Matrix interferences may require that the sample be diluted to reduce or eliminate the interference. Consequently, the RLs are elevated in proportion to the dilution factor.

3. The RLs listed in the Holloman AFB RFI QAPP (W-C 1993) for soil are based on wet weight. RLs calculated for soil on a dry weight basis will be higher. Because moisture content can vary from sample to sample, RLs calculated on a dry weight basis will vary accordingly.

4. The physical characteristics of the matrix do not permit concentration to the required final volume during sample preparation resulting in a larger sample extract volume and consequently an elevation in RLs.

The presence of high concentrations of petroleum hydrocarbons may have interfered or affected the analyses, resulting in qualification or elevated reporting limits for a number of samples collected at Holloman AFB SWMUs.

In a given sample, one or more of these effects may be exhibited. When the reporting limits have been elevated as a result of one or more of the above causes, surrogate or target compounds present at low concentrations may not be detected.

These limitations on data for contaminants of concern are discussed on a case-by-case basis.

4.4 DATA ASSESSMENT

The assessment of data for each SWMU involved a consideration of the major data uses, the potential decisions, the identification of data which were qualified or otherwise deviated from Holloman AFB RFI QAPP (W-C 1993) requirements, and limitations associated with the evaluation of data use in supporting decisions to be made at each SWMU.

4.4.1 Uses of Data

The major uses for data collected in the RFI were:

- Characterization of the nature and extent of contamination at a SWMU
- Fate and transport evaluation and modeling of contaminants
- Human and ecological risk assessment
- Recommendations on whether corrective action may be warranted

Characterization of the nature and extent of contamination released from a SWMU included identifying specific compounds and their concentrations present in environmental media (e.g., soil, groundwater). Nature and extent characterization also involved defining the lateral and vertical distribution within certain spatial and temporal boundaries in environmental media of contamination released from a SWMU.

Fate and transport modeling was conducted to determine whether contaminants released from a SWMU might be transported from the SWMU to points where the potential for exposure to human or ecological receptors exists. Fate and transport evaluation also involved the evaluation of the potential for contaminants to transfer from one medium to another (e.g., volatilization from soil to air), and for contaminants to undergo chemical transformations in the environment (e.g., hydrolysis, biodegradation).

Information developed in the characterization of nature and extent as well as the fate and transport evaluation was used in risk assessments to determine whether populations are likely to have unacceptable exposures to contaminants released from a SWMU, and if they are exposed, to evaluate the likelihood of detrimental health effects. The results of the risk assessment were used to determine if corrective action is recommended for a SWMU.

Where corrective action was recommended, the results of the nature and extent, the fate and transport evaluation, and the risk assessment will be used to help develop corrective action plans for the respective SWMU. Corrective action may involve removal or destruction of contamination or elimination of potential exposures to contamination.

4.4.2 Summary of Data Quality Requirements

Data collected in the RFI must be of known quality to support the uses for which it is intended. That is, the data must be able to support remedial decisions concerning the respective SWMUs. A primary purpose of the RFI was to determine whether a SWMU requires corrective action based on the results of the risk assessment. Therefore, the data collected must be able to support such a recommendation. This means that data must be able to characterize what chemicals were released from the SWMU and, at an acceptable level of uncertainty, what their concentrations are in environmental media of concern at potential exposure points. RLs must meet the levels necessary to determine whether analytes are present at concentrations of concern (i.e., above risk-based concentrations).

Inherent to providing defensible data is the need for a QA/QC program. The QA/QC program must have measurement tools so that data collected will be of known quality. QA/QC objectives for sampling and analysis were developed for this project which use as indicators: precision, accuracy, completeness, comparability, and representativeness.

Data was also collected to characterize the physical setting (e.g., geological, hydrogeological, and surface features) and to support fate and transport modeling.

4.4.3 Data Usability

For each SWMU, a determination of data usability was made with respect to project data quality objectives (DQOs). Sampling issues and data review issues were discussed in terms of the appropriateness of using the data as intended as well as making recommendations or limitations on data usage. These discussions addressed items such as elevated reporting limits, analytes suspected as laboratory contaminants, potential bias in results, and professional judgment utilized in the data review.

4.5 DATA QUALITY REVIEW FOR SWMU 229

Samples were collected and analyzed for this SWMU as presented in Tables 6-1 and 6-2. Tables 6-10 and 6-11 summarize detected analytical results. Complete analytical results are available in Appendix A. The laboratory analyzed these samples and reported the data in the following data packages:

D93-6690 (6-21-93)	D93-6694 (6-21-93)	D93-7041 (6-25-93)	D93-6755 (6-22-93)
D93-6806 (6-22-93)	D93-6957 (6-28-93)	D93-6804 (6-22-93)	D93-8109 (8-24-93)
D93-7962 (8-24-93)	D93-8214 (8-25-93)	D93-8120 (8-25-93)	D93-8120 (8-25-93)
D93-8269 (8-26-93	D93-8267 (8-26-93)		

Sampling and analytical work were completed in accordance with the Holloman AFB QAPP (W-C 1993). Results of the data review for SWMU 229 are provided below.

4.5.1 Laboratory Case Narrative

The laboratory narrative indicated several analytes had initial/continuing calibration percent recoveries which exceeded functional guidelines criteria. The laboratory narrative also indicated several analytes may have been subjected to interelemental and background interference as indicated by outlying ICP interference check samples. Sample data qualified on the basis of outlying calibration criteria and/or matrix interference are presented in Tables 6-3 and 6-4.

For SDG-7041, several of the metals were omitted from the LCS mixture. Because of this omission by the laboratory, magnesium, calcium, potassium, and sodium results associated with samples 229-002-MW-001, 230-001-MW-001, and 230-004-MW-001 were qualified as estimated **J**.

4.5.2 Holding Times

Holding times were specified in the Holloman AFB RFI QAPP (W-C 1993) for each respective analytical method. All samples collected from this SWMU were extracted/analyzed within acceptable holding times. No qualifications based on holding times were necessary.

4.5.3 Blank Samples

Method blanks were used to assess laboratory contamination that may have been present in samples. All aromatic volatile organics, TRPH, and water quality parameter analyses method blank samples were analyte free above reporting limits; therefore, no qualification based on method blanks was necessary.

For metals analyses, several method blanks contained low concentrations of iron, potassium, and aluminum. Samples associated with these detections were not qualified since sample results were greater than five times the amount detected in the method blank. Sample results greater than the reporting limits, but less than 5X the blank concentration were qualified nondetect **U**, and the reporting limit was raised to the value of the sample concentration. Table 6-5 lists qualifications made based on method blank contamination.

4.5.4 Laboratory Control Samples (LCS)

For metals, Table 6-6 lists samples qualified based on LCS evaluation criteria. Several LCS results for SWMU 229 were outside evaluation criteria. No organic analytes were qualified based on LCS; however, several metals including aluminum, copper, potassium, silver, thallium, calcium, magnesium, sodium, beryllium, nickel, cadmium, iron, vanadium, manganese, zinc, selenium, cobalt, chromium, and thallium required qualification. Results were qualified estimated, **J**, to indicate a potential low or high bias.

4.5.5 Reporting Limits

Numerous Method 8020 volatile aromatic organics, TRPH, calcium, sodium, sulfate, nitrate-nitrogen, and magnesium results were diluted. Most of these analytes have a relatively high risk-based concentration (RBC) as compared to the elevated reporting limits; therefore, there is no limitation on the usability of the data. However, for two analytes which have low RBCs, benzene and 1,4-dichlorobenzene, there may be a limitation on the usability of data reported as nondetect. Method 8020 samples requiring dilutions are listed below:

Method 8020 Samples Requiring Dilution

W-C I.D. No.	Dilution Factor
229-004-SB-007	25,000x
229-005-SB-007	500x
229-006-SB-007	50,000x
229-007-SB-007	500x
229-026-MW-001	2,500x
229-004-MW-001	2,500x
229-021-SB-007	10,000x
229-008-SB-007	1,000x
229-009-SB-007	25,000x
229-010-SB-007	5,000x
229-002-SB-004	500x
229-014-SB-007	50,000x
229-011-SB-007	25,000x
229-012-SB-005	250x
229-012-SB-007	5,000x
229-016-SB-005	100,000x
229-017-SB-012	5,000x
229-MW1-SB-007	5,000x

4.5.6 Surrogate Compounds Percent Recoveries

A high recovery of the Method 8020 surrogate 4-bromofluorobenzene was reported for samples 229-011-SB-005, 229-012-SB-005, and 229-013-SB-005. Specific analytes qualified can be found in Table 6-7. No other data was qualified based on surrogate recoveries.

4.5.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD) and MS/Duplicate Analyses

No qualification of data was required for the organic analyses based on MS/MSD results.

For metals, matrix spike data were reviewed to assess precision and accuracy. Table 6-8 lists samples qualified based on outlying matrix spike/duplicate evaluation criteria.

4.5.8 Field Duplicate Samples

Overall precision for the sampling event was measured using field duplicate samples. Three field duplicate samples were collected for soil and two for water. The following field duplicate results were qualified estimated **J** based on a high RPD: aluminum, iron, and zinc results for 229-004-MW-001 and 229-026-MW-001; sodium results for samples 229-009-MW-001 and 229-023-MW-001; and sodium and lead results for samples 229-010-SB-007 and 229-020-SB-005. As stated in Section 4.5.1 of the Holloman AFB RFI QAPP (W-C 1993), for analytes with the sample concentration greater than 5 times the reporting limit, the duplicate sample results should agree within 50 percent RPD for soils and 25 percent for aqueous samples. Also, for analytes with either or both concentrations less than 5 times the reporting limit, duplicate samples results should agree within ±2 times the reporting limit for soil and aqueous samples. Table 6-9 lists sample results qualified based upon poor field duplicate precision. Review of field duplicate results indicated the overall sampling precision was satisfactory.

4.5.9 PARCC Parameter Summary

Precision and Accuracy

The agreement between duplicate analyses within control limits indicates satisfactory precision in a measurement system. The recovery of a predetermined amount of surrogate within control limits indicates satisfactory accuracy with respect to the method on the individual sample and the general matrix. Precision and accuracy were quantitatively assessed by evaluating quality control data. Except where otherwise specified in the data review, the majority of the spike recoveries (which were used to measure accuracy) were within acceptable evaluation criteria. For organic analyses, 263 of the 275 indicators reviewed for accuracy (matrix spikes, LCS, and surrogate spikes) were reported within evaluation criteria. Therefore, 96 percent of the accuracy indicators reviewed for organic analyses were reported within evaluation criteria. For metals analyses, 189 of the 942 indicators reviewed for accuracy (LCS and matrix spikes) required qualification of associated data; therefore, 80 percent of the accuracy indicators reviewed for metal analyses were within evaluation criteria. Overall, it was concluded that the accuracy of data for this SWMU was satisfactory.

Similarly, except where otherwise specified in the data review, it was concluded that the overall precision of the data for this SWMU was satisfactory. For organic analyses, 100 percent of the indicators reviewed for precision (matrix spike duplicate and field duplicates) were within acceptable evaluation criteria. For metals analyses, only 6 of the 407(matrix spike duplicate and field duplicate) indicators reviewed for precision required qualification of associated data. Therefore, 98.5 percent of precision indicators reviewed for metals analysis were within evaluation criteria.

Representativeness

Representativeness expresses the degree which sample data accurately and precisely represent the characteristics of a population. Representativeness is a qualitative parameter which is of concern in the proper design of the sampling program, such that, the sampling locations selected will provide representative data for decisions at the SWMU. Representativeness was assessed by the use of duplicate samples. Three soil field duplicate and two groundwater

field duplicate sample sets were collected. Each duplicate was analyzed for one specific analytical method. The duplicate was analyzed for halogenated volatiles, water quality parameters, TPH, and RCRA metals. The sample met satisfactory evaluation criteria, except where noted in the field duplicate section; therefore, it was concluded that representativeness was satisfactory.

Comparability

Comparability expresses the confidence with which one data set can be compared to another. In accordance with the Holloman AFB RFI QAPP (W-C 1993), data are comparable when siting considerations, collection techniques, measurement methods, and reporting procedures are equivalent for the samples within a sample set. Throughout this investigation, appropriate procedures for sampling and shipping were implemented as specified in the Holloman AFB QAPP (W-C 1993) or where amended for the various field activities. Within this data set, it was concluded that results were comparable to one another as well as to other data sets generated for Holloman AFB SWMUs.

Completeness

Completeness, defined as the percentage of the total number of analytical results requested which are judged to be valid (including estimated **J** values) in accordance with the Holloman AFB RFI QAPP (W-C 1993), was 100 percent for all analyses.

4.6 DATA QUALITY REVIEW FOR SWMU 230

Samples were collected and analyzed for this SWMU as presented in Tables 6.2-1 and 6.2-2. Tables 6.2-9 through 6.2-10 of this report summarize the detected analytical results. A complete summary of chemical results are presented in Appendix A. The laboratory (NDRC) reported these samples in the following data packages:

D93-6690 (6-21-93)	D93-6694 (6-21-93)	D93-7041 (6-25-93)
D93-6755 (6-22-93)	D93-6752 (6-22-93)	D93-6806 (6-22-93)
D93-6957 (6-28-93)	D93-6804 (6-22-93)	D93-6871 (6-24-93)

D93-7779 (7-20-93) D93-7848 (8-24-93) D93-8154 (8-25-93)
D93-8267 (8-26-93)

Sampling and analytical work were completed in accordance with the Holloman AFB RFI QAPP (W-C 1993). Results of the data review for Building 828 (SWMU 230) are provided below.

4.6.1 Laboratory Case Narrative

The laboratory narrative indicated several analytes had initial/continuing calibration percent recoveries which exceeded functional guidelines criteria. The laboratory narrative also indicated several analytes may have been subjected to interelemental and background interference as indicated by outlying ICP interference check samples. Sample data qualified on the basis of outlying calibration criteria and/or matrix interference are presented in Tables 6.2-3 and 6.2-4.

4.6.2 Holding Times

Holding times were specified in the Holloman AFB RFI QAPP (W-C 1993) for each respective analytical method. All samples taken from Building 828 were extracted and analyzed within acceptable holding times. No qualifications were necessary based on holding times.

4.6.3 Blank Samples

Aromatic volatile organics, TRPH, and water quality parameter analyses method blanks were below reporting limits. For metal analyses, sodium, mercury, and potassium were detected in several method blanks. Sample results greater than the reporting limit but less than 5 times the blank concentration were qualified nondetect U, and the reporting limit was raised to the value of the sample concentration.

Negative values found in metals preparation blanks could indicate a potential for low bias. The method blank data were evaluated using functional guideline criteria. Environmental samples having negative values for metals preparation blanks were qualified nondetect **U**.

All qualifications based on method blank contamination are presented in Table 6.2-5.

4.6.4 Laboratory Control Samples

LCS were laboratory prepared samples analyzed along with field samples. The samples were used to assess method accuracy and precision and served as a control on the analytical system. The Holloman AFB RFI QAPP (W-C 1993) indicates all aqueous LCS results must fall within the control limits of 80% to 120% recovery. Additionally, all solid LCS results must fall within the control limits established of 75% to 125%. Mercury control limits are 80% to 120% for water and 40% to 150% for soil. LCS results not meeting the above criteria were flagged either estimated **J** or estimated nondetect **UJ**, depending on sample results. All qualifications based on outlying LCS recoveries for SWMU 230 are presented in Table 6.2-6. Nondetect sample results associated with LCS results above control criteria, indicating high bias, did not require qualification.

4.6.5 Reporting Limits

As noted by the **D** qualifier in the summary tables 6.2-9 and 6.2-10, certain sample analyses required dilution. Those analytes requiring dilutions greater than 10 times, which due to having low risk-based concentrations (RBCs) may have limitations on the use of the nondetect data, are listed below.

W-C Sample Number	Method	Dilution
230-025-SB-009	8020	500
230-MW10-SB-006	8020	1,000
230-007-SB-005	8020	1,000
230-MW3-SB-010	8020	1,000
230-MW5-SB-006	8020	2,500
230-007-SB-007	8020	2,500
230-002-SB-006	8020	2,500
230-015-SB-006	8020	5,000
230-012-SB-009	8020	5,000
230-013-SB-009	8020	5,000
230-036-SB-006	8020	10,000
230-015-SB-009	8020	25,000
230-008-SB-006	8020	25,000
230-008-SB-009	8020	100,000

Impact of elevated reporting limits due to dilution on the intended use of the data is discussed in Section 5.4. While no data were qualified on the basis of elevated reporting limits, the possibility that low level analytes have been diluted to a concentration below reporting limits cannot be ruled out.

4.6.6 Surrogate Compounds Percent Recoveries

All surrogate compound percent recoveries were within evaluation criteria. No data required qualification based on outlying surrogate recoveries.

4.6.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD) and MS/Duplicate Analyses

No qualification of data was required for the organic analyses based on MS/MSD results.

For metals, matrix spike data were reviewed to assess precision and accuracy. Table 6.2-7 lists samples qualified based on outlying matrix spike/duplicate evaluation criteria.

4.6.8 Field Duplicate Samples

Overall precision for the sampling event was measured using field duplicate samples. Four field duplicate samples were collected for soil. As stated in Section 4.5.1 of the Holloman AFB RFI QAPP (W-C 1993), for analytes with the sample concentration greater than 5 times the reporting limit, the duplicate sample results should agree within 50 percent RPD for soils and 25 percent for aqueous samples. Also, for analytes with either or both concentrations less than 5 times the reporting limit, duplicate samples results should agree within ±2 times the reporting limit for soil and aqueous samples. Table 6-9 lists sample results qualified based upon poor field duplicate precision. A summary of duplicate results and qualifiations based on outlying relative percent difference is available in Table 6.2-8. Review of field duplicate results indicated the overall sampling precision was satisfactory.

4.6.9 PARCC Parameter Summary

Precision and Accuracy

The agreement between duplicate analyses within control limits indicates satisfactory precision in a measurement system. The recovery of a predetermined amount of surrogate within control limits indicates satisfactory accuracy with respect to the method on the individual sample and the general matrix. Precision and accuracy were quantitatively assessed by evaluating quality control data. Except where otherwise specified in the data review, the majority of the spike recoveries (which were used to measure accuracy) satisfied evaluation criteria. For organic analyses, none of the 231 indicators reviewed for accuracy (matrix spikes, LCS, and surrogate spikes), were outside evaluation criteria. Therefore, 100 percent of the accuracy indicators reviewed for organic analyses were reported within evaluation criteria. For metals analyses, 43 of the 508 indicators reviewed for accuracy (LCS and matrix spikes), required qualification of associated data; therefore, 92 percent of the accuracy indicators reviewed for metals analyses were within evaluation criteria. Overall, it was concluded that the accuracy of data for this SWMU was satisfactory.

Similarly, except where otherwise specified in the data review, it was concluded that the overall precision of the data for this SWMU was satisfactory. For organic analyses, 100 percent of the indicators reviewed for precision (matrix spike duplicate and field duplicates) were within acceptable evaluation criteria. For metals analyses, 5 of the 77 indicators reviewed for precision required qualification of associated data. Therefore, 94 percent of precision indicators reviewed for metals analyses were within evaluation criteria. All qualifications based on outlying accuracy and precision recoveries are available in Tables 6.2-7 and 6.2-8, respectively.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent the characteristics of a population. Representativeness is a qualitative parameter which is of concern in the proper design of the sampling program, such that the sampling locations selected will provide representative data for decisions at the SWMU. Representativeness was assessed by the use of duplicate samples. Four sets of field duplicate sample sets were collected for groundwater and boring samples. One hundred percent of the VOCs water quality analyses and metals analyses performed met satisfactory evaluation criteria. Therefore, it was concluded that representativeness was satisfactory.

Comparability

Comparability expresses the confidence with which one data set can be compared to another. In accordance with the Holloman AFB RFI QAPP (W-C 1993), data are comparable when siting considerations, collection techniques, measurement methods, and reporting procedures are equivalent for the samples within a sample set. Throughout this investigation, appropriate procedures for sampling and shipping were implemented as specified in the Holloman AFB RFI QAPP (W-C 1993) or where amended for the various field activities. Within this data set, it was concluded that results are comparable to one another as well as to other data sets generated for Holloman AFB SWMUs.

Completeness

Completeness, defined as the percentage of the total number of analytical results requested which are judged to be valid (including estimated **J** values) in accordance with the Holloman AFB QAPP (W-C 1993), was 100 percent for all analyses.

5.0
DAILY QUALITY CONTROL REPORT SUMMARY

5.1 DAILY QUALITY CONTROL REPORT FORMAT

During the field investigation, DQCRs were completed daily and transmitted to the USACE on a weekly basis. Copies of all of the DQCRs generated during the field activities are presented in Appendix B of this QCSR. Each DQCR contained the following headings:

- Date/Day
- Weather Conditions
- Subcontractors on Site
- Equipment on Site
- Work Performed (Including Sampling)
- Quality Control Activities (Including Field Calibrations)
- Health and Safety Levels and Activities
- Problems Encountered/Corrective Action Taken
- Special Notes

5.2 PERIOD OF PERFORMANCE OF FIELD ACTIVITIES

Field activities were completed in two phases. Phase I was conducted from June 7, 1993 through June 19, 1993. Table 5-1 shows the as-completed schedule of field activities, including personnel involved in each activity. Phase II was conducted from July 7, 1993 through July 22, 1993.

5.3 WEATHER CONDITIONS

Weather conditions were generally very warm to hot and dry. Daily high temperatures ranged from 95°F (June) to 105°F (July). Skies were generally clear with low to moderate winds. A few days in July were overcast with moderate winds and moderate humidity.

5.4 SUBCONTRACTORS AND EQUIPMENT ON SITE

One subcontractor, Southwest Engineering, Inc., was used for both drilling and land surveying services. Drilling equipment used in June included two drill rigs, a CME-75 and CME-55, with associated support vehicles.

5.5 WORK PERFORMED

Soil boring and sampling, monitoring well installation and development, groundwater sampling, slug testing, bail-down testing, and surveying were the activities conducted at Holloman AFB by W-C and their subcontractor. Additional information on the sampling and analyses performed can be found in the project FSP and Addendum and in the RFI report.

5.6 QUALITY CONTROL ACTIVITIES

In addition to the collection of field QC samples, the documented QC activities (including field calibrations) were the calibrations of the OVAs and other instruments used during sampling and other field activities.

5.7 HEALTH AND SAFETY LEVELS AND ACTIVITIES

The primary level of personnel protective equipment (PPE) for this field investigation was Level D. Modified Level D was used when splash hazards existed during handling of nonaqueous phase liquid (e.g., during well development).

5.8 PROBLEMS ENCOUNTERED/CORRECTIVE ACTION TAKEN

No major problems were encountered during the field activities. The DQCRs report the typical drill rig mechanical problems and down time for repairs.

TABLE 5-1
FIELD ACTIVITIES SCHEDULE
HOLLOMAN AFB RFI

	June 1993												July 1993	
	M	Tu	W	Th	F	Sa	M	Tu	W	Th	Fr	Sa	W	Th
ACTIVITY & SITE	7	8	9	10	11	12	14	15	16	17	18	19	7	8
Soil Boring Drilling & Sampling:														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Monitoring Well Installation:														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Well Development														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Groundwater Sampling:														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Slug Testing														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Bail-Down Testing														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
Location Survey														
T-38 Test Cell (SWMU 229)														
Building 828 (SWMU 230)														
W-C PERSONNEL														
Project Manager:														
Steve Cox														
Field Manager:														
Jon Ritterling														
Field Personnel:														
Randy McElroy														
Todd Fryzek														
Karen Phillips														
Dan Galde														
USACE PERSONNEL														
Ron Stirling, Project Manager														
Tom Zink, Project Geologist														
SUBCONTRACTORS														
Drilling:														
Southwest Engineering Inc.														
Land Surveying:														
Southwest Engineering Inc.														

TABLE 5-1
FIELD ACTIVITIES SCHEDULE
HOLLOMAN AFB RFI

	July 1993												
	Fr	Sa	M	Tu	W	Th	Fr	Sa	Su	M	Tu	W	Th
ACTIVITY & SITE	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**
Soil Boring Drilling & Sampling:													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Monitoring Well Installation:													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Well Development													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Groundwater Sampling:													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Slug Testing													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Bail-Down Testing													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
Location Survey													
T-38 Test Cell (SWMU 229)													
Building 828 (SWMU 230)													
W-C PERSONNEL													
Project Manager:													
Steve Cox													
Field Manager:													
Jon Ritterling													
Field Personnel:													
Randy McElroy													
Todd Fryzek													
Karen Phillips													
Dan Galde													
USACE PERSONNEL													
Ron Stirling, Project Manager													
Tom Zink, Project Geologist													
SUBCONTRACTORS													
Drilling:													
Southwest Engineering Inc.													
Land Surveying:													
Southwest Engineering Inc.													

6.0
CONCLUSIONS AND RECOMMENDATIONS

The QCSR objective is to assess the field and analytical data quality in relation to project objectives. As documented in the log books and the Daily Quality Control Reports (Appendix B), there were no sampling issues that would impact data usability for this investigation.

As presented in Tables 6-3 through 6-9 and 6.2-3 through 6.2-8, some data required qualifications based on functional guidelines criteria; however, usability of the data was not significantly impacted, as no data were qualified as rejected.

6.1 RECOMMENDATIONS

- A more thorough records search on historical fuel consumption at the T-38 Test Cell may have uncovered the possibility of more extensive contamination and resulted in changes in approach to this investigation.

- Product soil borings (temporary wells) are very useful in determining the extent of free product. However, they should be constructed with inexpensive screens to facilitate free product flow and subsequent measurements.

- Building flexibility into the scope of work (i.e., a total soil boring footage versus specific number of soil borings per site) allows project managers to use results from field screening to determine the next step in the fieldwork without going outside the original scope.

TABLE 6-1
SUMMARY OF GROUNDWATER SAMPLING FOR CHEMICAL ANALYSIS AT T-38 TEST CELL

Sample Location	Sample Identification	Sample Depth (ft)	Sample Date	Parameters: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TDS/Alk Cl/Fl/SO4 (4)	Nitrate/ Nitrite	PO4 (5)	Total Phosphorous	Dissolved Iron (6)	TOC (7)	TKN (8)	BOD/ COD (9)	Dissolved Oxygen (10)	Comments
229-MW2	229-002-MW-001		6/17/93	X	X		X	X	X							
229-MW4	229-004-MW-001		6/18/93	X	X		X	X	X							Field split USACE-MRD lab
	229-026-MW-001		6/18/93	X	X		X	X	X							Blind duplicate
229-MW5	229-005-MW-001		6/18/93	X	X		X	X	X							
				X												MS/MSD
					X											MS
	229-MW5-RN-001		6/18/93	X	X											Equipment rinsate
229-MW7	229-007-MW-001		7/19/93	X		X	X	X	X	X	X	X	X	X	X	Field split USACE-MRD lab
229-MW8	229-008-MW-001		7/19/93	X		X										
				X												MS/MSD
						X										MS
229-MW9	229-009-MW-001		7/19/93	X		X	X	X	X	X	X	X	X	X	X	
	229-023-MW-001		7/19/93	X		X	X	X	X	X	X	X	X	X		Blind duplicate
229-MW11	229-011-MW-001		7/20/93	X		X										
229-MW12	229-012-MW-001		7/20/93	X		X										

(1) Volatile organic compounds (Method 8020 - benzene, toluene, ethylbenzene, xylenes)
(2) Total metals - Target Analyte List
(3) Total metals - Resource Conservation and Recovery Act (RCRA) List plus sodium, calcium, magnesium, and potassium
(4) Total dissolved solids, alkalinity, chloride, fluoride, and sulfate
(5) Orthophosphate
(6) Filtered prior to collection
(7) Total organic carbon
(8) Total Kjeldahl nitrogen
(9) Biochemical oxygen demand / chemical oxygen demand
(10) Measured in the field with a dissolved oxygen membrane probe
MS/MSD = Matrix spike / matrix spike duplicate
USACE-MRD = United States Army Corps of Engineers - Missouri River Division

TABLE 6-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS AT T-38 TEST CELL

Sample Location	Sample Identification	Sample Depth (ft)	Sample Date	Parameters: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
229-SB1	229-001-SB-002		6/7/93	X	X		X						
	229-001-SB-004		6/7/93	X	X		X						
	229-001-SB-006		6/7/93	X	X		X						
229-SB2	229-002-SB-002		6/8/93	X	X		X						
	229-002-SB-004		6/8/93	X	X		X						
	229-002-SB-006		6/8/93	X	X		X						
229-SB3	229-003-SB-003		6/8/93	X	X		X						
	229-003-SB-005		6/8/93	X	X		X						
	229-003-SB-007		6/8/93	X	X		X						
229-SB4	229-004-SB-003		6/8/93	X	X		X						
	229-004-SB-005		6/8/93	X	X		X						
	229-004-SB-007		6/8/93	X	X		X						
229-SB5	229-005-SB-003		6/8/93	X	X		X						
	229-005-SB-005		6/8/93	X	X		X						
	229-005-SB-007		6/8/93	X	X		X						
229-SB6	229-006-SB-003		6/8/93	X	X		X						
	229-006-SB-005		6/8/93	X	X		X						
	229-006-SB-007		6/8/93	X	X		X						
229-SB7	229-007-SB-003		6/8/93	X	X		X						
	229-007-SB-005		6/8/93	X	X		X						
	229-007-SB-007		6/8/93	X	X		X						
229-SB8	229-008-SB-003		6/11/93	X			X						Collected from adjacent boring
	229-008-SB-005		6/9/93	X	X		X						Field split to USACE-MRD lab
	229-008-SB-007		6/9/93	X	X		X						
				X									MS/MSD
					X								MS

TABLE 6-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS AT T-38 TEST CELL

Sample Location	Sample Identification	Sample Depth (ft)	Sample Date	Parameters: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
229-SB9	229-009-SB-003		6/9/93	X	X		X						
	229-009-SB-005		6/9/93	X	X		X						
	229-020-SB-005		6/9/93	X	X		X						Blind duplicate
	229-009-SB-007		6/9/93	X	X		X						Field split to USACE-MRD lab
229-SB10	229-010-SB-003		6/9/93	X	X		X						
	229-010-SB-005		6/9/93	X	X		X						
				X									MS/MSD
					X								MS
	229-010-SB-007		6/9/93	X	X		X						
	229-021-SB-007		6/9/93	X	X		X						Blind duplicate
229-SB11	229-011-SB-003		6/10/93	X	X		X						
	229-011-SB-005		6/10/93	X	X		X						
	229-011-SB-007		6/10/93	X	X		X						
229-SB12	229-012-SB-003		6/10/93	X	X		X						
	229-012-SB-005		6/10/93	X	X		X						
	229-012-SB-007		6/10/93	X	X		X						
229-SB13	229-013-SB-003		6/10/93	X	X		X						
	229-013-SB-005		6/10/93	X	X		X						
229-SB14	229-014-SB-003		6/10/93	X	X		X						
	229-014-SB-005		6/10/93	X	X		X						
	229-014-SB-007		6/10/93	X	X		X						
229-SB15	229-015-SB-005		6/10/93	X	X		X						
	229-015-SB-007		6/10/93	X	X		X						
229-SB16	229-016-SB-005		6/10/93	X	X		X						
	229-016-SB-007		6/10/93	X	X		X						
229-SB17	229-017-SB-007		6/10/93	X	X		X						
	229-017-SB-012		6/10/93	X	X		X						

TABLE 6-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS AT T-38 TEST CELL

Sample Location	Sample Identification	Sample Depth (ft)	Sample Date	Parameters: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
229-SB18	229-018-SB-002		6/11/93	X			X						
229-SB29	229-029-SB-003		7/14/93	X		X	X						
	229-044-SB-003		7/14/93	X		X	X						Blind duplicate
	229-029-SB-006		7/14/93	X		X	X						Field split to USACE-MRD lab
229-SB31	229-031-SB-003		7/15/93	X		X	X						
							X						MS/MSD
	229-031-SB-005		7/15/93	X		X	X						
229-SB32	229-032-SB-003		7/15/93	X		X	X						
	229-032-SB-007		7/15/93	X		X	X						Field split to USACE-MRD lab
229-SB33	229-033-SB-003		7/15/93	X		X	X						
	229-033-SB-007		7/15/93	X		X	X						
	229-048-SB-007		7/15/93	X		X	X						Blind duplicate
229-SB34	229-034-SB-003		7/15/93	X		X	X						
	229-034-SB-007		7/15/93	X		X	X						
229-SB35	229-035-SB-003		7/15/93	X		X	X						
	229-035-SB-006		7/15/93	X		X	X						
229-MW1	229-MW1-SB-007		6/11/93	X	X		X						
229-MW2	229-MW2-SB-007		6/12/93	X	X		X						
229-MW3	229-MW3-SB-007		6/15/93	X	X		X						
229-MW4	229-MW4-SB-012		6/15/93	X	X		X						
229-MW5	229-MW5-SB-003		6/16/93	X	X		X						
229-MW6	229-MW6-SB-003		7/12/93	X		X	X	X	X	X	X	X	
				X			X						MS/MSD
						X							MS

TABLE 6-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS AT T-38 TEST CELL

Sample Location	Sample Identification	Sample Depth (ft)	Sample Date	Parameters: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
229-MW6, cont.	229-MW6-SB-006		7/12/93	X		X	X	X	X	X	X	X	Field split to USACE-MRD lab
229-MW7	229-MW7-SB-003		7/12/93	X		X	X	X	X	X	X	X	
	229-MW7-SB-006		7/12/93	X		X	X	X	X	X	X	X	
229-MW8	229-MW8-SB-003		7/13/93	X		X	X	X	X	X	X	X	
	229-MW8-SB-007		7/13/93	X		X	X	X	X	X	X	X	Field split to USACE-MRD lab
229-MW9	229-MW9-SB-003		7/13/93	X		X	X	X	X	X	X	X	
	229-MW9-SB-007		7/13/93	X		X	X	X	X	X	X	X	
	229-MW19-SB-007		7/13/93	X		X	X	X	X	X	X	X	Blind duplicate
229-MW10	229-MW10-SB-011		7/13/93	X		X	X	X	X	X	X	X	
	229-MW10-SB-014		7/13/93	X		X	X	X	X	X	X	X	
229-MW11	229-MW11-SB-003		7/14/93	X		X	X	X	X	X	X	X	
	229-MW11-SB-006		7/14/93	X		X	X	X	X	X	X	X	
229-MW12	229-MW12-SB-003		7/14/93	X		X	X	X	X	X	X	X	
	229-MW12-SB-006		7/14/93	X		X	X	X	X	X	X	X	

(1) Volatile organic compounds (Method 8020 - benzene, toluene, ethylbenzene, xylenes)
(2) Total metals - Target Analyte List
(3) Total metals - Resource Conservation and Recovery Act (RCRA) List plus sodium, calcium, magnesium, and potassium
(4) Total petroleum hydrocarbons
(5) Total organic carbon
(6) Total Kjeldahl nitrogen
MS/MSD = Matrix spike / matrix spike duplicate
USACE-MRD = United States Army Corps of Engineers - Missouri River Division

TABLE 6-3
QUALIFICATIONS BASED ON MATRIX INTERFERENCE - SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUAL	DET	CRITERIA FOR QUALIFICATIONS
D93-7108-9	229-004-MW-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference Check
D93-7108-9	229-004-MW-001	6010	Potassium	J		ICP interference check sample
D93-7108-9	229-004-MW-001	6010	Sodium	J		ICP interference check sample
D93-7108-7	229-005-RN-001	6010	Sodium	UJ	2.01	Detected in method blank, ICP Interference check
D93-7108-7	229-005-RN-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference check
D93-7108-7	229-005-RN-001	6010	Potassium	J		ICP interference check sample
D93-6755-12	229-008-SB-005	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-12	229-008-SB-005	6010	Cobalt	J		Matrix interference
D93-6755-12	229-008-SB-005	6010	Sodium	J		Matrix interference
D93-6755-13	229-008-SB-007	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-13	229-008-SB-007	6010	Cobalt	J		Matrix interference
D93-6755-13	229-008-SB-007	6010	Sodium	J		Matrix interference
D93-6755-15	229-009-SB-003	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-15	229-009-SB-003	6010	Cobalt	J		Matrix interference
D93-6755-15	229-009-SB-003	6010	Sodium	J		Matrix interference
D93-6755-16	229-009-SB-005	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-16	229-009-SB-005	6010	Cobalt	J		Matrix interference
D93-6755-16	229-009-SB-005	6010	Sodium	J		Matrix interference
D93-6755-17	229-009-SB-007	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-17	229-009-SB-007	6010	Cobalt	J		Matrix interference
D93-6755-17	229-009-SB-007	6010	Sodium	J		Matrix interference
D93-6755-18	229-010-SB-003	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-18	229-010-SB-003	6010	Cobalt	J		Matrix interference
D93-6755-18	229-010-SB-003	6010	Sodium	J		Matrix interference, RPD
D93-6755-19	229-010-SB-005	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-19	229-010-SB-005	6010	Cobalt	J		Matrix interference
D93-6755-19	229-010-SB-005	6010	Sodium	J		Matrix interference, RPD
D93-6755-20	229-010-SB-007	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-20	229-010-SB-007	6010	Cobalt	J		Matrix interference
D93-6755-20	229-010-SB-007	6010	Sodium	J		Matrix interference
D93-6755-10	229-020-SB-005	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-10	229-020-SB-005	6010	Cobalt	J		Matrix interference
D93-6755-10	229-020-SB-005	6010	Sodium	J		Matrix interference, RPD
D93-6755-11	229-021-SB-007	6010	Potassium	J		High continuing calibration/matrix interference
D93-6755-11	229-021-SB-007	6010	Cobalt	J		Matrix interference

TABLE 6-3
QUALIFICATIONS BASED ON MATRIX INTERFERENCE - SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUAL	DET	CRITERIA FOR QUALIFICATIONS
D93-6755-11	229-021-SB-007	6010	Sodium	J		Matrix interference
D93-7108-8	229-026-MW-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference Check
D93-7108-8	229-026-MW-001	6010	Potassium	J		ICP Interference check
D93-7108-8	229-026-MW-001	6010	Sodium	J		ICP Interference Check
D93-6871-1	229-MW2-SB-007	6010	Sodium	J		Matrix Interference Check
D93-6957-1	229-MW3-SB-007	6010	Sodium	J		Matrix Interference Check
D93-6957-2	229-MW4-SB-012	6010	Sodium	J		Matrix Interference Check
D93-6957-5	229-MW5-SB-003	6010	Sodium	J		Matrix Interference Check

TABLE 6-4
QUALIFICATIONS BASED ON INITIAL/CONTINUING CALIBRATIONS FOR SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER	CRITERIA FOR QUALIFICATIONS
D93-7108-9	229-004-MW-001	6010	Aluminum	UJ	High MS/MSD recovery, CCV out of C.L.
D93-7108-9	229-004-MW-001	7421	Lead	DUJ	High MS/MSD recovery, CCV out of C.L.
D93-7108-9	229-004-MW-001	6010	Chromium	J	Initial and continuing calibration
D93-7108-7	229-005-RN-001	6010	Aluminum	J	CCV outside C.L.
D93-7108-7	229-005-RN-001	7421	Lead	UJ	High MS/MSD recovery, CCV outside C.L.
D93-7108-7	229-005-RN-001	6010	Chromium	J	Initial and continuing calibration
D93-6755-12	229-008-SB-005	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-13	229-008-SB-007	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-15	229-009-SB-003	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-16	229-009-SB-005	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-17	229-009-SB-007	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-18	229-010-SB-003	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-19	229-010-SB-005	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-20	229-010-SB-007	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-10	229-020-SB-005	6010	Potassium	J	High continuing calibration/matrix interference
D93-6755-11	229-021-SB-007	6010	Potassium	J	High continuing calibration/matrix interference
D93-7108-8	229-026-MW-001	7421	Lead	DUJ	High MS/MSD recovery, CCV outside C.L.
D93-7108-8	229-026-MW-001	6010	Aluminum	J	High MS/MSD recovery, CCV outside C.L., RPD
D93-7108-8	229-026-MW-001	6010	Chromium	J	Initial and Continuing Calibration

TABLE 6-5
QUALIFICATIONS BASED ON OUTLYING METHOD BLANK CRITERIA - SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6690-1	229-001-SB-002	6010	Sodium	U
D93-6690-2	229-001-SB-004	6010	Sodium	U
D93-6690-3	229-001-SB-006	6010	Sodium	U
D93-6690-10	229-002-SB-002	6010	Sodium	U
D93-6690-11	229-002-SB-004	6010	Sodium	U
D92-6690-12	229-002-SB-006	6010	Sodium	U
D93-6690-13	229-003-SB-003	6010	Sodium	U
D93-6690-14	229-003-SB-005	6010	Sodium	U
D93-6694-1	229-004-SB-005	6010	Sodium	U
D93-6694-2	229-004-SB-007	6010	Sodium	U
D93-7108-7	229-005-RN-001	6010	Calcium	U
D93-7108-7	229-005-RN-001	6010	Magnesium	U
D93-7108-7	229-005-RN-001	6010	Sodium	UJ
D93-6694-3	229-005-SB-003	6010	Sodium	U
D93-6694-4	229-005-SB-005	6010	Sodium	U
D93-6694-5	229-005-SB-007	6010	Sodium	U
D93-6694-9	229-007-SB-003	6010	Sodium	U
D93-6694-10	229-007-SB-005	6010	Sodium	U
D93-6694-11	229-007-SB-007	6010	Sodium	U
D93-6755-12	229-008-SB-005	6010	Sodium	U
D93-6755-13	229-008-SB-007	6010	Sodium	U
D93-6755-15	229-009-SB-003	7471	Mercury	U
D93-6755-15	229-009-SB-003	6010	Sodium	U
D93-6755-16	229-009-SB-005	6010	Sodium	U
D93-6755-17	229-009-SB-007	6010	Sodium	U
D93-6755-18	229-010-SB-003	6010	Sodium	U
D93-6755-19	229-010-SB-005	6010	Sodium	U
D93-6755-19	229-010-SB-005	7471	Mercury	U
D93-6755-20	229-010-SB-007	6010	Sodium	U
D93-6806-1	229-014-SB-005	6010	Sodium	U
D93-6806-2	229-014-SB-007	6010	Sodium	U
D93-6755-10	229-020-SB-005	6010	Sodium	U

TABLE 6-5
QUALIFICATIONS BASED ON OUTLYING METHOD BLANK CRITERIA - SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6755-11	229-021-SB-007	6010	Sodium	U
D93-8120-12	229-034-SB-003	6010	Sodium	U
D93-7962-1	229-MW6-SB-003	6010	Sodium	U
D93-7962-4	229-MW6-SB-006	6010	Sodium	U
D93-6690-1	229-001-SB-002	6010	Sodium	U
D93-6690-2	229-001-SB-004	6010	Sodium	U
D93-6690-3	229-001-SB-006	6010	Sodium	U
D93-6690-10	229-002-SB-002	6010	Sodium	U
D93-6690-11	229-002-SB-004	6010	Sodium	U
D92-6690-12	229-002-SB-006	6010	Sodium	U
D93-6690-13	229-003-SB-003	6010	Sodium	U
D93-6690-14	229-003-SB-005	6010	Sodium	U
D93-6694-1	229-004-SB-005	6010	Sodium	U
D93-6694-2	229-004-SB-007	6010	Sodium	U
D93-7108-7	229-005-RN-001	6010	Calcium	U
D93-7108-7	229-005-RN-001	6010	Magnesium	U
D93-7108-7	229-005-RN-001	6010	Sodium	UJ
D93-6694-3	229-005-SB-003	6010	Sodium	U
D93-6694-4	229-005-SB-005	6010	Sodium	U
D93-6694-5	229-005-SB-007	6010	Sodium	U
D93-6694-9	229-007-SB-003	6010	Sodium	U
D93-6694-10	229-007-SB-005	6010	Sodium	U
D93-6694-11	229-007-SB-007	6010	Sodium	U
D93-6755-12	229-008-SB-005	6010	Sodium	U
D93-6755-13	229-008-SB-007	6010	Sodium	U
D93-6755-15	229-009-SB-003	7471	Mercury	U
D93-6755-15	229-009-SB-003	6010	Sodium	U
D93-6755-16	229-009-SB-005	6010	Sodium	U
D93-6755-17	229-009-SB-007	6010	Sodium	U
D93-6755-18	229-010-SB-003	6010	Sodium	U
D93-6755-19	229-010-SB-005	6010	Sodium	U
D93-6755-19	229-010-SB-005	7471	Mercury	U
D93-6755-20	229-010-SB-007	6010	Sodium	U

TABLE 6-5
QUALIFICATIONS BASED ON OUTLYING METHOD BLANK CRITERIA - SWMU 229

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6806-1	229-014-SB-005	6010	Sodium	U
D93-6806-2	229-014-SB-007	6010	Sodium	U
D93-6755-10	229-020-SB-005	6010	Sodium	U
D93-6755-11	229-021-SB-007	6010	Sodium	U
D93-8120-12	229-034-SB-003	6010	Sodium	U
D93-7962-1	229-MW6-SB-003	6010	Sodium	U
D93-7962-4	229-MW6-SB-006	6010	Sodium	U

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6690-1	229-001-SB-002	6010	Aluminum	J	Low LCS recovery
D93-6690-1	229-001-SB-002	6010	Copper	UJ	Low LCS recovery
D93-6690-1	229-001-SB-002	6010	Potassium	J	Low LCS recovery
D93-6690-1	229-001-SB-002	6010	Silver	UJ	Low LCS recovery
D93-6690-1	229-001-SB-002	6010	Thallium	UJ	Low LCS recovery
D93-6690-2	229-001-SB-004	6010	Aluminum	J	Low LCS recovery
D93-6690-2	229-001-SB-004	6010	Copper	UJ	Low LCS recovery
D93-6690-2	229-001-SB-004	6010	Potassium	J	Low LCS recovery
D93-6690-2	229-001-SB-004	6010	Silver	UJ	Low LCS recovery
D93-6690-2	229-001-SB-004	6010	Thallium	UJ	Low LCS recovery
D93-6690-3	229-001-SB-006	6010	Aluminum	J	Low LCS recovery
D93-6690-3	229-001-SB-006	6010	Copper	UJ	Low LCS recovery
D93-6690-3	229-001-SB-006	6010	Potassium	J	Low LCS recovery
D93-6690-3	229-001-SB-006	6010	Silver	UJ	Low LCS recovery
D93-6690-3	229-001-SB-006	6010	Thallium	UJ	Low LCS recovery
D93-7041-1	229-002-MW-001	6010	Calcium	J	Element was not included in LCS sample
D93-7041-1	229-002-MW-001	6010	Magnesium	J	Element was not included in LCS sample
D93-7041-1	229-002-MW-001	6010	Potassium	J	Element was not included in LCS sample
D93-7041-1	229-002-MW-001	6010	Sodium	DJ	Element was not included in LCS sample
D93-7041-1	229-002-MW-001	6010	Beryllium	UJ	Low LCS recovery
D93-7041-1	229-002-MW-001	6010	Nickel	UJ	Low LCS recovery
D93-6690-10	229-002-SB-002	6010	Aluminum	J	Low LCS recovery
D93-6690-10	229-002-SB-002	6010	Copper	UJ	Low LCS recovery
D93-6690-10	229-002-SB-002	6010	Potassium	J	Low LCS recovery
D93-6690-10	229-002-SB-002	6010	Silver	UJ	Low LCS recovery
D93-6690-10	229-002-SB-002	6010	Thallium	UJ	Low LCS recovery
D93-6690-11	229-002-SB-004	6010	Aluminum	J	Low LCS recovery
D93-6690-11	229-002-SB-004	6010	Copper	UJ	Low LCS recovery
D93-6690-11	229-002-SB-004	6010	Potassium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6690-11	229-002-SB-004	6010	Silver	UJ	Low LCS recovery
D93-6690-11	229-002-SB-004	6010	Thallium	UJ	Low LCS recovery
D93-6690-11	229-002-SB-004	6010	Zinc	J	Low LCS recovery
D92-6690-12	229-002-SB-006	6010	Aluminum	J	Low LCS recovery
D92-6690-12	229-002-SB-006	6010	Copper	UJ	Low LCS recovery
D92-6690-12	229-002-SB-006	6010	Potassium	J	Low LCS recovery
D92-6690-12	229-002-SB-006	6010	Silver	UJ	Low LCS recovery
D92-6690-12	229-002-SB-006	6010	Thallium	UJ	Low LCS recovery
D93-6690-13	229-003-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6690-13	229-003-SB-003	6010	Copper	UJ	Low LCS recovery
D93-6690-13	229-003-SB-003	6010	Potassium	J	Low LCS recovery
D93-6690-13	229-003-SB-003	6010	Silver	UJ	Low LCS recovery
D93-6690-13	229-003-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6690-14	229-003-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6690-14	229-003-SB-005	6010	Copper	UJ	Low LCS recovery
D93-6690-14	229-003-SB-005	6010	Potassium	J	Low LCS recovery
D93-6690-14	229-003-SB-005	6010	Silver	UJ	Low LCS recovery
D93-6690-14	229-003-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-7108-9	229-004-MW-001	6010	Beryllium	UJ	Low LCS recovery
D93-7108-9	229-004-MW-001	6010	Cadmium	UJ	Low LCS recovery
D93-7108-9	229-004-MW-001	6010	Iron	J	Low LCS recovery
D93-7108-9	229-004-MW-001	6010	Silver	UJ	Low LCS recovery
D93-7108-9	229-004-MW-001	6010	Vanadium	UJ	Low LCS recovery
D93-7108-9	229-004-MW-001	7740	Selenium	DJ	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Beryllim	UJ	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Calcium	DJ	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Iron	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Manganese	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6694-1	229-004-SB-005	6010	Nickel	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Potassium	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Silver	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6694-1	229-004-SB-005	6010	Zinc	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Beryllim	UJ	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Calcium	DJ	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Manganese	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Nickel	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Potassium	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Silver	UJ	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6694-2	229-004-SB-007	6010	Aluminum	J	Low LCS recovery, RPD
D93-6694-2	229-004-SB-007	6010	Iron	J	Low LCS recovery, RPD
D93-6694-2	229-004-SB-007	6010	Zinc	J	Low LCS recovery, RPD
D93-7108-7	229-005-RN-001	6010	Beryllium	UJ	Low LCS recovery
D93-7108-7	229-005-RN-001	6010	Cadmium	UJ	Low LCS recovery
D93-7108-7	229-005-RN-001	6010	Iron	J	Low LCS recovery
D93-7108-7	229-005-RN-001	6010	Silver	UJ	Low LCS recovery
D93-7108-7	229-005-RN-001	6010	Vanadium	UJ	Low LCS recovery
D93-7108-7	229-005-RN-001	7740	Selenium	UJ	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Beryllim	UJ	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Calcium	DJ	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Iron	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Manganese	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6694-3	229-005-SB-003	6010	Nickel	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Potassium	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Silver	UJ	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6694-3	229-005-SB-003	6010	Zinc	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Beryllim	UJ	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Calcium	DJ	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Iron	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Manganese	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Potassium	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Silver	UJ	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6694-4	229-005-SB-005	6010	Zinc	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Beryllim	UJ	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Calcium	DJ	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Iron	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Manganese	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Nickel	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Potassium	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Silver	UJ	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6694-5	229-005-SB-007	6010	Zinc	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Aluminum	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6694-6	229-006-SB-003	6010	Beryllim	UJ	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Calcium	DJ	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Iron	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Manganese	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Nickel	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Potassium	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Silver	UJ	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6694-6	229-006-SB-003	6010	Zinc	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Beryllim	UJ	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Calcium	DJ	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Iron	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Manganese	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Nickel	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Potassium	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Silver	UJ	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6694-7	229-006-SB-005	6010	Zinc	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Beryllim	UJ	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Calcium	DJ	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Iron	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Manganese	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Nickel	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6694-8	229-006-SB-007	6010	Potassium	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Silver	UJ	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6694-8	229-006-SB-007	6010	Zinc	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Beryllim	UJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Calcium	DJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Iron	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Manganese	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Nickel	JJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Potassium	J	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Silver	UJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Vanadium	JJ	Low LCS recovery
D93-6694-9	229-007-SB-003	6010	Zinc	JJ	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Beryllim	UJ	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Calcium	DJ	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Iron	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Manganese	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Nickel	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Potassium	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Silver	UJ	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6694-10	229-007-SB-005	6010	Zinc	J	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Aluminum	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6694-11	229-007-SB-007	6010	Beryllim	UJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Calcium	DJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Iron	J	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Manganese	J	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Nickel	JJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Potassium	J	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Silver	UJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Vanadium	JJ	Low LCS recovery
D93-6694-11	229-007-SB-007	6010	Zinc	JJ	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Aluminum	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Calcium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Chromium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Cobalt	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Iron	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Magnesium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Manganese	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Potassium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Silver	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Thallium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Vanadium	J	Low LCS recovery
D93-6806-17	229-008-SB-002	6010	Zinc	J	Low LCS recovery
D93-6806-17	229-008-SB-002	7740	Selenium	J	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Cobalt	UJ	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Iron	J	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Potassium	J	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6755-12	229-008-SB-005	6010	Silver	J	Not included in LCS

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6755-13	229-008-SB-007	7471	Mercury	J	High LCS recovery
D93-6755-13	229-008-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6755-13	229-008-SB-007	6010	Cobalt	UJ	Low LCS recovery
D93-6755-13	229-008-SB-007	6010	Iron	J	Low LCS recovery
D93-6755-13	229-008-SB-007	6010	Potassium	J	Low LCS recovery
D93-6755-13	229-008-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6755-13	229-008-SB-007	6010	Silver	J	Not included in LCS
D93-6755-15	229-009-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6755-15	229-009-SB-003	6010	Cobalt	UJ	Low LCS recovery
D93-6755-15	229-009-SB-003	6010	Iron	J	Low LCS recovery
D93-6755-15	229-009-SB-003	6010	Potassium	J	Low LCS recovery
D93-6755-15	229-009-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6755-15	229-009-SB-003	6010	Silver	J	Not included in LCS
D93-6755-16	229-009-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6755-16	229-009-SB-005	6010	Cobalt	UJ	Low LCS recovery
D93-6755-16	229-009-SB-005	6010	Iron	J	Low LCS recovery
D93-6755-16	229-009-SB-005	6010	Potassium	J	Low LCS recovery
D93-6755-16	229-009-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6755-16	229-009-SB-005	6010	Silver	J	Not included in LCS
D93-6755-17	229-009-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6755-17	229-009-SB-007	6010	Cobalt	UJ	Low LCS recovery
D93-6755-17	229-009-SB-007	6010	Iron	J	Low LCS recovery
D93-6755-17	229-009-SB-007	6010	Potassium	J	Low LCS recovery
D93-6755-17	229-009-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6755-17	229-009-SB-007	6010	Silver	J	Not included in LCS
D93-6755-18	229-010-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6755-18	229-010-SB-003	6010	Cobalt	UJ	Low LCS recovery
D93-6755-18	229-010-SB-003	6010	Iron	J	Low LCS recovery
D93-6755-18	229-010-SB-003	6010	Potassium	J	Low LCS recovery
D93-6755-18	229-010-SB-003	6010	Thallium	UJ	Low LCS recovery

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QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6755-18	229-010-SB-003	6010	Silver	J	Not included in LCS
D93-6755-19	229-010-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6755-19	229-010-SB-005	6010	Cobalt	UJ	Low LCS recovery
D93-6755-19	229-010-SB-005	6010	Iron	J	Low LCS recovery
D93-6755-19	229-010-SB-005	6010	Potassium	J	Low LCS recovery
D93-6755-19	229-010-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6755-19	229-010-SB-005	6010	Silver	J	Not included in LCS
D93-6755-20	229-010-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6755-20	229-010-SB-007	6010	Cobalt	UJ	Low LCS recovery
D93-6755-20	229-010-SB-007	6010	Iron	J	Low LCS recovery
D93-6755-20	229-010-SB-007	6010	Potassium	J	Low LCS recovery
D93-6755-20	229-010-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6755-20	229-010-SB-007	6010	Silver	J	Not included in LCS
D93-6806-3	229-011-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Calcium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Chromium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Cobalt	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Iron	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Manganese	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Potassium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Silver	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Thallium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6806-3	229-011-SB-003	6010	Zinc	J	Low LCS recovery
D93-6806-3	229-011-SB-003	7740	Selenium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Calcium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Chromium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Cobalt	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-4	229-011-SB-005	6010	Iron	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Potassium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-4	229-011-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-4	229-011-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6806-5	229-011-SB-007	6010	Zinc	J	Low LCS recovery
D93-6806-5	229-011-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Calcium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Chromium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Cobalt	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Iron	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Manganese	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Potassium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-6	229-012-SB-003	6010	Silver	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Thallium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6806-6	229-012-SB-003	6010	Zinc	J	Low LCS recovery
D93-6806-6	229-012-SB-003	7740	Selenium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Calcium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Chromium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Cobalt	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Iron	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Potassium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-7	229-012-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-7	229-012-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6806-8	229-012-SB-007	6010	Zinc	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-8	229-012-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Calcium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Chromium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Cobalt	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Iron	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Magnesium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Manganese	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Potassium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Silver	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Thallium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6806-9	229-013-SB-003	6010	Zinc	J	Low LCS recovery
D93-6806-9	229-013-SB-003	7740	Selenium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Calcium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Chromium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Cobalt	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Iron	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Potassium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-10	229-013-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-10	229-013-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Antimony	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Calcium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-1	229-014-SB-005	6010	Cobalt	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Iron	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Potassium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Sodium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-1	229-014-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-1	229-014-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6806-2	229-014-SB-007	6010	Zinc	J	Low LCS recovery
D93-6806-2	229-014-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Sodium	J	High LCS recovery
D93-6806-11	229-015-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Calcium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Chromium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Cobalt	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Iron	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-11	229-015-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Potassium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-11	229-015-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-11	229-015-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Sodium	J	High LCS recovery
D93-6806-12	229-015-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6806-12	229-015-SB-007	6010	Zinc	J	Low LCS recovery
D93-6806-12	229-015-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Calcium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Chromium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Cobalt	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Iron	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Magnesium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Manganese	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Potassium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-13	229-016-SB-005	6010	Silver	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Thallium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Vanadium	J	Low LCS recovery
D93-6806-13	229-016-SB-005	6010	Zinc	J	Low LCS recovery
D93-6806-13	229-016-SB-005	7740	Selenium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Sodium	J	High LCS recovery
D93-6806-14	229-016-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Vanadium	J	Low LCS recovery
D93-6806-14	229-016-SB-007	6010	Zinc	J	Low LCS recovery
D93-6806-14	229-016-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Calcium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Chromium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Cobalt	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Iron	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Magnesium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Manganese	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Potassium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Silver	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Thallium	J	Low LCS recovery
D93-6806-15	229-017-SB-007	6010	Vanadium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6806-15	229-017-SB-007	6010	Zinc	J	Low LCS recovery
D93-6806-15	229-017-SB-007	7740	Selenium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Aluminum	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Calcium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Chromium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Cobalt	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Iron	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Magnesium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Manganese	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Potassium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Silver	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Thallium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Vanadium	J	Low LCS recovery
D93-6806-16	229-017-SB-012	6010	Zinc	J	Low LCS recovery
D93-6806-16	229-017-SB-012	7740	Selenium	J	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Aluminum	J	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Cobalt	UJ	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Iron	J	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Potassium	J	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Thallium	UJ	Low LCS recovery
D93-6755-10	229-020-SB-005	6010	Silver	J	Not included in LCS
D93-6755-11	229-021-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6755-11	229-021-SB-007	6010	Cobalt	UJ	Low LCS recovery
D93-6755-11	229-021-SB-007	6010	Iron	J	Low LCS recovery
D93-6755-11	229-021-SB-007	6010	Potassium	J	Low LCS recovery
D93-6755-11	229-021-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6755-11	229-021-SB-007	6010	Silver	J	Not included in LCS
D93-7108-8	229-026-MW-001	6010	Beryllium	UJ	Low LCS recovery
D93-7108-8	229-026-MW-001	6010	Cadmium	UJ	Low LCS recovery
D93-7108-8	229-026-MW-001	6010	Silver	UJ	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-7108-8	229-026-MW-001	6010	Vanadium	J	Low LCS recovery
D93-7108-8	229-026-MW-001	7740	Selenium	DJ	Low LCS recovery
D93-7108-8	229-026-MW-001	6010	Iron	J	Low LCS recovery, RPD
D93-8109-1	229-MW10-SB-011	6010	Sodium	J	High LCS recovery
D93-8109-1	229-MW10-SB-011	6010	Silver	UJ	Low LCS recovery
D93-8109-2	229-MW10-SB-14	6010	Sodium	J	High LCS recovery
D93-8109-2	229-MW10-SB-14	6010	Silver	UJ	Low LCS recovery
D93-8109-3	229-MW11-SB-003	6010	Sodium	J	High LCS recovery
D93-8109-3	229-MW11-SB-003	6010	Silver	UJ	Low LCS recovery
D93-8109-4	229-MW11-SB-006	6010	Sodium	J	High LCS recovery
D93-8109-4	229-MW11-SB-006	6010	Silver	UJ	Low LCS recovery
D93-8109-5	229-MW12-SB-003	6010	Sodium	J	High LCS recovery
D93-8109-5	229-MW12-SB-003	6010	Silver	UJ	Low LCS recovery
D93-8109-6	229-MW12-SB-006	6010	Sodium	J	High LCS recovery
D93-8109-6	229-MW12-SB-006	6010	Silver	UJ	Low LCS recovery
D93-7962-11	229-MW19-SB-007	6010	Sodium	J	Low LCS recovery
D93-7962-11	229-MW19-SB-007	6010	Silver	J	poor LCS recovery
D93-6871-1	229-MW2-SB-007	6010	Sodium	J	High LCS recovery
D93-6871-1	229-MW2-SB-007	6010	Silver	UJ	LCS was out of control
D93-6957-1	229-MW3-SB-007	6010	Sodium	J	High LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Aluminum	J	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Beryllium	UJ	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Cobalt	UJ	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Iron	J	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Manganese	J	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Nickel	UJ	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Potassium	J	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Silver	UJ	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Thallium	UJ	Low LCS recovery
D93-6957-1	229-MW3-SB-007	6010	Vanadium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-6957-1	229-MW3-SB-007	6010	Zinc	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Sodium	J	High LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Aluminum	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Beryllium	UJ	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Cobalt	UJ	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Iron	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Manganese	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Nickel	UJ	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Potassium	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Silver	UJ	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Thallium	UJ	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Vanadium	J	Low LCS recovery
D93-6957-2	229-MW4-SB-012	6010	Zinc	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Sodium	J	High LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Aluminum	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Beryllium	UJ	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Cobalt	UJ	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Iron	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Manganese	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Nickel	UJ	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Potassium	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Silver	UJ	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Thallium	UJ	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Vanadium	J	Low LCS recovery
D93-6957-5	229-MW5-SB-003	6010	Zinc	J	Low LCS recovery
D93-7962-1	229-MW6-SB-003	6010	Silver	J	LCS recovery poor
D93-7962-4	229-MW6-SB-006	6010	Silver	J	poor LCS recovery
D93-7962-5	229-MW7-SB-003	6010	Sodium	J	Low LCS recovery
D93-7962-5	229-MW7-SB-003	6010	Silver	J	poor LCS recovery
D93-7962-6	229-MW7-SB-006	6010	Sodium	J	Low LCS recovery

TABLE 6-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qualifier	Criteria for Qualifications
D93-7962-6	229-MW7-SB-006	6010	Silver	J	poor LCS recovery
D93-7962-7	229-MW8-SB-003	6010	Sodium	J	Low LCS recovery
D93-7962-7	229-MW8-SB-003	6010	Silver	J	poor LCS recovery
D93-7962-8	229-MW8-SB-007	6010	Sodium	J	Low LCS recovery
D93-7962-8	229-MW8-SB-007	6010	Silver	J	poor LCS recovery
D93-7962-9	229-MW9-SB-003	6010	Sodium	J	Low LCS recovery
D93-7962-9	229-MW9-SB-003	6010	Silver	J	poor LCS recovery
D93-7962-10	229-MW9-SB-007	6010	Sodium	J	Low LCS recovery
D93-7962-10	229-MW9-SB-007	6010	Silver	J	poor LCS recovery

TABLE 6-7
QUALIFICATIONS BASED ON OUTLYING SURROGATE RECOVERIES

SDG	W-C I.D.	Method	Analyte	Qualifier	Detection	Criteria for Qualifications
D93-6806-4	229-011-SB-005	8020	Xylenes	J		High surrogate recovery
D93-6806-7	229-012-SB-005	8020	Ethylbenzene	J		High surrogate recovery
D93-6806-7	229-012-SB-005	8020	Toluene	J		High surrogate recovery
D93-6806-7	229-012-SB-005	8020	Xylenes	J		High surrogate recovery
D93-6806-10	229-013-SB-005	8020	Ethylbenzene			High surrogate recovery
D93-6806-10	229-013-SB-005	8020	Xylenes			High surrogate recovery
D93-8120-10	229-033-SB-003	8020	Ethylbenzene	J		High surrogate recovery
D93-8120-10	229-033-SB-003	8020	Toluene	J		High surrogate recovery
D93-8120-13	229-034-SB-007	8020	Ethylbenzene	DJ		High surrogate recovery
D93-8120-13	229-034-SB-007	8020	Toluene	DJ		High surrogate recovery
D93-8120-13	229-034-SB-007	8020	Xylenes	DJ		High surrogate recovery
D93-8120-10	229-033-SB-003	8020	Xylenes	J		High surrogate recovery, RPD

TABLE 6-8
QUALIFICATIONS BASED ON OUTLYING MS/MSD RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qual	Detection	Criteria for Qualifications
D93-6690-1	229-001-SB-002	6010	Beryllim	UJ		Low MS recovery
D93-6690-1	229-001-SB-002	6010	Barium	J		Low MS/MSD recovery
D93-6690-1	229-001-SB-002	6010	Cadnium	UJ		Low MS/MSD recovery
D93-6690-1	229-001-SB-002	6010	Chromium	UJ		Low MS/MSD recovery
D93-6690-1	229-001-SB-002	6010	Coblat	UJ		Low MS/MSD recovery
D93-6690-1	229-001-SB-002	7421	Lead	J		Low MS/MSD recovery
D93-7041-1	229-002-MW-001	6010	Aluminum	J		High MS/MSD recovery
D93-7041-1	229-002-MW-001	7740	Selenium	DJ		High MS/MSD recovery
D93-7041-1	229-002-MW-001	6010	Cobalt	UJ		Low MS recovery
D93-7041-1	229-002-MW-001	6010	Manganese	J		Low MS/MSD recovery
D93-7108-9	229-004-MW-001	6010	Nickel	UJ		High MS/MSD recovery
D93-7108-9	229-004-MW-001	7841	Thallium	UJ		High MS/MSD recovery
D93-7108-9	229-004-MW-001	6010	Aluminum	UJ		High MS/MSD recovery, CCV out of C.L.
D93-7108-9	229-004-MW-001	7421	Lead	DUJ		High MS/MSD recovery, CCV out of C.L.
D93-7108-9	229-004-MW-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference Check
D93-7108-7	229-005-RN-001	6010	Nickel	UJ		High MS/MSD recovery
D93-7108-7	229-005-RN-001	7841	Thallium	UJ		High MS/MSD recovery
D93-7108-7	229-005-RN-001	7421	Lead	UJ		High MS/MSD recovery, CCV outside C.L.
D93-7108-7	229-005-RN-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference check
D93-8214-1	229-007-MW-001	6010	Cadnium	UJ		Low MS/MSD recovery
D93-8214-1	229-007-MW-001	6010	Iron	UJ		Low MS/MSD recovery
D93-8214-1	229-007-MW-001	7421	Lead	UJ		Low MS/MSD recovery
D93-8214-1	229-007-MW-001	6010	Chromium	UJ		Low/High MS/MSD recovery
D93-6694-11	229-007-SB-007	6010	Barium	J		Low MS/MSD recovery
D93-6694-11	229-007-SB-007	6010	Cadnium	UJ		Low MS/MSD recovery
D93-6694-11	229-007-SB-007	6010	Chromium	UJ		Low MS/MSD recovery
D93-6694-11	229-007-SB-007	6010	Cobalt	UJ		Low MS/MSD recovery
D93-6694-11	229-007-SB-007	6010	Copper	UJ		Low MS/MSD recovery
D93-6694-11	229-007-SB-007	7740	Selenium	UJ		Low MS/MSD recovery

TABLE 6-8
QUALIFICATIONS BASED ON OUTLYING MS/MSD RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qual	Detection	Criteria for Qualifications
D93-6694-11	229-007-SB-007	6010	Antimony	R		Low MS/MSD recovery <30%
D93-8214-3	229-008-MW-001	6010	Cadnium	UJ		Low MS/MSD recovery
D93-8214-3	229-008-MW-001	7421	Lead	UJ		Low MS/MSD recovery
D93-8214-3	229-008-MW-001	6010	Chromium	UJ		Low/High MS/MSD recovery
D93-8214-5	229-009-MW-001	6010	Cadnium	UJ		Low MS/MSD recovery
D93-8214-5	229-009-MW-001	6010	Iron	UJ		Low MS/MSD recovery
D93-8214-5	229-009-MW-001	7421	Lead	UJ		Low MS/MSD recovery
D93-8214-5	229-009-MW-001	6010	Chromium	UJ		Low/High MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Barium	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Beryllium	UJ		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Cadnium	UJ		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Chromium	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Copper	UJ		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Manganese	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Nickel	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Vanadium	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	6010	Zinc	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	7060	Arsenic	J		Low MS/MSD recovery
D93-6755-19	229-010-SB-005	7421	Lead	J		Low MS/MSD recovery, RPD
D93-8269-1	229-011-MW-001	7421	Lead	J		Low MS/MSD recovery
D93-8269-2	229-012-MW-001	7421	Lead	J		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Antimony	J		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Barium	R		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Chromium	J		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Thallium	J		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Vanadium	J		Low MS/MSD recovery
D93-6806-1	229-014-SB-005	6010	Zinc	J		Low MS/MSD recovery
D93-8214-6	229-023-MW-001	6010	Cadnium	UJ		Low MS/MSD recovery
D93-8214-6	229-023-MW-001	6010	Iron	UJ		Low MS/MSD recovery
D93-8214-6	229-023-MW-001	7421	Lead	J		Low MS/MSD recovery

TABLE 6-8
QUALIFICATIONS BASED ON OUTLYING MS/MSD RECOVERIES - SWMU 229

SDG	W-C I.D.	Method	Analyte	Qual	Detection	Criteria for Qualifications
D93-8214-6	229-023-MW-001	6010	Chromium	UJ		Low/High MS/MSD recovery
D93-7108-8	229-026-MW-001	6010	Nickel	UJ		High MS/MSD recovery
D93-7108-8	229-026-MW-001	7841	Thallium	UJ		High MS/MSD recovery
D93-7108-8	229-026-MW-001	7421	Lead	DUJ		High MS/MSD recovery, CCV outside C.L.
D93-7108-8	229-026-MW-001	6010	Aluminum	J		High MS/MSD recovery, CCV outside C.L., RPD
D93-7108-8	229-026-MW-001	6010	Cobalt	UJ		High MS/MSD recovery, ICP Interference Check
D93-8120-4	229-031-SB-003	6010	Barium	J		Low MS/MSD recovery
D93-8120-4	229-031-SB-003	6010	Cadnium	UJ		Low MS/MSD recovery
D93-8120-4	229-031-SB-003	7421	Lead	J		Low MS/MSD recovery
D93-8120-4	229-031-SB-003	7740	Selenium	UJ		Low MS/MSD recovery
D93-8109-1	229-MW10-SB-011	7060	Arsenic	J		Low MS/MSD recovery
D93-8109-1	229-MW10-SB-011	7421	Lead	J		Low MS/MSD recovery
D93-6871-1	229-MW2-SB-007	6010	Barium	J		Low MS/MSD recovery
D93-6871-1	229-MW2-SB-007	6010	Chromium	J		Low MS/MSD recovery
D93-6871-1	229-MW2-SB-007	7060	Arsenic	J		Low MS/MSD recovery
D93-6871-1	229-MW2-SB-007	7421	Lead	UJ		Low MS/MSD recovery
D93-6957-1	229-MW3-SB-007	6010	Barium	J		Low MS/MSD recovery
D93-6957-1	229-MW3-SB-007	6010	Cadnium	UJ		Low MS/MSD recovery
D93-6957-1	229-MW3-SB-007	6010	Chromium	J		Low MS/MSD recovery
D93-6957-1	229-MW3-SB-007	7421	Lead	UJ		Low MS/MSD recovery
D93-7962-1	229-MW6-SB-003	6010	Barium	J		Low MS/MSD recovery
D93-7962-1	229-MW6-SB-003	7421	Lead	J		Low MS/MSD recovery

TABLE 6-9
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 229

LOCATOR			229-009-MW-001		229-023-MW-001(1)		
COLLECT DATE			7/19/93		7/19/93		
SAMPLE DELIVERY GROUP			8214		8214		
		Units	Result	Qual	Result	Qual	RPD (2)(%)
EPA 8020	Ethylbenzene	µg/L	0		4		N/A
	Benzene	µg/L	0		4		N/A
	Xylenes	µg/L	0		11		N/A
	1,4-Dichlorobenzene	µg/L	0		4		N/A
	1,3-Dichlorobenzene	µg/L	0		5		N/A
	Toluene	µg/L	0		4		N/A
EPA 6010	Barium	mg/L	0.12		0.1		18.18
	Calcium	mg/L	1510		1320		13.43
	Potassium	mg/L	25.6		24.1		6.04
	Magnesium	mg/L	1230		1100		11.16
	Sodium	mg/L	4340	J	1100	J	119.12
EPA 310.1	Alkalinity	mg/L	111		121		8.62
EPA 9252	Chloride	mg/L	13200		12100		8.70
EPA 410.1	Chem.Oxygen Demand	mg/L	800		847		5.71
EPA 340.2	Fluoride	mg/L	1.8		1.8		0.00
EPA 351.3	Nitrogen, Total Kjeld	mg/L	4.8		1.4		109.68
EPA 353.3	Nitrate-Nitrite Nitrog	mg/L	20		20.8		3.92
EPA 365.3	Orthophosphate-phos	mg/L	0.01		0.03		100.00
EPA 365.3	Total Phosphorus	mg/L	0.04		0.13		105.88
EPA 160.1	Total Dissolved Solids	mg/L	22600		23000		1.75
EPA 9038	Sulfate		2120		2210		4.16

(1) Duplicates were also analyzed for 405.1 Biochemical Oxygen Demand, and 9060 Total Organic Carbon.
There were no 405.1 or 9060 detections. This table lists only detections.

(2) RPD = Relative Percent Difference

TABLE 6-9
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 229

LOCATOR			229-MW9-SB-007		229-MW19-SB-007(1)		
COLLECT DATE			7/19/93		7/19/93		
SAMPLE DELIVERY GROUP			7962		7962		
		Units	Result	Qual	Result	Qual	RPD (2)(%)
EPA 6010	Silver		0.3		0.5		50.00
	Arsenic	mg/kg	1.3		1.2		8.00
	Barium	mg/kg	15.4		14.3		7.41
	Calciu	mg/kg	48800		57900		17.06
	Chromi	mg/kg	2.6		1.6		47.62
	Potassi	mg/kg	660		520		23.73
	Magne	mg/kg	1570		1460		7.26
	Sodium	mg/kg	551		482		13.36
	Lead	mg/kg	0.8		0.9		11.76
	Seleniu	mg/kg	0.2		0.1		66.67
EPA 410.1	Nitrate-	mg/kg	2.19		2.1		4.20
EPA 365.3	Total p	mg/kg	35		31		12.12
EPA 9045	pH		7.7		7.7		0.00
EPA 9060	Total o	mg/kg	1700		1500		12.50

(1) Duplicates were also analyzed for 8020 Aromatic Volatiles, 418.1 TRPH, and 351.3 TKN.
There were no 8020, 418.1, or 351.3 detections. This table lists only detections.

(2) RPD = Relative Percent Difference

TABLE 6-9
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 229

LOCATOR			229-004-MW-001		229-026-MW-001		
COLLECT DATE			6/18/93		6/18/93		
SAMPLE DELIVERY GROUP			7108		7108		
		Units	Result	Qual	Result	Qual	RPD (1)(%)
EPA 8020	Ethylbenzene	µg/L	1800		1900		5.41
	Benzene	µg/L	9700		8500		13.19
	Xylenes	µg/L	3400		3800		11.11
	Toluene	µg/L	11000		11000		0.00
EPA 6010	Aluminum	mg/L	7.48	J	12.9	J	53.19
	Barium	mg/L	0.11		0.14		24.00
	Calcium	mg/L	623		790		23.64
	Iron	mg/L	5.79	J	9.98	J	53.14
	Potassium	mg/L	30.6		27.6		10.31
	Magnesium	mg/L	935		964		3.05
	Manganese	mg/L	0.5		0.47		6.19
	Sodium	mg/L	3360		3700		9.63
	Selenium	mg/L	0.015		0.016		6.45
	Vanadium	mg/L	0.03		0.03		0.00
	Zinc	mg/L	0.08	J	0.06	J	28.57
EPA 310.1	Alkalinity	mg/L	201		206		2.46
EPA 9252	Chloride	mg/L	4210		4480		6.21
EPA 410.1	Nitrate-Nitrite	mg/L	29		31		6.67
EPA 340.2	Fluoride	mg/L	3.6		3.7		2.74
EPA 365.3	Total Phosphat	mg/L	0.41		0.47		13.64
EPA 160.1	Total Dissolve	mg/L	22000		22700		3.13
EPA 9038	Sulfate	mg/L	7600		6500		15.60

(1) RPD = Relative Percent Difference

TABLE 6-9
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 229

LOCATOR			229-009-SB-003		229-020-SB-005(1)		
COLLECT DATE			7/1/93		7/1/93		
SAMPLE DELIVERY GROUP			6755		6755		
		Units	Result	Qual	Result	Qual	RPD (2)(%)
EPA 8020	Ethylbenzene	µg/kg	23		0		N/A
	Xylene	µg/kg	170		0		N/A
EPA 6010	Aluminum	mg/kg	1670		1510		10.06
	Arsenic	mg/kg	0.8		0.7		13.33
	Barium	mg/kg	15.7		16.7		6.17
	Calcium	mg/kg	111000		77700		35.29
	Chromium	mg/kg	3.8		3.2		17.14
	Potassium	mg/kg	487		446		8.79
	Iron	mg/kg	1980		1890		4.65
	Magnesium	mg/kg	1510		1770		15.85
	Manganese	mg/kg	30.4		28.4		6.80
	Sodium	mg/kg	131		160		19.93
	Lead	mg/kg	0.8		0.9		11.76
	Vanadium	mg/kg	3.8		3.8		0.00
	Zinc	mg/kg	4.8		4.9		2.06

(1) Duplicates were also analyzed for 418.1 TRPH.
There were no 418.1 detections. This table lists only detections.
(2) RPD = Relative Percent Difference

TABLE 6-9
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 229

LOCATOR			229-010-SB-007		229-020-SB-005		
COLLECT DATE			7/19/93		7/19/93		
SAMPLE DELIVERY GROUP			6755		6755		
		Units	Result	Qual	Result	Qual	RPD (1)(%)
EPA 8020	Ethylbenzene	µg/kg	59000		56000		5.22
	Xylene	µg/kg	85000		110000		25.64
	Toluene	µg/kg	71000		71000		0.00
	Benzene	µg/kg	1700		0		N/A (2)
EPA 418.1	TRPH	mg/kg	6800		5400		22.95
EPA 6010	Aluminum	mg/kg	1620		1030		44.53
	Arsenic	mg/kg	0.5		0.7		33.33
	Barium	mg/kg	16.8		15.6		7.41
	Calcium	mg/kg	101000		84000		18.38
	Chromium	mg/kg	4		1.6		85.71
	Copper	mg/kg	1.1		1.1		0.00
	Iron	mg/kg	2060		1710		18.57
	Potassium	mg/kg	517		428		18.84
	Magnesium	mg/kg	1440		1240		14.93
	Manganese	mg/kg	38.4		41.7		8.24
	Sodium	mg/kg	109	J	219	J	67.07
	Lead	mg/kg	0.4	J	0.8	J	66.67
	Vanadium	mg/kg	3.7		3.3		11.43
	Zinc	mg/kg	4.8		4.8		0.00

(1) RPD = Relative Percent Difference

(2) Sample 229-020-SB-005 had a dilution of 2000 µg/kg; it was not possible to make a field duplicate comparison

TABLE 6-10
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 229

LOCATOR	229-002-MW-001			229-004-MW-001			229-005-MW-001			229-007-MW-001			229-008-MW-001			229-009-MW-001		
LAB SAMPLE NUMBER	D93-7041-1			D93-7108-9			D93-7108-6			D93-8214-1			D93-8214-3			D93-8214-5		
COLLECT DATE	06/17/93			06/18/93			06/18/93			07/19/93			07/19/93			07/19/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/L)																		
Benzene	<	2	DU	9700	500	D	1	2	DJ	2200	20	D	<	2	U	<	2	U
1,2-Dichlorobenzene	<	4	DU	<	1000	DU	<	4	DU	<	4	U	<	4	U	<	4	U
1,3-Dichlorobenzene	<	4	DU	<	1000	DU	<	4	DU	<	4	U	<	4	U	<	4	U
1,4-Dichlorobenzene	<	3	DU	<	800	DU	<	3	DU	<	3	U	<	3	U	<	3	U
Ethylbenzene	<	2	DU	1800	500	D	2	2	DJ	<	2	U	<	2	U	<	2	U
Toluene	<	2	DU	11000	500	D	4	2	D	<	2	U	<	2	U	<	2	U
Xylenes	1	2	DJ	3400	500	D	3	2	D	62	2		<	2	U	<	2	UJ
Metals (mg/L)																		
Aluminum	2.71	0.05	J	7.48	0.05	UJ	3.09	0.05	J									
Barium	0.15	0.01		0.11	0.01		0.09	0.01		0.04	0.02		0.08	0.02		0.12	0.02	
Calcium	319	1	J	623	5	D	700	5	D	1070	100	D	1090	100	D	1510	100	D
Iron	1.97	0.05		5.79	0.05	J	2.96	0.05	J	<	0.1	UJ				<	0.1	UJ
Lead	<	0.005	U	<	0.025	DUJ	<	0.005	UJ	<	0.005	UJ	<	0.005	UJ	<	0.005	UJ
Magnesium	1560	0.01	J	935	0.01		667	0.01		890	50	D	1060	50	D	1230	50	D
Manganese	0.24	0.01	J	0.5	0.01		0.35	0.01	J									
Potassium	27.6	0.1	J	30.6	0.1	J	39.6	0.1	J	18.4	1		24.4	1		25.6	1	
Selenium	0.01	0.01	DJ	0.015	0.01	DJ	0.004	0.002	UJ	<	0.01	DU	<	0.01	DU	<	0.01	DU
Sodium	1240	0.2	DJ	3360	1	J	1670	1	J	2700	10	D	3360	10	D	4340	10	D
Vanadium	0.01	0.01		0.02	0.01	UJ	0.02	0.01	UJ									
Zinc	0.03	0.01		0.08	0.01		0.03	0.01										
Water Quality (mg/L)																		
Alkalinity	144	0.1		201	0.1		263	0.1		131	0.1					111	0.1	
Chemical Oxygen Demand										240	5					800	5	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.

J = Estimated value.
R = Rejected value.
U = Nondetected value.
D = Sample was diluted for analysis.
RL = Reporting Limit.

TABLE 6-10
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 229

LOCATOR	229-002-MW-001			229-004-MW-001			229-005-MW-001			229-007-MW-001			229-008-MW-001			229-009-MW-001		
LAB SAMPLE NUMBER	D93-7041-1			D93-7108-9			D93-7108-6			D93-8214-1			D93-8214-3			D93-8214-5		
COLLECT DATE	06/17/93			06/18/93			06/18/93			07/19/93			07/19/93			07/19/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Chloride	16200	1		4210	1		5010	1		7180	1					13200	1	
Fluoride	1.1	0.1		3.6	0.1		2.3	0.1		2.3	0.1					1.8	0.1	
Nitrate-Nitrite Nitrogen	6.1	0.1	D	29	1	D	23	1	D	12	0.2	D				20	0.2	D
Nitrogen, Total Kjeldahl										5	0.1					4.8	0.1	
Orthophosphate-phosphorus										0.03	0.01					0.01	0.01	
Sulfate	3200	50	D	7600	500	D	3250	50	D	78	1					2120	50	D
Total Dissolved Solids	30000	1		22000	1		13800	1		14700	1					22600	1	
Total Phosphate	0.19	0.01		0.41	0.01		0.41	0.01										
Total Phosphorus										0.1	0.01					0.04	0.01	J

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.

J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-10
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 229

LOCATOR	229-011-MW-001			229-012-MW-001			229-023-MW-001			229-026-MW-001		
LAB SAMPLE NUMBER	D93-8269-1			D93-8269-2			D93-8214-6			D93-7108-8		
COLLECT DATE	07/20/93			07/20/93			07/19/93			06/18/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/L)												
Benzene	<	2	U	<	2	U	<	2	U	8500	500	D
1,2-Dichlorobenzene	<	4	U	3	4	J	5	4		<	1000	DU
1,3-Dichlorobenzene	<	4	U	3	4	J	5	4		<	1000	DU
1,4-Dichlorobenzene	<	3	U	3	3		4	3		<	800	DU
Ethylbenzene	<	2	U	<	2	U	4	2		1900	500	D
Toluene	<	2	U	<	2	U	4	2		11000	500	D
Xylenes	<	2	U	<	2	U	11	2		3800	500	D
Metals (mg/L)												
Aluminum										12.9	0.05	J
Barium	0.09	0.02		0.09	0.02		0.1	0.02		0.14	0.01	
Calcium	1470	100	D	657	10	D	1320	100	D	790	5	D
Iron							<	0.1	UJ	9.98	0.05	J
Lead	<	0.002	J	<	0.002	J	0.007	0.002	J	<	0.025	DUJ
Magnesium	1340	50	D	133	5	D	1100	50	D	964	0.01	
Manganese										0.47	0.01	
Potassium	18.4	1		18.9	1		24.1	1		27.6	0.1	J
Selenium	0.005	0.005		0.003	0.005	J	<	0.01	DU	0.016	0.01	DJ
Sodium	3950	10	D	383	1	D	3970	10	J	3700	1	J
Vanadium										0.03	0.01	J
Zinc										0.06	0.01	J
Water Quality (mg/L)												
Alkalinity							121	0.1		206	0.1	
Chemical Oxygen Demand							847	5				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.

J = Estimated value.
R = Rejected value.
U = Nondetected value.
D = Sample was diluted for analysis.
RL = Reporting Limit.

TABLE 6-10
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 229

LOCATOR	229-011-MW-001			229-012-MW-001			229-023-MW-001			229-026-MW-001		
LAB SAMPLE NUMBER	D93-8269-1			D93-8269-2			D93-8214-6			D93-7108-8		
COLLECT DATE	07/20/93			07/20/93			07/19/93			06/18/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Chloride							12100	1		4480	1	
Fluoride							1.8	0.1		3.7	0.1	
Nitrate-Nitrite Nitrogen							20.8	0.2	D	31	1	D
Nitrogen, Total Kjeldahl							1.4	0.1				
Orthophosphate-phosphorus							0.03	0.01				
Sulfate							2210	50	D	6500	500	D
Total Dissolved Solids							23000	1		22700	1	
Total Phosphate										0.47	0.01	
Total Phosphorus							0.13	0.01				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.

J = Estimated value.
R = Rejected value.
U = Nondetected value.
D = Sample was diluted for analysis.
RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-001-SB-002			229-001-SB-004			229-001-SB-006			229-002-SB-002			229-002-SB-004			229-002-SB-006		
LAB SAMPLE NUMBER	D93-6690-1			D93-6690-2			D93-6690-3			D93-6690-10			D93-6690-11			D93-6690-12		
COLLECT DATE	06/07/93			06/07/93			06/07/93			06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/kg)																		
Benzene	<	2	DU	<	2	DU	47000	5000	D	<	2	DU	<	100	DU	59000	10000	D
Ethylbenzene	<	2	DU	<	2	DU	130000	5000	D	<	2	DU	4200	100	D	160000	10000	D
Toluene	<	2	DU	<	2	DU	380000	5000	D	<	2	DU	3900	100	D	420000	10000	D
Xylenes	<	2	DU	<	2	DU	240000	5000	D	<	2	DU	9400	100	D	260000	10000	D
Metals (mg/kg)																		
Aluminum	1010	1	J	852	1	J	1370	1	J	569	1	J	1770	1	J	1330	1	J
Arsenic	0.7	0.1		0.7	0.1		0.7	0.1		0.7	0.1		1.3	0.1		0.7	0.1	
Barium	11.8	1	J	12.5	1		11.5	1		7.6	1		29.8	1		11.7	1	
Calcium	33200	10	D	118000	100	D	36300	100	D	25500	10	D	42300	100	D	79300	100	D
Chromium	<	1	UJ	<	1	U	3.1	1		<	1	U	1.4	1		2.8	1	
Cobalt	<	1	UJ	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Copper	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ
Iron	1150	1		955	1		1420	1		644	1		1910	1		1440	1	
Lead	0.2	0.1	J	0.2	0.1		0.7	0.1		0.2	0.1		0.8	0.1		0.4	0.1	
Magnesium	770	1		679	1		919	1		538	1		1190	1		903	1	
Manganese	22.8	1		20.6	1		24.8	1		10	1		35.8	1		28.6	1	
Mercury	<	0.01	U	<	0.01	U	0.04	0.01		<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.7	1		1.5	1		1.2	1		<	1	U	1.6	1		1.4	1	
Potassium	326	1	J	354	1	J	455	1	J	160	1	J	513	1	J	389	1	J
Sodium	<	109	U	<	86	U	<	63	U	<	111	U	<	248	U	<	218	U
Vanadium	2.5	0.1		2.1	0.1		2.7	0.1		1.4	0.1		4.6	0.1		2.8	0.1	
Zinc	4	1		3.4	1		3.5	1		1.7	1		5.6	1	J	4	1	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-001-SB-002			229-001-SB-004			229-001-SB-006			229-002-SB-002			229-002-SB-004			229-002-SB-006		
LAB SAMPLE NUMBER	D93-6690-1			D93-6690-2			D93-6690-3			D93-6690-10			D93-6690-11			D93-6690-12		
COLLECT DATE	06/07/93			06/07/93			06/07/93			06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TPH (mg/kg)																		
Total Petroleum Hydrocarbon	<	10	U	110	10		7700	100	D	29	10		2500	100	D	28000	1000	D
Water Quality (mg/L CaCO3)																		
Alkalinity																		
Chemical Oxygen Demand																		
Chloride																		
Fluoride																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
Orthophosphate-phosphorus																		
Sulfate																		
Total Dissolved Solids																		
Total Phosphorus																		
Total Solids	90.7	0.01		90.3	0.01		89.5	0.01		95.2	0.01		93.9	0.01		91.4	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-003-SB-003			229-003-SB-005			229-003-SB-007			229-004-SB-003			229-004-SB-005			229-004-SB-007		
LAB SAMPLE NUMBER	D93-6690-13			D93-6690-14			D93-6690-15			D93-6690-16			D93-6694-1			D93-6694-2		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/kg)																		
Benzene	3	2	D	2	2	D	100000	10000	D	<	2	DU	<	2	DU	19000	5000	D
Ethylbenzene	<	2	DU	3	2	D	230000	10000	D	<	2	DU	13	2	D	77000	5000	D
Toluene	<	2	DU	2	2	D	620000	10000	D	<	2	DU	4	2	D	190000	5000	D
Xylenes	3	2	D	8	2	D	440000	10000	D	<	2	DU	21	2	D	150000	5000	D
Metals (mg/kg)																		
Aluminum	808	1	J	1510	1	J	795	1		1590	1		1400	1	J	873	1	J
Arsenic	0.7	0.1		1	0.1		0.7	0.1		1.4	0.1		1.1	0.1		1.3	0.1	
Barium	12.2	1		11.3	1		10.2	1		15.7	1		22.3	1		15.1	1	
Calcium	41500	100	D	34900	100	D	49000	100	D	83000	100	D	105000	100	DJ	75100	100	DJ
Chromium	2.8	1		2.4	1		1.4	1		3.3	1		5.2	1		<	1	U
Cobalt	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Copper	<	1	UJ	<	1	UJ	<	1	U	<	1	U	1.5	1		<	1	U
Iron	1140	1		1680	1		1050	1		2530	1		2850	1	J	1380	1	J
Lead	0.2	0.1		0.5	0.1		0.4	0.1		2.5	0.1		0.8	0.1		0.8	0.1	
Magnesium	693	1		1230	1		1190	1		4330	1		2760	1	J	996	1	J
Manganese	22	1		21.4	1		17.5	1		51	1		63.1	1	J	31.9	1	J
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.3	1		<	1	U	<	1	U	2.1	1		3.4	1	J	2.2	1	J
Potassium	262	1	J	404	1	J	279	1		375	1		363	1	J	332	1	J
Sodium	<	105	U	<	113	U	107	1		88.1	1		<	131	U	<	96	U
Vanadium	3.4	0.1		4.6	0.1		2.1	0.1		7	0.1		6.3	0.1	J	2.8	0.1	J
Zinc	3.6	1		4.1	1		3.1	1		12.1	1		8	1	J	4.1	1	J

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-003-SB-003			229-003-SB-005			229-003-SB-007			229-004-SB-003			229-004-SB-005			229-004-SB-007		
LAB SAMPLE NUMBER	D93-6690-13			D93-6690-14			D93-6690-15			D93-6690-16			D93-6694-1			D93-6694-2		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TPH (mg/kg)																		
Total Petroleum Hydrocarbon	32	10		<	10	U	21000	1000	D	20	10		230	10		7800	100	D
Water Quality (mg/L CaCO3)																		
Alkalinity																		
Chemical Oxygen Demand																		
Chloride																		
Fluoride																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
Orthophosphate-phosphorus																		
Sulfate																		
Total Dissolved Solids																		
Total Phosphorus																		
Total Solids	89.3	0.01		90.5	0.01		90.4	0.01		88.7	0.01		88.4	0.01		79.6	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-005-SB-003			229-005-SB-005			229-005-SB-007			229-006-SB-003			229-006-SB-005			229-007-MW-001		
LAB SAMPLE NUMBER	D93-6694-3			D93-6694-4			D93-6694-5			D93-6694-6			D93-6694-7			D93-8214-1		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/08/93			07/19/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/kg)																		
Benzene	<	2	DU	<	2	DU	<	100	DU	<	2	DU	<	2	DU	2200	20	D
Ethylbenzene	<	2	DU	<	2	DU	1200	100	D	<	2	DU	<	2	DU	<	2	U
Toluene	<	2	DU	<	2	DU	2100	100	D	<	2	DU	<	2	DU	<	2	U
Xylenes	<	2	DU	<	2	DU	11000	100	D	<	2	DU	<	2	DU	62	2	
Metals (mg/kg)																		
Aluminum	1170	1	J	1260	1	J	1150	1	J	2850	1	J	2650	1	J			
Arsenic	1.1	0.1		0.6	0.1		0.8	0.1		2	0.1		0.9	0.1		<	0.01	U
Barium	18.8	1		17.4	1		14.9	1		25.6	1		29.5	1		0.04	0.02	
Calcium	148000	100	DJ	123000	100	DJ	71100	100	DJ	104000	100	DJ	76400	100	DJ	1070	100	D
Chromium	2.9	1		2	1		<	1	U	2.1	1		5.7	1		<	0.05	UJ
Cobalt	<	1	U	<	1	U	<	1	U	<	1	U	1.4	1				
Copper	1.1	1		1.1	1		1	1		1.9	1		2.3	1				
Iron	1340	1	J	1450	1	J	1400	1	J	2500	1	J	2600	1	J	<	0.1	UJ
Lead	2.4	0.5	D	0.8	0.1		0.7	0.1		1.1	0.1		2.9	0.5	D	<	0.005	UJ
Magnesium	1480	1	J	1500	1	J	1530	1	J	1800	1	J	1600	1	J	890	50	D
Manganese	31.5	1	J	28.2	1	J	31.4	1	J	46.4	1	J	59.1	1	J			
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U			
Nickel	2.1	1	J	1.7	1		2.4	1	J	2.8	1	J	2.8	1	J			
Potassium	462	1	J	452	1	J	433	1	J	876	1	J	838	1	J	18.4	1	
Sodium	<	130	U	<	123	U	<	134	U	1340	1		1090	1		2700	10	D
Vanadium	3.1	0.1	J	3.3	0.1	J	3.4	0.1	J	5.6	0.1	J	4.8	0.1	J			
Zinc	5	1	J	5.2	1	J	4.7	1	J	7.9	1	J	8.5	1	J			

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-005-SB-003			229-005-SB-005			229-005-SB-007			229-006-SB-003			229-006-SB-005			229-007-MW-001		
LAB SAMPLE NUMBER	D93-6694-3			D93-6694-4			D93-6694-5			D93-6694-6			D93-6694-7			D93-8214-1		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/08/93			07/19/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TPH (mg/kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	5800	100	D	<	10	U	35	10				
Water Quality (mg/L CaCO3)																		
Alkalinity																131	0.1	
Chemical Oxygen Demand																240	5	
Chloride																7180	1	
Fluoride																2.3	0.1	
Nitrate-Nitrite Nitrogen																12	0.2	D
Nitrogen, Total Kjeldahl																5	0.1	
Orthophosphate-phosphorus																0.03	0.01	
Sulfate																78	1	
Total Dissolved Solids																14700	1	
Total Phosphorus																0.1	0.01	
Total Solids	85.2	0.01		72.1	0.01		79.1	0.01		84	0.01		79.3	0.01				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-007-SB-003			229-007-SB-005			229-007-SB-007		
LAB SAMPLE NUMBER	D93-6694-9			D93-6694-10			D93-6694-11		
COLLECT DATE	06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (µg/kg)									
Benzene	<	2	DU	20	2	D	440	100	D
Ethylbenzene	<	2	DU	2	2	D	1100	100	D
Toluene	<	2	DU	24	2	D	2200	100	D
Xylenes	<	2	DU	5	2	D	14000	100	D
Metals (mg/kg)									
Aluminum	668	1	J	1020	1	J	939	1	J
Arsenic	0.5	0.1		0.6	0.1		0.5	0.1	
Barium	11.4	1		12.5	1		11.7	1	J
Calcium	53100	100	DJ	66400	100	DJ	70800	25	DJ
Chromium	<	1	U	<	1	U	<	1	UJ
Cobalt	<	1	U	<	1	U	<	1	UJ
Copper	<	1	U	<	1	U	<	1	UJ
Iron	840	1	J	1180	1	J	1120	1	J
Lead	9.5	0.1		1	0.1		2.2	0.1	
Magnesium	736	1	J	808	1	J	853	1	J
Manganese	19.1	1	J	24.6	1	J	21.6	1	J
Mercury	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.6	1	JJ	1.7	1	J	1.8	1	JJ
Potassium	233	1	J	395	1	J	368	1	J
Sodium	<	87	U	<	106	U	<	79	U
Vanadium	1.5	0.1	JJ	2.3	0.1	J	2.3	0.1	JJ
Zinc	3	1	JJ	3.4	1	J	3.6	1	JJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-007-SB-003			229-007-SB-005			229-007-SB-007		
LAB SAMPLE NUMBER	D93-6694-9			D93-6694-10			D93-6694-11		
COLLECT DATE	06/08/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TPH (mg/kg)									
Total Petroleum Hydrocarbon	<	10	U	<	10	U	540	10	
Water Quality (mg/L CaCO3)									
Alkalinity									
Chemical Oxygen Demand									
Chloride									
Fluoride									
Nitrate-Nitrite Nitrogen									
Nitrogen, Total Kjeldahl									
Orthophosphate-phosphorus									
Sulfate									
Total Dissolved Solids									
Total Phosphorus									
Total Solids	85.7	0.01		85.2	0.01		79.4	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-008-SB-003			229-008-SB-005			229-008-SB-007			229-009-SB-003			229-009-SB-005			229-009-SB-007		
LAB SAMPLE NUMBER	D93-6806-17			D93-6755-12			D93-6755-13			D93-6755-15			D93-6755-16			D93-6755-17		
COLLECT DATE	06/11/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	DU	<	200	DU	<	2	DU	<	10	DU	15000	5000	D
Ethylbenzene	<	2	DU	<	2	DU	7700	200	D	<	2	DU	23	10	D	99000	5000	D
Toluene	<	2	DU	<	2	DU	2900	200	D	<	2	DU	<	10	DU	260000	5000	D
Xylenes	<	2	DU	<	2	DU	17000	200	D	2	2	D	170	10	D	190000	5000	D
Metals (mg/Kg)																		
Aluminum				618	1	J	1170	1	J	1920	1	J	1670	1	J	1040	1	J
Arsenic				0.4	0.1		1	0.1		1.2	0.1		0.8	0.1		0.7	0.1	
Barium				13.3	1		15.8	1		28	1		15.7	1		15.3	1	
Calcium				110000	100	D	103000	100	D	131000	100	D	111000	100	D	102000	100	D
Chromium				3.6	1		3.2	1		5.2	1		3.8	1		3.3	1	
Cobalt				<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ
Copper				<	1	U	<	1	U	2.4	1		<	1	U	<	1	U
Iron				865	1	J	1680	1	J	3380	1	J	1980	1	J	1570	1	J
Lead				0.6	0.1		0.8	0.1		1.5	0.1		0.8	0.1		0.8	0.1	
Magnesium				653	10	D	776	1		5010	1		1510	10	D	1330	10	D
Manganese				17.3	1		24.3	1		73.1	1		30.4	1		23.5	1	
Mercury				<	0.01	U	0.12	0.01	J	<	0.02	U	<	0.01	U	<	0.01	U
Nickel				<	1	U	1.2	1		2.7	1		1.1	1		1.1	1	
Potassium				233	1	J	360	1	J	406	1	J	487	1	J	365	1	J
Selenium				<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver				<	1	J	<	1	J	<	1	J	<	1	J	<	1	J
Sodium				<	134	U	<	177	U	<	129	U	<	131	U	<	78.2	U
Vanadium				2	0.1		3.5	0.1		7.5	0.1		3.8	0.1		3.1	0.1	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-008-SB-003			229-008-SB-005			229-008-SB-007			229-009-SB-003			229-009-SB-005			229-009-SB-007		
LAB SAMPLE NUMBER	D93-6806-17			D93-6755-12			D93-6755-13			D93-6755-15			D93-6755-16			D93-6755-17		
COLLECT DATE	06/11/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc				2.8	1		4.3	1		10	1		4.8	1		3.7	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	3030	100	D	<	10	U	360	10		5000	100	D
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	85	0.01		83.2	0.01		87.1	0.01		90.8	0.01		82.6	0.01		85.7	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-010-SB-003			229-010-SB-005			229-010-SB-007			229-011-SB-003			229-011-SB-005			229-011-SB-007		
LAB SAMPLE NUMBER	D93-6755-18			D93-6755-19			D93-6755-20			D93-6806-3			D93-6806-4			D93-6806-5		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	DU	1700	1000	D	3	2	D	<	10	DU	<	5000	DU
Ethylbenzene	<	2	DU	<	2	DU	59000	1000	D	3	2	D	<	10	DU	30000	5000	D
Toluene	<	2	DU	<	2	DU	71000	1000	D	<	2	DU	<	10	DU	42000	5000	D
Xylenes	<	2	DU	<	2	DU	85000	1000	D	10	2	D	56	10	J	64000	5000	D
Metals (mg/Kg)																		
Aluminum	1570	1	J	1360	1	J	1620	1	J	1520	1	J	997	1	J	1060	1	J
Arsenic	1.3	0.1		0.6	0.1	J	0.5	0.1		0.8	0.1		0.5	0.1		0.6	0.1	
Barium	17.7	1		11.8	1	J	16.8	1		11.9	1		14.4	1		11.5	1	
Calcium	111000	100	D	64000	100	D	101000	100	D	16700	100	J	90200	100	J	20800	100	J
Chromium	5.5	1		2.8	1	J	4	1		4.3	1	J	1.9	1	J	1.3	1	J
Cobalt	<	1	UJ	<	1	UJ	<	1	UJ	<	1	J	<	1	J	<	1	J
Copper	<	1	U	<	1	UJ	1.1	1		<	1	U	<	1	U	<	1	U
Iron	2310	1	J	1770	1	J	2060	1	J	1740	1	J	1230	1	J	1200	1	J
Lead	1	0.1		0.9	0.1	J	0.4	0.1		0.1	0.1		0.4	0.1		0.6	0.1	
Magnesium	2100	10	D	1290	10	D	1440	1		1320	1	J	1200	1	J	1060	1	J
Manganese	33.1	1		28.3	1	J	38.4	1		24.8	1	J	24.9	1	J	26.1	1	J
Mercury	<	0.01	U	<	0.02	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.8	1		1.4	1	J	1.5	1		1.7	1		1.7	1		1.2	1	
Potassium	442	1	J	417	1	J	517	1	J	425	1	J	371	1	J	280	1	J
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.1	J	<	0.1	J	<	0.1	J
Silver	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J
Sodium	<	146	U	<	123	U	<	109	U	<	172	U	275	1		248	1	
Vanadium	6.7	0.1		3.2	0.1	J	3.7	0.1		3.9	0.1	J	2.5	0.1	J	2	0.1	J

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-010-SB-003			229-010-SB-005			229-010-SB-007			229-011-SB-003			229-011-SB-005			229-011-SB-007		
LAB SAMPLE NUMBER	D93-6755-18			D93-6755-19			D93-6755-20			D93-6806-3			D93-6806-4			D93-6806-5		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc	6	1		5.1	1	J	4.8	1		3.8	1	J	3.2	1	J	2.8	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	43	10		17	10		6800	100	D	10	10		340	10		7000	100	D
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	87.2	0.01		85.5	0.01		82.7	0.01		87.2	0.01		84.9	0.01		85.4	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-012-SB-003			229-012-SB-005			229-012-SB-007			229-013-SB-003			229-013-SB-005			229-014-SB-003		
LAB SAMPLE NUMBER	D93-6806-6			D93-6806-7			D93-6806-8			D93-6806-9			D93-6806-10			D93-6804-21		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	50	DU	<	1000	DU	<	2	DU	<	10	DU	<	2	DU
Ethylbenzene	<	2	DU	480	50	J	33000	1000	D	<	2	DU	46	10		<	2	DU
Toluene	<	2	DU	80	50	J	43000	1000	D	<	2	DU	<	10	DU	<	2	DU
Xylenes	<	2	DU	2200	50	J	91000	1000	D	<	2	DU	270	10		<	2	DU
Metals (mg/Kg)																		
Aluminum	906	1	J	1270	1	J	1220	1	J	3490	1	J	2200	1	J	1140	1	
Arsenic	0.7	0.1		0.6	0.1		0.5	0.1		1.2	0.1		1.4	0.1		0.4	0.1	
Barium	8.9	1		11.8	1		10.6	1		24.2	1		38	1		13.4	1	
Calcium	22100	100	J	27100	100	J	30500	100	J	46300	100	J	21700	100	J	35600	100	D
Chromium	3.2	1	J	2.2	1	J	<	1	J	6	1	J	2.9	1	J	1.6	1	
Cobalt	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J	<	1	U
Copper	<	1	U	<	1	U	<	1	U	3	1		1.6	1		<	1	U
Iron	1100	1	J	1410	1	J	1450	1	J	3420	1	J	2380	1	J	1510	1	
Lead	0.5	0.1		0.5	0.1		0.3	0.1		5.4	0.5	D	2.4	0.1		0.5	0.1	
Magnesium	733	1	J	997	1	J	1090	1	J	4350	10	J	1090	1	J	897	1	
Manganese	19.5	1	J	22.5	1	J	20.1	1	J	76.8	1	J	42.6	1	J	28.5	1	
Mercury	<	0.01	U	0.03	0.01		0.04	0.01		0.03	0.01		<	0.01	U	<	0.01	U
Nickel	1.8	1		1.9	1		<	1	U	3.9	1		2.7	1		1.3	1	
Potassium	226	1	J	329	1	J	348	1	J	960	1	J	683	1	J	377	1	
Selenium	<	0.1	J	<	0.1	J	<	0.1	J	<	0.1	J	<	0.1	J	<	0.5	DU
Silver	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J	<	1	U
Sodium	<	102	U	<	199	U	<	112	U	<	105	U	<	110	U	<	119	U
Vanadium	2.7	0.1	J	2.3	0.1	J	2.6	0.1	J	6.1	0.1	J	4.4	0.1	J	2.2	0.1	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-012-SB-003			229-012-SB-005			229-012-SB-007			229-013-SB-003			229-013-SB-005			229-014-SB-003		
LAB SAMPLE NUMBER	D93-6806-6			D93-6806-7			D93-6806-8			D93-6806-9			D93-6806-10			D93-6804-21		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc	2.3	1	J	2.8	1	J	2.9	1	J	12.5	1	J	6.1	1	J	3.1	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	660	10		35000	1000	D	280	10		410	10		<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	87.1	0.01		86.8	0.01		84.1	0.01		85.7	0.01		82.9	0.01		88.6	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-014-SB-005			229-014-SB-007			229-015-SB-005			229-015-SB-007			229-016-SB-005			229-016-SB-007		
LAB SAMPLE NUMBER	D93-6806-1			D93-6806-2			D93-6806-11			D93-6806-12			D93-6806-13			D93-6806-14		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	75000	10000	D	<	2	DU	<	2	DU	90000	20000	D	<	500	DU
Ethylbenzene	<	2	DU	210000	10000	D	<	2	DU	<	2	DU	300000	20000	D	9000	500	D
Toluene	<	2	DU	510000	10000	D	<	2	DU	<	2	DU	600000	20000	D	8600	500	D
Xylenes	<	2	DU	400000	10000	D	<	2	DU	<	2	DU	600000	20000	D	21000	500	D
Metals (mg/Kg)																		
Aluminum	1130	1	J	1070	1	J	1580	1	J	1850	1	J	878	1	J	3410	1	J
Arsenic	0.8	0.1		0.6	0.1		1.3	0.1		1.1	0.1		0.4	0.1		0.9	0.1	
Barium	<		R	11.4	1		70.1	1		79.1	1		11.8	1		34	1	
Calcium	20200	100	J	24200	100	J	60100	100	J	104000	100	J	21200	100	J	79700	100	J
Chromium	<	1	J	<	1	J	2.7	1	J	2	1	J	2.2	1	J	4.9	1	J
Cobalt	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J
Copper	<	1	U	<	1	U	<	1	U	1.1	1		<	1	U	1.7	1	
Iron	1220	1	J	1220	1	J	1240	1	J	1530	1	J	1100	1	J	3900	1	J
Lead	<	0.1	U	0.3	0.1		2.7	0.5	D	0.4	0.1		0.6	0.1		1.7	0.1	
Magnesium	1280	1	J	1130	1	J	1610	1	J	1930	1	J	815	1	J	2710	1	J
Manganese	30.3	1	J	24.6	1	J	11.1	1	J	14.3	1	J	24.5	1	J	64.2	1	J
Mercury	<	0.01	U	0.03	0.01		<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.8	1		1.3	1		1.8	1		2.5	1		1.5	1		2.9	1	
Potassium	427	1	J	425	1	J	306	1	J	406	1	J	258	1	J	910	1	J
Selenium	<	0.1	J	<	0.1	J	<	0.1	J	<	0.1	J	<	0.1	J	<	0.1	J
Silver	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J
Sodium	<	80.2	U	<	104	U	1340	1	J	1750	1	J	<	109	U	567	1	J
Vanadium	2	0.1	J	1.8	0.1	J	3	0.1	J	4	0.1	J	1.9	0.1	J	7.4	0.1	J

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-014-SB-005			229-014-SB-007			229-015-SB-005			229-015-SB-007			229-016-SB-005			229-016-SB-007		
LAB SAMPLE NUMBER	D93-6806-1			D93-6806-2			D93-6806-11			D93-6806-12			D93-6806-13			D93-6806-14		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc	3.8	1	J	3.3	1	J	3.3	1	J	5.5	1	J	3.2	1	J	9.3	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	27000	1000	D	<	10	U	<	10	U	37000	1000	D	2300	100	D
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	81.7	0.01		81.2	0.01		88.4	0.01		86.3	0.01		82.7	0.01		78.5	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-017-SB-007			229-017-SB-012			229-018-SB-002			229-020-SB-005			229-021-SB-007			229-029-SB-003		
LAB SAMPLE NUMBER	D93-6806-15			D93-6806-16			D93-6806-18			D93-6755-10			D93-6755-11			D93-8120-2		
COLLECT DATE	06/10/93			06/10/93			06/11/93			06/09/93			06/09/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	12000	1000	D	<	2	DU	<	2	DU	<	2000	DU	<	2	U
Ethylbenzene	<	2	DU	32000	1000	D	<	2	DU	<	2	DU	56000	2000	D	<	2	U
Toluene	<	2	DU	54000	1000	D	<	2	DU	<	2	DU	71000	2000	D	<	2	U
Xylenes	<	2	DU	61000	1000	D	<	2	DU	<	2	DU	110000	2000	D	<	2	U
Metals (mg/Kg)																		
Aluminum	1710	1	J	4830	1	J				1510	1	J	1030	1	J			
Arsenic	0.6	0.1		2	0.1					0.7	0.1		0.7	0.1		1.2	0.5	
Barium	14.7	1		52.6	1					16.7	1		15.6	1		19	2	
Calcium	78500	100	J	48000	100	J				77700	100	D	84000	100	D	95200	1000	D
Chromium	1.6	1	J	8.4	1	J				3.2	1		1.6	1		2.9	7	J
Cobalt	<	1	J	1.6	1	J				<	1	UJ	<	1	UJ			
Copper	<	1	U	4.3	1					<	1	U	1.1	1				
Iron	1870	1	J	6760	1	J				1890	1	J	1710	1	J			
Lead	0.5	0.1		5.1	0.5	D				0.9	0.1		0.8	0.1		0.5	0.2	
Magnesium	1260	1	J	11200	10	J				1770	1		1240	1		1900	5	
Manganese	31.2	1	J	505	1	J				28.4	1		41.7	1				
Mercury	<	0.01	U	<	0.01	U				<	0.01	U	<	0.01	U	<	0.01	U
Nickel	2	1		11	1					<	1	U	1.1	1				
Potassium	537	1	J	1120	1	J				446	1	J	428	1	J	433	100	J
Selenium	<	0.1	J	<	0.1	J				<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	J	<	1	J				<	1	J	1	1	J	<	1	U
Sodium	<	140	U	<	117	U				<	160	U	<	115	U	105	10	
Vanadium	3.7	0.1	J	11.9	0.1	J				3.8	0.1		3.3	0.1				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-017-SB-007			229-017-SB-012			229-018-SB-002			229-020-SB-005			229-021-SB-007			229-029-SB-003		
LAB SAMPLE NUMBER	D93-6806-15			D93-6806-16			D93-6806-18			D93-6755-10			D93-6755-11			D93-8120-2		
COLLECT DATE	06/10/93			06/10/93			06/11/93			06/09/93			06/09/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc	4.2	1	J	17.8	1	J				4.9	1		4.8	1				
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	1400	100	D	<	10	U	<	10	U	5400	100	D	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	86.6	0.01		84.7	0.01		78	0.01		83.3	0.01		83.6	0.01		92.9	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-029-SB-006			229-031-SB-003			229-031-SB-005			229-032-SB-003			229-032-SB-007			229-033-SB-003		
LAB SAMPLE NUMBER	D93-8120-3			D93-8120-4			D93-8120-7			D93-8120-8			D93-8120-9			D93-8120-10		
COLLECT DATE	07/14/93			07/15/93			07/15/93			07/15/93			07/15/93			07/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	80	2		13000	5000	D	64000	5000	D	<	2	U	1500	200	D	<	2	U
Ethylbenzene	105	2		91000	5000	D	190000	5000	D	<	2	U	7900	200	D	8	2	J
Toluene	170	2		180000	5000	D	390000	5000	D	<	2	U	15000	200	D	10	2	J
Xylenes	220	2		230000	5000	D	410000	5000	D	<	2	U	18000	200	D	21	2	J
Metals (mg/Kg)																		
Aluminum																		
Arsenic	0.9	0.5		1.5	0.5		0.7	0.5		0.8	0.5		1.6	0.5		0.8	0.5	
Barium	10.6	2		47.2	2	J	14.3	2		13.5	2		51.8	2		12.9	2	
Calcium	66600	1000	D	73200	1000	D	42300	1000	D	85400	1000	D	100000	1000	D	61800	1000	D
Chromium	1.4	7	J	<	1	U	2	7	J	<	1	U	6.2	7	J	1	7	J
Cobalt																		
Copper																		
Iron																		
Lead	0.3	0.2		0.8	0.2	J	0.7	0.2		0.3	0.2		3.6	1	D	0.4	0.2	J
Magnesium	625	5		985	5		1160	5		1020	5		4300	50	D	997	5	
Manganese																		
Mercury	<	0.01	U	0.01	0.5	J	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel																		
Potassium	259	100		415	100		440	100		479	100		1150	100		378	100	J
Selenium	<	0.5	DU	<	0.1	UJ	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Sodium	86	10		137	10		126	10		87	10		145	10		94	10	
Vanadium																		

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J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-029-SB-006			229-031-SB-003			229-031-SB-005			229-032-SB-003			229-032-SB-007			229-033-SB-003		
LAB SAMPLE NUMBER	D93-8120-3			D93-8120-4			D93-8120-7			D93-8120-8			D93-8120-9			D93-8120-10		
COLLECT DATE	07/14/93			07/15/93			07/15/93			07/15/93			07/15/93			07/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc																		
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	170	10		8210	100	D	17000	1000	D	<	10	U	1400	100	D	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	88.2	0.01		90.3	0.01		87.1	0.01		96.8	0.01		87.1	0.01		99.1	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-033-SB-007			229-034-SB-003			229-034-SB-007			229-035-SB-003			229-035-SB-006			229-044-SB-003		
LAB SAMPLE NUMBER	D93-8120-11			D93-8120-12			D93-8120-13			D93-8120-14			D93-8120-15			D93-8120-1		
COLLECT DATE	07/15/93			07/15/93			07/15/93			07/15/93			07/15/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	U	<	2	U	<	5000	DU	<	2	U	<	2	U	<	2	U
Ethylbenzene	<	2	U	<	2	U	5000	5000	DJ	<	2	U	<	2	U	<	2	U
Toluene	<	2	U	<	2	U	15000	5000	DJ	<	2	U	<	2	U	<	2	U
Xylenes	<	2	U	<	2	U	49000	5000	DJ	<	2	U	<	2	U	<	2	U
Metals (mg/Kg)																		
Aluminum																		
Arsenic	1	0.5		0.8	0.5		0.9	0.5		1.3	0.5		1	0.5		1.4	0.5	
Barium	18	2		13.5	2		11.6	2		23.7	2		10.2	2		13.2	2	
Calcium	77200	1000	D	59300	1000	D	76100	1000	D	104000	1000	D	105000	1000	D	94900	1000	D
Chromium	<	1	U	<	1	U	1.7	7	J	1.4	7	J	<	1	U	<	1	U
Cobalt																		
Copper																		
Iron																		
Lead	0.7	0.2		0.4	0.2		0.3	0.2		0.2	0.2		<	0.1	U	<	0.1	U
Magnesium	1240	5		1300	5		854	5		5550	50	D	1360	5		1320	5	
Manganese																		
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel																		
Potassium	460	100		436	100		347	100		322	100		196	100		216	100	J
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Sodium	76	10		<	56	U	116	10		3230	100	D	1610	10		141	10	
Vanadium																		

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TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-033-SB-007			229-034-SB-003			229-034-SB-007			229-035-SB-003			229-035-SB-006			229-044-SB-003		
LAB SAMPLE NUMBER	D93-8120-11			D93-8120-12			D93-8120-13			D93-8120-14			D93-8120-15			D93-8120-1		
COLLECT DATE	07/15/93			07/15/93			07/15/93			07/15/93			07/15/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc																		
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	3300	100	D	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	96.3	0.01		96.5	0.01		97.7	0.01		99.3	0.01		90	0.01		94.1	0.01	

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TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-048-SB-007			229-MW1-SB-007			229-MW10-SB-011			229-MW10-SB-014			229-MW11-SB-003			229-MW11-SB-006		
LAB SAMPLE NUMBER	D93-8120-16			D93-6806-19			D93-8109-1			D93-8109-2			D93-8109-3			D93-8109-4		
COLLECT DATE	07/15/93			06/11/93			07/13/93			07/13/93			07/14/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	U	3800	1000	D	<	2	U	<	2	U	<	2	U	<	2	U
Ethylbenzene	<	2	U	31000	1000	D	<	2	U	<	2	U	<	2	U	<	2	U
Toluene	3	2		76000	1000	D	<	2	U	<	2	U	<	2	U	<	2	U
Xylenes	4	2	J	81000	1000	D	<	2	U	<	2	U	<	2	U	<	2	U
Metals (mg/Kg)																		
Aluminum				1210	1													
Arsenic	0.8	0.5		0.6	0.1		0.6	0.5	J	0.6	0.5		3	0.5		0.5	0.5	J
Barium	17.1	2		13.6	1		13.8	2		22.5	2		25.8	2		14.4	2	
Calcium	72700	1000	D	23200	10	D	112000	1000	D	130000	1000	D	87000	1000	D	113000	1000	D
Chromium	1.5	7	J	1.9	1		<	1	U	2.1	7	J	2	7	J	<	1	U
Cobalt				<	1	U												
Copper				<	1	U												
Iron				1580	1													
Lead	0.6	0.2		0.8	0.1		0.3	0.2	J	0.9	0.2		1	0.2		<	0.1	U
Magnesium	1200	5		1110	1		1230	5		1640	5		2200	5		820	5	
Manganese				33.2	1													
Mercury	<	0.01	U	<	0.01	U	0.02	0.5	J	<	0.01	U	<	0.01	U	<	0.01	U
Nickel				1.6	1													
Potassium	421	100		394	1		462	100		627	100		949	100		273	100	
Selenium	<	0.5	DU	<	0.1	U	<	0.1	U	<	0.1	U	0.2	0.5	J	0.3	0.5	J
Silver	<	1	U	<	1	U	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ
Sodium	72	10		<	170	U	1220	10	J	1160	10	J	1390	10	J	767	10	J
Vanadium				2.6	0.1													

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TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-048-SB-007			229-MW1-SB-007			229-MW10-SB-011			229-MW10-SB-014			229-MW11-SB-003			229-MW11-SB-006		
LAB SAMPLE NUMBER	D93-8120-16			D93-6806-19			D93-8109-1			D93-8109-2			D93-8109-3			D93-8109-4		
COLLECT DATE	07/15/93			06/11/93			07/13/93			07/13/93			07/14/93			07/14/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc				3.8	1													
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	15000	1000	D	<	10	U	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen							1.64	0.1		1.28	0.1		1.33	0.1		1.74	0.1	
Nitrogen, Total Kjeldahl							322	10		70	10		168	10		336	10	
pH							8.1			8.1			7.7			7.6		
Total Phosphorus							64	10	D	67	20	D	111	20	D	78.9	10	D
Total Organic Carbon							4700	100		6300	100		6600	100		4700	100	
Total Solids	95.9	0.01		82.6	0.01		96.7	0.01		96.9	0.01		93.9	0.01		90.2	0.01	

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TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW12-SB-003			229-MW12-SB-006			229-MW19-SB-007			229-MW2-SB-007			229-MW3-SB-007			229-MW4-SB-012		
LAB SAMPLE NUMBER	D93-8109-5			D93-8109-6			D93-7962-11			D93-6871-1			D93-6957-1			D93-6957-2		
COLLECT DATE	07/14/93			07/14/93			07/13/93			06/12/93			06/15/93			06/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	U	<	2	U	<	2	U	<	2	DU	6000	2000	D	<	2	DU
Ethylbenzene	<	2	U	<	2	U	<	2	U	<	2	DU	52000	2000	D	<	2	DU
Toluene	<	2	U	<	2	U	<	2	U	<	2	DU	110000	2000	D	<	2	DU
Xylenes	<	2	U	<	2	U	<	2	U	<	2	DU	96000	2000	D	<	2	DU
Metals (mg/Kg)																		
Aluminum										913	1		1270	1	J	1140	1	J
Arsenic	0.3	0.5	J	1.4	0.5		1.2	0.5		0.7	0.1	J	0.6	0.1		0.5	0.1	
Barium	7.9	2		19.1	2		14.3	2		10.2	1	J	13.8	1	J	12.2	1	
Calcium	99400	1000	D	86500	1000	D	57900	1000	D	94700	100	D	89200	100	D	76600	10	D
Chromium	<	1	U	<	1	U	1.6	7	J	2.5	1	J	3	1	J	<	1	U
Cobalt										<	1	U	<	1	UJ	<	1	UJ
Copper										<	1	U	<	1	U	<	1	U
Iron										948	1		1630	1	J	1190	1	J
Lead	<	0.1	U	1.2	0.2		0.9	0.2		<	0.1	UJ	<	0.1	UJ	0.3	0.1	
Magnesium	397	5		1170	5		1460	5		883	1		847	1		1140	1	
Manganese										11.8	1		25.5	1	J	23.1	1	J
Mercury	0.04	0.5	J	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel										2.2	1		<	1	UJ	<	1	UJ
Potassium	64	100	J	523	100		520	100		314	1		413	1	J	385	1	J
Selenium	0.1	0.5	J	<	0.1	U	0.1	0.5	J	<	0.1	U	<	0.5	DU	<	0.5	DU
Silver	<	1	UJ	<	1	UJ	<	1	J	<	1	UJ	<	1	UJ	<	1	UJ
Sodium	117	10	J	146	10	J	482	10	J	1020	1	J	142	1	J	132	1	J
Vanadium										3.8	0.1		3.6	0.1	J	2.2	0.1	J

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TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW12-SB-003			229-MW12-SB-006			229-MW19-SB-007			229-MW2-SB-007			229-MW3-SB-007			229-MW4-SB-012		
LAB SAMPLE NUMBER	D93-8109-5			D93-8109-6			D93-7962-11			D93-6871-1			D93-6957-1			D93-6957-2		
COLLECT DATE	07/14/93			07/14/93			07/13/93			06/12/93			06/15/93			06/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc										4.4	1		3.6	1	J	3.4	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	<	10	U	<	10	U	3300	100	D	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen	6.73	0.1		2.08	0.1		2.1	0.1										
Nitrogen, Total Kjeldahl	112	10		140	10		112	10										
pH	8			8			7.7											
Total Phosphorus	12.6	2		69.3	10	D	31	20	D									
Total Organic Carbon	4400	100		3800	100		1500	100										
Total Solids	83.9	0.01		85.1	0.01		86	0.01		68.6	0.01		75.1	0.01		70	0.01	

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J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW5-SB-003			229-MW6-SB-003			229-MW6-SB-006			229-MW7-SB-003			229-MW7-SB-006			229-MW8-SB-003		
LAB SAMPLE NUMBER	D93-6957-5			D93-7962-1			D93-7962-4			D93-7962-5			D93-7962-6			D93-7962-7		
COLLECT DATE	06/16/93			07/12/93			07/12/93			07/12/93			07/12/93			07/13/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	U	<	2	U	<	2	U	<	2	U	<	2	U
Ethylbenzene	<	2	DU	<	2	U	<	2	U	<	2	U	<	2	U	<	2	U
Toluene	<	2	DU	<	2	U	<	2	U	<	2	U	<	2	U	<	2	U
Xylenes	<	2	DU	<	2	U	<	2	U	<	2	U	<	2	U	<	2	U
Metals (mg/Kg)																		
Aluminum	1160	1	J															
Arsenic	1.1	0.1		0.7	0.5		0.9	0.5		1.6	0.5		1.5	0.5		0.7	0.5	
Barium	16	1		13.8	2	J	12.3	2		26.6	2		24.8	2		5.1	2	
Calcium	118000	10	D	81800	1000	D	66900	1000	D	72000	1000	D	50900	1000	D	89700	1000	D
Chromium	1.4	1		<	1	U	<	1	U	2.4	7	J	3.9	7	J	<	1	U
Cobalt	<	1	UJ															
Copper	<	1	U															
Iron	1360	1	J															
Lead	0.9	0.1		<	0.1	J	0.4	0.2		0.9	0.2		1.2	0.2		<	0.1	U
Magnesium	2070	1		1130	5		1680	5		2160	5		3330	5		2060	5	
Manganese	52.6	1	J															
Mercury	<	0.01	U	0.27	0.5	J	1.01	0.5		0.1	0.5	J	0.06	0.5	J	0.22	0.5	J
Nickel	1.2	1	UJ															
Potassium	405	1	J	496	100		690	100		712	100		853	100		278	100	
Selenium	<	0.5	DU	<	0.1	U	<	0.1	U	<	0.1	U	0.1	0.5	J	<	0.1	U
Silver	<	1	UJ	<	1	J	<	1	J	<	1	J	<	1	J	<	1	J
Sodium	140	1	J	<	108	U	<	97	U	444	10	J	429	10	J	1580	10	J
Vanadium	2	0.1	J															

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J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW5-SB-003			229-MW6-SB-003			229-MW6-SB-006			229-MW7-SB-003			229-MW7-SB-006			229-MW8-SB-003		
LAB SAMPLE NUMBER	D93-6957-5			D93-7962-1			D93-7962-4			D93-7962-5			D93-7962-6			D93-7962-7		
COLLECT DATE	06/16/93			07/12/93			07/12/93			07/12/93			07/12/93			07/13/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc	4.3	1	J															
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	<	10	U	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen				<	0.1	U	<	0.1	U	1	0.1		1.57	0.1		26.5	0.5	D
Nitrogen, Total Kjeldahl				126	10		84	10		154	10		126	10		238	10	
pH				7.7			8			7.9			8.3			7.9		
Total Phosphorus				39	20	D	49	20	D	42	20	D	69	20	D	22	20	D
Total Organic Carbon				3300	100		3500	100		3000	100		7700	100		4700	100	
Total Solids	69.9	0.01		85.6	0.01		84.9	0.01		79.8	0.01		73.5	0.01		77.8	0.01	

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J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW8-SB-007			229-MW9-SB-003			229-MW9-SB-007		
LAB SAMPLE NUMBER	D93-7962-8			D93-7962-9			D93-7962-10		
COLLECT DATE	07/13/93			07/13/93			07/13/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)									
Benzene	<	2	U	<	2	U	<	2	U
Ethylbenzene	<	2	U	<	2	U	<	2	U
Toluene	<	2	U	<	2	U	<	2	U
Xylenes	<	2	U	<	2	U	<	2	U
Metals (mg/Kg)									
Aluminum									
Arsenic	0.9	0.5		1.3	0.5		1.3	0.5	
Barium	15.1	2		6.2	2		15.4	2	
Calcium	118000	1000	D	131000	1000	D	48800	1000	D
Chromium	2.1	7	J	<	1	U	2.6	7	J
Cobalt									
Copper									
Iron									
Lead	0.1	0.2	J	<	0.5	DU	0.8	0.2	
Magnesium	1360	5		1270	5		1570	5	
Manganese									
Mercury	0.12	0.5	J	0.07	0.5	J	<	0.01	U
Nickel									
Potassium	536	100		189	100		660	100	
Selenium	0.2	0.5	J	0.2	0.5	J	0.2	0.5	J
Silver	<	1	J	<	1	J	<	1	J
Sodium	933	10	J	1030	10	J	551	10	J
Vanadium									

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6-11
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT SWMU 229

LOCATOR	229-MW8-SB-007			229-MW9-SB-003			229-MW9-SB-007		
LAB SAMPLE NUMBER	D93-7962-8			D93-7962-9			D93-7962-10		
COLLECT DATE	07/13/93			07/13/93			07/13/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Zinc									
TPH (mg/Kg)									
Total Petroleum Hydrocarbon	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)									
Nitrate-Nitrite Nitrogen	11.6	0.1		8.59	0.1		2.19	0.1	
Nitrogen, Total Kjeldahl	238	10		182	10		<	10	U
pH	7.9			8			7.7		
Total Phosphorus	43	20	D	18	20	DJ	35	20	D
Total Organic Carbon	2900	100		3300	100		1700	100	
Total Solids	78.4	0.01		79.7	0.01		86.8	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-1
SUMMARY OF GROUNDWATER SAMPLING FOR CHEMICAL ANALYSIS AT BUILDING 828

Sample Location	Sample Identification	Sample Date	Parameters												Comments
			VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TDS/Alk Cl/Fl/SO4 (4)	Nitrate/ Nitrite	PO4 (5)	Total Phosphorous	Dissolved Iron (6)	TOC (7)	TKN (8)	BOD/ COD (9)	Dissolved Oxygen (10)	
230-MW1	230-001-MW-001	6/17/93	X	X		X	X	X							QA/QC Postive control
230-MW2	230-002-MW-001	6/18/93	X	X		X	X	X							
	230-MW2-RN-001	6/18/93	X	X											Equipment rinsate
230-MW3	230-003-MW-001	6/18/93	X	X		X	X	X							Field split USACE-MRD lab
	230-025-MW-001	6/18/93	X	X		X	X	X							Blind duplicate
230-MW4	230-004-MW-001	6/17/93	X	X		X	X	X							
230-MW6	230-006-MW-001	7/16/93	X		X	X	X	X	X	X	X	X	X	X	
230-MW7	230-007-MW-001	7/16/93	X		X										

(1) Volatile Organic Compounds (Method 8020 - Benzene, Toluene, Ethylbenzene, Xylenes)
(2) Total metals - Target Analyte List
(3) Total metals - Resource Conservation and Recovery Act (RCRA) List plus Sodium, Calcium, Magnesium, and Potassium
(4) Total Dissolved Solids, Alkalinity, Chloride, Fluoride, and Sulfate
(5) Orthophosphate
(6) Filtered prior to collection
(7) Total Organic Carbon
(8) Total Kjeldahl Nitrogen
(9) Biochemical Oxygen Demand / Chemical Oxygen Demand
(10) Measured in the field with a dissolved oxygen membrane probe
MS/MSD = Matrix Spike / Matrix Spike Duplicate
USACE-MRD = United States Army Corps of Engineers - Missouri River Division

TABLE 6.2-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS AT BUILDING 828

Sample Location	Sample Identification	Sample Date	Parameter: VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
230-SB1	230-001-SB-02.5	6/7/93	X	X		X						
	230-001-SB-07.5	6/7/93	X	X		X						
	230-001-SB-09.5	6/7/93	X	X		X						
230-SB2	230-002-SB-003	6/10/93	X	X		X						
	230-002-SB-006	6/10/93	X	X		X						
	230-002-SB-009	6/10/93	X	X		X						Field split to USACE-MRD lab
230-SB3	230-003-SB-003	6/8/93	X	X		X						
	230-003-SB-006	6/8/93	X	X		X						
	230-003-SB-009	6/8/93	X	X		X						
	230-025-SB-009	6/8/93	X	X		X						Blind duplicate
230-SB4	230-004-SB-003	6/8/93	X	X		X						
	230-004-SB-005	6/8/93	X	X		X						
	230-004-SB-008	6/8/93	X	X		X						
230-SB5	230-005-SB-003	6/10/93	X	X		X						
	230-005-SB-006	6/10/93	X	X		X						
	230-005-SB-009	6/10/93	X	X		X						
	230-027-SB-009	6/10/93	X	X		X						Blind duplicate
230-SB6	230-006-SB-003	6/10/93	X	X		X						
	230-006-SB-006	6/10/93	X	X		X						
	230-006-SB-009	6/10/93	X	X		X						
			X									MS/MSD
				X								MS
230-SB7	230-007-SB-005	6/9/93	X	X		X						
	230-007-SB-007	6/9/93	X	X		X						
	230-007-SB-009	6/9/93	X	X		X						
230-SB8	230-008-SB-003	6/9/93	X	X		X						
	230-008-SB-006	6/9/93	X	X		X						
	230-008-SB-009	6/9/93	X	X		X						
			X									MS/MSD
				X								MS
230-SB9	230-009-SB-004	6/8/93	X	X		X						
	230-009-SB-007	6/8/93	X	X		X						
	230-009-SB-009	6/8/93	X	X		X						
230-SB10	230-010-SB-003	6/9/93	X	X		X						
	230-010-SB-006	6/9/93	X	X		X						

TABLE 6.2-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS
AT BUILDING 828

Sample Location	Sample Identification	Sample Date	VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
230-SB10	230-010-SB-009	6/9/93	X	X		X						
230-SB11	230-011-SB-003	6/10/93	X	X		X						
	230-011-SB-006	6/10/93	X	X		X						
	230-011-SB-009	6/10/93	X	X		X						
230-SB12	230-012-SB-003	6/9/93	X	X		X						
	230-012-SB-006	6/9/93	X	X		X						
	230-012-SB-009	6/9/93	X	X		X						Field split to USACE-MRD lab
230-SB13	230-013-SB-003	6/9/93	X	X		X						
	230-013-SB-006	6/9/93	X	X		X						
	230-013-SB-009	6/9/93	X	X		X						
230-SB14	230-014-SB-003	6/9/93	X	X		X						
	230-014-SB-006	6/9/93	X	X		X						
	230-036-SB-006	6/9/93	X	X		X						Blind duplicate
	230-014-SB-009	6/9/93	X	X		X						
230-SB15	230-015-SB-003	6/9/93	X	X		X						
	230-015-SB-006	6/9/93	X	X		X						
			X									MS/MSD
				X								MS
	230-015-SB-009	6/9/93	X	X		X						
230-SB16	230-016-SB-006	6/10/93	X	X		X						
	230-016-SB-009	6/10/93	X	X		X						
230-SB17	230-017-SB-003	6/10/93	X	X		X						
	230-017-SB-006	6/10/93	X	X		X						
	230-017-SB-009	6/10/93	X	X		X						Field split to USACE-MRD lab
230-SB18	230-018-SB-009	6/10/93	X	X		X						
230-SB20	230-020-SB-003	7/8/93	X		X	X						
	230-020-SB-007	7/8/93	X		X	X						
230-SB21	230-021-SB-003	7/8/93	X		X	X						
	230-021-SB-006	7/8/93	X		X	X						
			X									MS/MSD
					X							MS
230-MW1	230-MW1-SB-010	6/11/93	X	X		X						
230-MW2	230-MW2-SB-010	6/15/93	X	X		X						
230-MW3	230-MW3-SB-010	6/15/93	X	X		X						
230-MW4	230-MW4-SB-010	6/12/93	X	X		X						

TABLE 6.2-2
SUMMARY OF SOIL SAMPLING FOR CHEMICAL ANALYSIS
AT BUILDING 828

Sample Location	Sample Identification	Sample Date	VOCs (1)	TAL Metals (2)	RCRA Metals (3)	TPH (4)	TOC (5)	pH	Total Phosphorous	TKN (6)	Nitrate/ Nitrite	Comments
230-MW5	230-MW5-SB-003	7/8/93	X		X	X	X	X	X	X	X	
	230-MW5-SB-006	7/8/93	X		X	X	X	X	X	X	X	
	230-MW10-SB-006	7/8/93	X		X	X	X	X	X	X	X	Blind duplicate
230-MW6	230-MW6-SB-003	7/9/93	X		X	X	X	X	X	X	X	
	230-MW6-SB-006	7/9/93	X		X	X	X	X	X	X	X	
230-MW7	230-MW7-SB-003	7/9/93	X		X	X	X	X	X	X	X	
	230-MW7-SB-006	7/9/93	X		X	X	X	X	X	X	X	

(1) Volatile Organic Compounds (Method 8020 - Benzene, Toluene, Ethylbenzene, Xylenes)
(2) Total metals - Target Analyte List
(3) Total metals - Resource Conservation and Recovery Act (RCRA) List plus Sodium, Calcium, Magnesium, and Potassium
(4) Total Petroleum Hydrocarbons
(5) Total Organic Carbon
(6) Total Kjeldahl Nitrogen
MS/MSD = Matrix Spike / Matrix Spike Duplicate
USACE-MRD = United States Army Corps of Engineers - Missouri River Division

TABLE 6.2-3
QUALIFICATIONS BASED ON MATRIX INTERFERENCE - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-7108-2	230-002-MW-001	6010	Cobalt	J
D93-7108-2	230-002-MW-001	6010	Potassium	J
D93-7108-2	230-002-MW-001	6010	Sodium	J
D93-7108-1	230-002-RN-001	6010	Cobalt	J
D93-7108-1	230-002-RN-001	6010	Potassium	J
D93-7108-1	230-002-RN-001	6010	Sodium	U
D93-7108-3	230-003-MW-001	6010	Cobalt	J
D93-7108-3	230-003-MW-001	6010	Potassium	J
D93-7108-3	230-003-MW-001	6010	Sodium	J
D93-7108-6	230-005-MW-001	6010	Cobalt	UJ
D93-7108-6	230-005-MW-001	6010	Potassium	J
D93-7108-6	230-005-MW-001	6010	Sodium	J
D93-6755-1	230-007-SB-009	6010	Potassium	J
D93-6755-1	230-007-SB-009	6010	Cobalt	J
D93-6755-1	230-007-SB-009	6010	Sodium	J
D93-6755-2	230-008-SB-003	6010	Potassium	J
D93-6755-2	230-008-SB-003	6010	Cobalt	J
D93-6755-2	230-008-SB-003	6010	Sodium	J
D93-6755-3	230-008-SB-006	6010	Potassium	J
D93-6755-3	230-008-SB-006	6010	Cobalt	J
D93-6755-3	230-008-SB-006	6010	Sodium	J
D93-6755-4	230-008-SB-009	6010	Potassium	J
D93-6755-4	230-008-SB-009	6010	Cobalt	J
D93-6755-4	230-008-SB-009	6010	Sodium	J
D93-6755-6	230-010-SB-003	6010	Potassium	J
D93-6755-6	230-010-SB-003	6010	Cobalt	J
D93-6755-6	230-010-SB-003	6010	Sodium	J
D93-6755-7	230-010-SB-006	6010	Potassium	J
D93-6755-7	230-010-SB-006	6010	Cobalt	J
D93-6755-7	230-010-SB-006	6010	Sodium	J
D93-6755-8	230-010-SB-009	6010	Potassium	J
D93-6755-8	230-010-SB-009	6010	Cobalt	J
D93-6755-8	230-010-SB-009	6010	Sodium	J
D93-7108-5	230-025-MW-001	6010	Cobalt	J
D93-7108-5	230-025-MW-001	6010	Potassium	J
D93-7108-5	230-025-MW-001	6010	Sodium	J

TABLE 6.2-3
QUALIFICATIONS BASED ON MATRIX INTERFERENCE - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6755-9	230-036-SB-006	6010	Potassium	J
D93-6755-9	230-036-SB-006	6010	Cobalt	J
D93-6755-9	230-036-SB-006	6010	Sodium	J
D93-6957-4	230-MW2-SB-010	6010	Sodium	J
D93-6957-3	230-MW3-SB-010	6010	Sodium	J
D93-6871-2	230-MW4-SB-010	6010	Sodium	J

TABLE 6.2-4
QUALIFICATIONS BASED ON INITIAL/CONTINUING CALIBRATION - SWMU 230

SDG	W-C ID	METHOD	ANALYTE
D93-7108-2	230-002-MW-001	6010	Aluminum
D93-7108-2	230-002-MW-001	7421	Lead
D93-7108-2	230-002-MW-001	6010	Chromium
D93-7108-1	230-002-RN-001	6010	Aluminum
D93-7108-1	230-002-RN-001	7421	Lead
D93-7108-1	230-002-RN-001	6010	Chromium
D93-7108-3	230-003-MW-001	6010	Aluminum
D93-7108-3	230-003-MW-001	7421	Lead
D93-7108-3	230-003-MW-001	6010	Chromium
D93-7108-6	230-005-MW-001	7421	Lead
D93-7108-6	230-005-MW-001	6010	Aluminum
D93-7108-6	230-005-MW-001	6010	Chromium
D93-6755-1	230-007-SB-009	6010	Potassium
D93-6755-2	230-008-SB-003	6010	Potassium
D93-6755-3	230-008-SB-006	6010	Potassium
D93-6755-4	230-008-SB-009	6010	Potassium
D93-6755-6	230-010-SB-003	6010	Potassium
D93-6755-7	230-010-SB-006	6010	Potassium
D93-6755-8	230-010-SB-009	6010	Potassium
D93-7108-5	230-025-MW-001	6010	Aluminum
D93-7108-5	230-025-MW-001	7421	Lead
D93-7108-5	230-025-MW-001	6010	Chromium
D93-6755-9	230-036-SB-006	6010	Potassium
D93-6694-12	230-004-SB-003	6010	Potassium
D93-6694-13	230-004-SB-005	6010	Potassium
D93-6694-14	230-004-SB-008	6010	Potassium
D93-6694-15	230-003-SB-003	6010	Potassium
D93-6694-16	230-003-SB-006	6010	Potassium
D93-6694-17	230-003-SB-009	6010	Potassium
D93-6694-18	230-025-SB-009	6010	Potassium

TABLE 6.2-5
QUALIFICATIONS BASED ON OUTLYING METHOD BLANK CRITERIA - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6690-5	230-001-SB-07.5	6010	Sodium	U
D93-6690-6	230-001-SB-09.5	6010	Sodium	U
D93-7108-2	230-002-MW-001	6010	Sodium	J
D93-7108-1	230-002-RN-001	6010	Sodium	U
D93-6804-3	230-002-SB-006	6010	Sodium	U
D93-6804-4	230-002-SB-009	6010	Sodium	U
D93-6694-15	230-003-SB-003	6010	Sodium	U
D93-6694-16	230-003-SB-006	6010	Sodium	U
D93-6694-17	230-003-SB-009	6010	Sodium	U
D93-6694-12	230-004-SB-003	6010	Sodium	U
D93-6694-13	230-004-SB-005	6010	Sodium	U
D93-6694-14	230-004-SB-008	6010	Sodium	U
D93-6804-5	230-005-SB-003	6010	Sodium	U
D93-6804-6	230-005-SB-006	6010	Sodium	U
D93-6804-7	230-005-SB-009	6010	Sodium	U
D93-6755-1	230-007-SB-009	6010	Sodium	U
D93-6755-2	230-008-SB-003	6010	Sodium	U
D93-6755-2	230-008-SB-003	7471	Mercury	U
D93-6755-3	230-008-SB-006	6010	Sodium	U
D93-6755-3	230-008-SB-006	7471	Mercury	U
D93-6755-3	230-008-SB-006	6010	Potassium	UJ
D93-6755-4	230-008-SB-009	6010	Sodium	U
D93-6755-4	230-008-SB-009	7471	Mercury	U
D93-6690-7	230-009-SB-004	6010	Sodium	U
D93-6690-8	230-009-SB-007	6010	Sodium	U
D93-6755-6	230-010-SB-003	6010	Sodium	U
D93-6755-7	230-010-SB-006	6010	Sodium	U
D93-6804-15	230-011-SB-003	6010	Sodium	U
D93-6804-16	230-011-SB-006	6010	Sodium	U
D93-6804-21	230-014-SB-003	6010	Sodium	U
D93-6804-18	230-016-SB-006	6010	Sodium	U
D93-6804-19	230-016-SB-009	6010	Sodium	U
D93-6804-12	230-017-SB-003	6010	Sodium	U
D93-6804-20	230-018-SB-009	6010	Sodium	U
D93-7779-4	230-021-SB-003	6010	Sodium	U
D93-7779-5	230-021-SB-006	6010	Sodium	U
D93-6694-18	230-025-SB-009	6010	Sodium	U

TABLE 6.2-5
QUALIFICATIONS BASED ON OUTLYING METHOD BLANK CRITERIA - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUAL
D93-6804-1	230-027-SB-009	6010	Sodium	U
D93-6755-9	230-036-SB-006	6010	Sodium	U
D93-7779-1	230-MW10-SB-006	6010	Sodium	U
D93-7779-7	230-MW5-SB-003	6010	Sodium	U
D93-7779-8	230-MW5-SB-006	6010	Sodium	U

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-7041-3	230-001-MW-001	6010	Magnesium	J
D93-7041-3	230-001-MW-001	6010	Potassium	J
D93-7041-3	230-001-MW-001	6010	Sodium	DJ
D93-7041-3	230-001-MW-001	6010	Beryllium	UJ
D93-7041-3	230-001-MW-001	6010	Nickel	UJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Calcium	DJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Magnesium	DJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Potassium	J
D93-7041-5	230-001-MW-001-PC-Primary	6010	Sodium	DJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Beryllium	UJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Nickel	UJ
D93-6690-4	230-001-SB-02.5	6010	Aluminum	J
D93-6690-4	230-001-SB-02.5	6010	Copper	J
D93-6690-4	230-001-SB-02.5	6010	Potassium	J
D93-6690-4	230-001-SB-02.5	6010	Silver	UJ
D93-6690-4	230-001-SB-02.5	6010	Thallium	UJ
D93-6690-4	230-001-SB-02.5	6010	Vanadium	J
D93-6690-4	230-001-SB-02.5	6010	Zinc	J
D93-6690-5	230-001-SB-07.5	6010	Aluminum	J
D93-6690-5	230-001-SB-07.5	6010	Copper	J
D93-6690-5	230-001-SB-07.5	6010	Potassium	J
D93-6690-5	230-001-SB-07.5	6010	Silver	UJ
D93-6690-5	230-001-SB-07.5	6010	Thallium	UJ
D93-6690-5	230-001-SB-07.5	6010	Zinc	J
D93-6690-6	230-001-SB-09.5	6010	Aluminum	J
D93-6690-6	230-001-SB-09.5	6010	Copper	UJ
D93-6690-6	230-001-SB-09.5	6010	Potassium	J
D93-6690-6	230-001-SB-09.5	6010	Silver	UJ
D93-6690-6	230-001-SB-09.5	6010	Thallium	UJ
D93-6690-6	230-001-SB-09.5	6010	Vanadium	J
D93-6690-6	230-001-SB-09.5	6010	Zinc	J
D93-7108-2	230-002-MW-001	6010	Beryllium	UJ
D93-7108-2	230-002-MW-001	6010	Cadnium	UJ
D93-7108-2	230-002-MW-001	6010	Iron	J
D93-7108-2	230-002-MW-001	6010	Silver	UJ
D93-7108-2	230-002-MW-001	6010	Vanadium	J
D93-7108-2	230-002-MW-001	7740	Selenium	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-7108-1	230-002-RN-001	6010	Beryllium	UJ
D93-7108-1	230-002-RN-001	6010	Cadnium	UJ
D93-7108-1	230-002-RN-001	6010	Iron	UJ
D93-7108-1	230-002-RN-001	6010	Vanadium	UJ
D93-7108-1	230-002-RN-001	7740	Selenium	UJ
D93-6804-2	230-002-SB-003	6010	Sodium	J
D93-7108-3	230-003-MW-001	6010	Beryllium	UJ
D93-7108-3	230-003-MW-001	6010	Cadnium	UJ
D93-7108-3	230-003-MW-001	6010	Iron	J
D93-7108-3	230-003-MW-001	6010	Silver	UJ
D93-7108-3	230-003-MW-001	6010	Vanadium	J
D93-7108-3	230-003-MW-001	7740	Selenium	UJ
D93-6694-15	230-003-SB-003	6010	Aluminum	J
D93-6694-15	230-003-SB-003	6010	Beryllim	UJ
D93-6694-15	230-003-SB-003	6010	Calcium	DJ
D93-6694-15	230-003-SB-003	6010	Iron	J
D93-6694-15	230-003-SB-003	6010	Magnesium	J
D93-6694-15	230-003-SB-003	6010	Manganese	J
D93-6694-15	230-003-SB-003	6010	Nickel	J
D93-6694-15	230-003-SB-003	6010	Potassium	J
D93-6694-15	230-003-SB-003	6010	Silver	UJ
D93-6694-15	230-003-SB-003	6010	Thallium	UJ
D93-6694-15	230-003-SB-003	6010	Vanadium	J
D93-6694-15	230-003-SB-003	6010	Zinc	J
D93-6694-16	230-003-SB-006	6010	Aluminum	J
D93-6694-16	230-003-SB-006	6010	Beryllim	UJ
D93-6694-16	230-003-SB-006	6010	Calcium	DJ
D93-6694-16	230-003-SB-006	6010	Iron	J
D93-6694-16	230-003-SB-006	6010	Magnesium	J
D93-6694-16	230-003-SB-006	6010	Manganese	J
D93-6694-16	230-003-SB-006	6010	Nickel	J
D93-6694-16	230-003-SB-006	6010	Potassium	J
D93-6694-16	230-003-SB-006	6010	Silver	UJ
D93-6694-16	230-003-SB-006	6010	Thallium	UJ
D93-6694-16	230-003-SB-006	6010	Vanadium	J
D93-6694-16	230-003-SB-006	6010	Zinc	J
D93-6694-17	230-003-SB-009	6010	Aluminum	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6694-17	230-003-SB-009	6010	Beryllim	UJ
D93-6694-17	230-003-SB-009	6010	Calcium	DJ
D93-6694-17	230-003-SB-009	6010	Iron	J
D93-6694-17	230-003-SB-009	6010	Manganese	J
D93-6694-17	230-003-SB-009	6010	Nickel	J
D93-6694-17	230-003-SB-009	6010	Potassium	J
D93-6694-17	230-003-SB-009	6010	Silver	UJ
D93-6694-17	230-003-SB-009	6010	Thallium	UJ
D93-6694-17	230-003-SB-009	6010	Vanadium	J
D93-6694-17	230-003-SB-009	6010	Zinc	J
D93-6694-17	230-003-SB-009	6010	Magnesium	DJ
D93-7041-4	230-004-MW-001	6010	Calcium	DJ
D93-7041-4	230-004-MW-001	6010	Magnesium	J
D93-7041-4	230-004-MW-001	6010	Potassium	J
D93-7041-4	230-004-MW-001	6010	Sodium	DJ
D93-7041-4	230-004-MW-001	6010	Beryllium	UJ
D93-7041-4	230-004-MW-001	6010	Nickel	UJ
D93-6694-12	230-004-SB-003	6010	Aluminum	J
D93-6694-12	230-004-SB-003	6010	Beryllim	UJ
D93-6694-12	230-004-SB-003	6010	Calcium	DJ
D93-6694-12	230-004-SB-003	6010	Iron	J
D93-6694-12	230-004-SB-003	6010	Magnesium	J
D93-6694-12	230-004-SB-003	6010	Manganese	J
D93-6694-12	230-004-SB-003	6010	Nickel	J
D93-6694-12	230-004-SB-003	6010	Potassium	J
D93-6694-12	230-004-SB-003	6010	Silver	UJ
D93-6694-12	230-004-SB-003	6010	Thallium	UJ
D93-6694-12	230-004-SB-003	6010	Vanadium	UJ
D93-6694-12	230-004-SB-003	6010	Zinc	UJ
D93-6694-13	230-004-SB-005	6010	Aluminum	J
D93-6694-13	230-004-SB-005	6010	Beryllim	UJ
D93-6694-13	230-004-SB-005	6010	Calcium	DJ
D93-6694-13	230-004-SB-005	6010	Iron	J
D93-6694-13	230-004-SB-005	6010	Magnesium	J
D93-6694-13	230-004-SB-005	6010	Manganese	J
D93-6694-13	230-004-SB-005	6010	Nickel	UJ
D93-6694-13	230-004-SB-005	6010	Potassium	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6694-13	230-004-SB-005	6010	Silver	J
D93-6694-13	230-004-SB-005	6010	Thallium	UJ
D93-6694-13	230-004-SB-005	6010	Vanadium	J
D93-6694-13	230-004-SB-005	6010	Zinc	J
D93-6694-14	230-004-SB-008	6010	Aluminum	J
D93-6694-14	230-004-SB-008	6010	Beryllim	UJ
D93-6694-14	230-004-SB-008	6010	Calcium	DJ
D93-6694-14	230-004-SB-008	6010	Iron	J
D93-6694-14	230-004-SB-008	6010	Magnesium	DJ
D93-6694-14	230-004-SB-008	6010	Manganese	J
D93-6694-14	230-004-SB-008	6010	Nickel	J
D93-6694-14	230-004-SB-008	6010	Potassium	J
D93-6694-14	230-004-SB-008	6010	Silver	UJ
D93-6694-14	230-004-SB-008	6010	Thallium	UJ
D93-6694-14	230-004-SB-008	6010	Vanadium	J
D93-6694-14	230-004-SB-008	6010	Zinc	J
D93-7108-6	230-005-MW-001	6010	Beryllium	UJ
D93-7108-6	230-005-MW-001	6010	Cadnium	UJ
D93-7108-6	230-005-MW-001	6010	Iron	J
D93-7108-6	230-005-MW-001	6010	Silver	UJ
D93-7108-6	230-005-MW-001	6010	Vanadium	UJ
D93-7108-6	230-005-MW-001	7740	Selenium	UJ
D93-8154-2	230-006-MW-001	7470	Mercury	J
D93-6804-8	230-006-SB-003	6010	Sodium	J
D93-6804-9	230-006-SB-006	6010	Sodium	J
D93-6804-10	230-006-SB-009	6010	Sodium	U
D93-6752-14	230-007-SB-005	6010	Sodium	J
D93-6752-14	230-007-SB-005	7421	Lead	J
D93-6752-14	230-007-SB-005	6010	Iron	J
D93-6752-14	230-007-SB-005	6010	Silver	UJ
D93-6752-14	230-007-SB-005	7060	Arsenic	DJ
D93-6752-15	230-007-SB-007	6010	Sodium	J
D93-6752-15	230-007-SB-007	7421	Lead	J
D93-6752-15	230-007-SB-007	6010	Iron	J
D93-6752-15	230-007-SB-007	6010	Silver	UJ
D93-6752-15	230-007-SB-007	7060	Arsenic	J
D93-6755-1	230-007-SB-009	6010	Aluminum	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6755-1	230-007-SB-009	6010	Cobalt	UJ
D93-6755-1	230-007-SB-009	6010	Iron	J
D93-6755-1	230-007-SB-009	6010	Potassium	J
D93-6755-1	230-007-SB-009	6010	Thallium	UJ
D93-6755-1	230-007-SB-009	6010	Silver	J
D93-6755-2	230-008-SB-003	6010	Aluminum	J
D93-6755-2	230-008-SB-003	6010	Cobalt	UJ
D93-6755-2	230-008-SB-003	6010	Iron	J
D93-6755-2	230-008-SB-003	6010	Potassium	J
D93-6755-2	230-008-SB-003	6010	Thallium	UJ
D93-6755-2	230-008-SB-003	6010	Silver	J
D93-6755-3	230-008-SB-006	6010	Potassium	UJ
D93-6755-3	230-008-SB-006	6010	Aluminum	J
D93-6755-3	230-008-SB-006	6010	Cobalt	UJ
D93-6755-3	230-008-SB-006	6010	Iron	J
D93-6755-3	230-008-SB-006	6010	Thallium	UJ
D93-6755-3	230-008-SB-006	6010	Silver	J
D93-6755-4	230-008-SB-009	6010	Aluminum	J
D93-6755-4	230-008-SB-009	6010	Cobalt	UJ
D93-6755-4	230-008-SB-009	6010	Iron	J
D93-6755-4	230-008-SB-009	6010	Potassium	J
D93-6755-4	230-008-SB-009	6010	Thallium	UJ
D93-6755-4	230-008-SB-009	6010	Silver	J
D93-6690-7	230-009-SB-004	6010	Aluminum	J
D93-6690-7	230-009-SB-004	6010	Copper	UJ
D93-6690-7	230-009-SB-004	6010	Potassium	J
D93-6690-7	230-009-SB-004	6010	Silver	UJ
D93-6690-7	230-009-SB-004	6010	Thallium	UJ
D93-6690-8	230-009-SB-007	6010	Aluminum	J
D93-6690-8	230-009-SB-007	6010	Copper	UJ
D93-6690-8	230-009-SB-007	6010	Potassium	J
D93-6690-8	230-009-SB-007	6010	Silver	UJ
D93-6690-8	230-009-SB-007	6010	Thallium	UJ
D93-6690-9	230-009-SB-009	6010	Aluminum	J
D93-6690-9	230-009-SB-009	6010	Copper	UJ
D93-6690-9	230-009-SB-009	6010	Potassium	J
D93-6690-9	230-009-SB-009	6010	Silver	UJ

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6690-9	230-009-SB-009	6010	Thallium	UJ
D93-6690-9	230-009-SB-009	6010	Zinc	J
D93-6755-6	230-010-SB-003	6010	Aluminum	J
D93-6755-6	230-010-SB-003	6010	Cobalt	UJ
D93-6755-6	230-010-SB-003	6010	Iron	J
D93-6755-6	230-010-SB-003	6010	Potassium	J
D93-6755-6	230-010-SB-003	6010	Thallium	UJ
D93-6755-6	230-010-SB-003	6010	Silver	J
D93-6755-7	230-010-SB-006	6010	Aluminum	J
D93-6755-7	230-010-SB-006	6010	Cobalt	UJ
D93-6755-7	230-010-SB-006	6010	Iron	J
D93-6755-7	230-010-SB-006	6010	Potassium	J
D93-6755-7	230-010-SB-006	6010	Thallium	UJ
D93-6755-7	230-010-SB-006	6010	Silver	J
D93-6755-8	230-010-SB-009	6010	Aluminum	J
D93-6755-8	230-010-SB-009	6010	Cobalt	UJ
D93-6755-8	230-010-SB-009	6010	Iron	J
D93-6755-8	230-010-SB-009	6010	Potassium	J
D93-6755-8	230-010-SB-009	6010	Thallium	UJ
D93-6755-8	230-010-SB-009	6010	Silver	J
D93-6804-17	230-011-SB-009	6010	Sodium	J
D93-6752-5	230-012-SB-003	6010	Sodium	J
D93-6752-5	230-012-SB-003	7421	Lead	J
D93-6752-5	230-012-SB-003	6010	Iron	J
D93-6752-5	230-012-SB-003	6010	Silver	UJ
D93-6752-5	230-012-SB-003	7060	Arsenic	J
D93-6752-6	230-012-SB-006	6010	Sodium	J
D93-6752-6	230-012-SB-006	7421	Lead	J
D93-6752-6	230-012-SB-006	6010	Iron	J
D93-6752-6	230-012-SB-006	6010	Silver	UJ
D93-6752-6	230-012-SB-006	7060	Arsenic	J
D93-6752-7	230-012-SB-009	6010	Sodium	J
D93-6752-7	230-012-SB-009	7421	Lead	J
D93-6752-7	230-012-SB-009	6010	Iron	J
D93-6752-7	230-012-SB-009	6010	Silver	UJ
D93-6752-7	230-012-SB-009	7060	Arsenic	J
D93-6752-8	230-013-SB-003	6010	Sodium	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6752-8	230-013-SB-003	7421	Lead	DJ
D93-6752-8	230-013-SB-003	6010	Iron	J
D93-6752-8	230-013-SB-003	6010	Silver	UJ
D93-6752-8	230-013-SB-003	7060	Arsenic	J
D93-6752-9	230-013-SB-006	6010	Sodium	J
D93-6752-9	230-013-SB-006	7421	Lead	DJ
D93-6752-9	230-013-SB-006	6010	Iron	J
D93-6752-9	230-013-SB-006	6010	Silver	UJ
D93-6752-9	230-013-SB-006	7060	Arsenic	DJ
D93-6752-10	230-013-SB-009	6010	Sodium	J
D93-6752-10	230-013-SB-009	7421	Lead	J
D93-6752-10	230-013-SB-009	6010	Iron	J
D93-6752-10	230-013-SB-009	6010	Silver	UJ
D93-6752-10	230-013-SB-009	7060	Arsenic	J
D93-6752-11	230-014-SB-003	6010	Sodium	J
D93-6752-11	230-014-SB-003	7421	Lead	DJ
D93-6752-11	230-014-SB-003	6010	Iron	J
D93-6752-11	230-014-SB-003	6010	Silver	UJ
D93-6752-11	230-014-SB-003	7060	Arsenic	J
D93-6752-12	230-014-SB-006	6010	Sodium	J
D93-6752-12	230-014-SB-006	7421	Lead	UJ
D93-6752-12	230-014-SB-006	6010	Iron	J
D93-6752-12	230-014-SB-006	6010	Silver	UJ
D93-6752-12	230-014-SB-006	7060	Arsenic	J
D93-6752-13	230-014-SB-009	6010	Sodium	J
D93-6752-13	230-014-SB-009	7421	Lead	J
D93-6752-13	230-014-SB-009	6010	Iron	J
D93-6752-13	230-014-SB-009	6010	Silver	UJ
D93-6752-13	230-014-SB-009	7060	Arsenic	J
D93-6752-1	230-015-SB-003	6010	Sodium	J
D93-6752-1	230-015-SB-003	6010	Iron	J
D93-6752-1	230-015-SB-003	6010	Silver	UJ
D93-6752-1	230-015-SB-003	7060	Arsenic	J
D93-6752-2	230-015-SB-006	6010	Sodium	J
D93-6752-2	230-015-SB-006	6010	Iron	J
D93-6752-2	230-015-SB-006	6010	Silver	UJ
D93-6752-2	230-015-SB-006	7060	Arsenic	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6752-4	230-015-SB-009	6010	Sodium	J
D93-6752-4	230-015-SB-009	7421	Lead	J
D93-6752-4	230-015-SB-009	6010	Iron	J
D93-6752-4	230-015-SB-009	6010	Silver	J
D93-6752-4	230-015-SB-009	7060	Arsenic	J
D93-6804-13	230-017-SB-006	6010	Sodium	J
D93-6804-14	230-017-SB-009	6010	Sodium	J
D93-6806-18	230-018-SB-007	6010	Aluminum	J
D93-6806-18	230-018-SB-007	6010	Calcium	J
D93-6806-18	230-018-SB-007	6010	Chromium	J
D93-6806-18	230-018-SB-007	6010	Cobalt	J
D93-6806-18	230-018-SB-007	6010	Iron	J
D93-6806-18	230-018-SB-007	6010	Magnesium	J
D93-6806-18	230-018-SB-007	6010	Manganese	J
D93-6806-18	230-018-SB-007	6010	Potassium	J
D93-6806-18	230-018-SB-007	6010	Silver	J
D93-6806-18	230-018-SB-007	6010	Thallium	J
D93-6806-18	230-018-SB-007	6010	Vanadium	J
D93-6806-18	230-018-SB-007	6010	Zinc	J
D93-6806-18	230-018-SB-007	7740	Selenium	J
D93-7779-2	230-020-SB-003	6010	Sodium	J
D93-7779-2	230-020-SB-003	6010	Silver	UJ
D93-7779-3	230-020-SB-007	6010	Sodium	J
D93-7779-3	230-020-SB-007	6010	Silver	UJ
D93-7779-4	230-021-SB-003	6010	Silver	UJ
D93-7779-5	230-021-SB-006	6010	Silver	UJ
D93-7108-5	230-025-MW-001	6010	Beryllium	UJ
D93-7108-5	230-025-MW-001	6010	Cadnium	UJ
D93-7108-5	230-025-MW-001	6010	Iron	J
D93-7108-5	230-025-MW-001	6010	Silver	UJ
D93-7108-5	230-025-MW-001	6010	Vanadium	J
D93-7108-5	230-025-MW-001	7740	Selenium	UJ
D93-6694-18	230-025-SB-009	6010	Aluminum	J
D93-6694-18	230-025-SB-009	6010	Beryllim	UJ
D93-6694-18	230-025-SB-009	6010	Calcium	DJ
D93-6694-18	230-025-SB-009	6010	Iron	J
D93-6694-18	230-025-SB-009	6010	Manganese	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6694-18	230-025-SB-009	6010	Nickel	J
D93-6694-18	230-025-SB-009	6010	Potassium	J
D93-6694-18	230-025-SB-009	6010	Silver	UJ
D93-6694-18	230-025-SB-009	6010	Thallium	UJ
D93-6694-18	230-025-SB-009	6010	Vanadium	J
D93-6694-18	230-025-SB-009	6010	Zinc	J
D93-6694-18	230-025-SB-009	6010	Magnesium	J
D93-6755-9	230-036-SB-006	6010	Aluminum	J
D93-6755-9	230-036-SB-006	6010	Cobalt	UJ
D93-6755-9	230-036-SB-006	6010	Iron	J
D93-6755-9	230-036-SB-006	6010	Potassium	J
D93-6755-9	230-036-SB-006	6010	Thallium	UJ
D93-6755-9	230-036-SB-006	6010	Silver	J
D93-7779-1	230-MW10-SB-006	6010	Silver	UJ
D93-6957-4	230-MW2-SB-010	6010	Sodium	J
D93-6957-4	230-MW2-SB-010	6010	Aluminum	J
D93-6957-4	230-MW2-SB-010	6010	Beryllium	UJ
D93-6957-4	230-MW2-SB-010	6010	Cobalt	UJ
D93-6957-4	230-MW2-SB-010	6010	Iron	J
D93-6957-4	230-MW2-SB-010	6010	Manganese	J
D93-6957-4	230-MW2-SB-010	6010	Nickel	J
D93-6957-4	230-MW2-SB-010	6010	Potassium	J
D93-6957-4	230-MW2-SB-010	6010	Silver	UJ
D93-6957-4	230-MW2-SB-010	6010	Thallium	UJ
D93-6957-4	230-MW2-SB-010	6010	Vanadium	J
D93-6957-4	230-MW2-SB-010	6010	Zinc	J
D93-6957-3	230-MW3-SB-010	6010	Sodium	J
D93-6957-3	230-MW3-SB-010	6010	Aluminum	J
D93-6957-3	230-MW3-SB-010	6010	Beryllium	UJ
D93-6957-3	230-MW3-SB-010	6010	Cobalt	UJ
D93-6957-3	230-MW3-SB-010	6010	Iron	J
D93-6957-3	230-MW3-SB-010	6010	Manganese	J
D93-6957-3	230-MW3-SB-010	6010	Nickel	J
D93-6957-3	230-MW3-SB-010	6010	Potassium	J
D93-6957-3	230-MW3-SB-010	6010	Silver	UJ
D93-6957-3	230-MW3-SB-010	6010	Thallium	UJ
D93-6957-3	230-MW3-SB-010	6010	Vanadium	J

TABLE 6.2-6
QUALIFICATIONS BASED ON OUTLYING LCS RECOVERIES - SWMU 230

SDG	W-C ID	METHOD	ANALYTE	QUALIFIER
D93-6957-3	230-MW3-SB-010	6010	Zinc	J
D93-6871-2	230-MW4-SB-010	6010	Sodium	J
D93-6871-2	230-MW4-SB-010	6010	Silver	UJ
D93-7779-7	230-MW5-SB-003	6010	Silver	UJ
D93-7779-8	230-MW5-SB-006	6010	Silver	UJ

TABLE 6.2-7
QUALIFICATIONS BASED ON OUTLYING MS/MSD RECOVERIES - SWMU 230

SDG	WC ID	METHOD	ANALYTE	QUAL
D93-7041-3	230-001-MW-001	6010	Aluminum	J
D93-7041-3	230-001-MW-001	6010	Cobalt	UJ
D93-7041-3	230-001-MW-001	6010	Cadnium	UJ
D93-7041-3	230-001-MW-001	7421	Lead	UJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Aluminum	J
D93-7041-5	230-001-MW-001-PC-Primary	6010	Cobalt	UJ
D93-7041-5	230-001-MW-001-PC-Primary	6010	Cadnium	UJ
D93-7041-5	230-001-MW-001-PC-Primary	7421	Lead	UJ
D93-7041-4	230-004-MW-001	6010	Aluminum	J
D93-7041-4	230-004-MW-001	6010	Cobalt	UJ
D93-7041-4	230-004-MW-001	6010	Cadnium	UJ
D93-7041-4	230-004-MW-001	7421	Lead	UJ
D93-7108-6	230-005-MW-001	6010	Nickel	UJ
D93-7108-6	230-005-MW-001	7841	Thallium	UJ
D93-7108-6	230-005-MW-001	7421	Lead	UJ
D93-7108-6	230-005-MW-001	6010	Cobalt	UJ
D93-7108-6	230-005-MW-001	6010	Aluminum	J
D93-8154-2	230-006-MW-001	7060	Arsenic	UJ
D93-8154-2	230-006-MW-001	7421	Lead	UJ
D93-8154-2	230-006-MW-001	7740	Selenium	JJ
D93-6804-10	230-006-SB-009	6010	Barium	J
D93-6804-10	230-006-SB-009	6010	Manganese	J
D93-6804-10	230-006-SB-009	6010	Silver	UJ
D93-6804-10	230-006-SB-009	7421	Lead	J
D93-8154-1	230-007-MW-001	7060	Arsenic	UJ
D93-8154-1	230-007-MW-001	7421	Lead	UJ
D93-8154-1	230-007-MW-001	7740	Selenium	DUJ
D93-6755-4	230-008-SB-009	6010	Barium	J
D93-6755-4	230-008-SB-009	6010	Cadnium	UJ
D93-6755-4	230-008-SB-009	6010	Zinc	J
D93-6755-4	230-008-SB-009	7421	Lead	R
D93-6752-2	230-015-SB-006	6010	Barium	J
D93-6752-2	230-015-SB-006	6010	Cadnium	UJ
D93-6752-2	230-015-SB-006	6010	Chromium	UJ
D93-6752-2	230-015-SB-006	6010	Cobalt	UJ
D93-6752-2	230-015-SB-006	6010	Copper	UJ
D93-6752-2	230-015-SB-006	6010	Nickel	UJ

TABLE 6.2-7
QUALIFICATIONS BASED ON OUTLYING MS/MSD RECOVERIES - SWMU 230

SDG	WC ID	METHOD	ANALYTE	QUAL
D93-6752-2	230-015-SB-006	6010	Thallium	J
D93-6752-2	230-015-SB-006	6010	Zinc	J
D93-6752-2	230-015-SB-006	7421	Lead	J
D93-6752-2	230-015-SB-006	7740	Selenium	J
D93-7779-5	230-021-SB-006	7421	Lead	UJ
D93-7779-5	230-021-SB-006	7471	Mercury	UJ

TABLE 6.2-8
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 230

LOCATOR			230-014-SB-006		230-036-SB-006(1)		
COLLECT DATE			6/18/93		6/18/93		
SAMPLE DELIVERY GROUP			6752		6752		
		Units	Result	Qual	Result	Qual	RPD (2)(%)
EPA 8020	Xylenes	ug/Kg	0		3		N/A
EPA 6010	Aluminum	mg/Kg	847		644		27.23
EPA 7060	Arsenic	mg/Kg	0.7	J	1.3	J	60.00
EPA 6010	Barium	mg/Kg	8.3		13.8		49.77
	Calcium	mg/Kg	110000		84400		26.34
	Chromium	mg/Kg	0		1.9		N/A
	Copper	mg/Kg	0		2		N/A
	Iron	mg/Kg	907		683		28.18
	Potassium	mg/Kg	337		307		9.32
	Magnesium	mg/Kg	1070	J	2880	J	91.65
	Manganese	mg/Kg	17.3		19.7		12.97
	Sodium	mg/Kg	144		137		4.98
	Vanadium	mg/Kg	3.6		3.5		2.82
	Zinc	mg/Kg	2.6		2.9		10.91

(1) Duplicates were also analyzed for 8020 Aromatic Volatiles and 418.1 TRPH.
There were no 8020, and 418.1 detections. This table lists only detections.
(2) RPD = Relative Percent Difference

TABLE 6.2-8
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 230

LOCATOR			230-MW5-SB-006		230-MW10-SB-006	
COLLECT DATE			7/8/93		7/8/93	
SAMPLE DELIVERY GROUP			7779		7779	
		Units	Result	Qual	Result Qual	RPD (1)(%)
EPA 8020	Ethylbe	ug/Kg	160000		93000	52.96
	Benzen	ug/Kg	10000		9000	10.53
	Xylene	ug/Kg	600000		350000	52.63
	Toluen	ug/Kg	300000		180000	50.00
EPA 6010	Arsenic	mg/Kg	1.5		1.7	12.50
	Barium	mg/Kg	40		50.4	23.01
	Calciu	mg/Kg	37000		46100	21.90
	Chromi	mg/Kg	3.8		4.5	16.87
	Potassi	mg/Kg	891		763	15.48
	Magne	mg/Kg	1110		1020	8.45
	Sodium	mg/Kg	67		66.3	1.05
	Lead	mg/Kg	2.2		1.7	25.64
EPA 418.1	TPH	mg/Kg	4000		4300	7.23

(1) RPD = Relative Percent Difference

TABLE 6.2-8
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 230

LOCATOR			230-005-SB-009	230-027-SB-009(1)	
COLLECT DATE			6/10/93	6/10/93	
SAMPLE DELIVERY GROUP			6804	6804	
		Units	Result Qual	Result Qual	RPD (2)(%)
EPA 6010	Aluminum	mg/Kg	971	1450	39.57
	Arsenic	mg/Kg	0.4	0.4	0.00
	Barium	mg/Kg	8.6	11.9	32.20
	Calcium	mg/Kg	126000	129000	2.35
	Chromium	mg/Kg	0	1.6	N/A
	Copper	mg/Kg	1.1	0	N/A
	Iron	mg/Kg	1130	1580	33.21
	Potassium	mg/Kg	268	430	46.42
	Magnesium	mg/Kg	1190	1960	48.89
	Manganese	mg/Kg	11.9 J	27.2 J	78.26
	Sodium	mg/Kg	164	206	22.70
	Nickel	mg/Kg	1.6	2.6	47.62
	Lead	mg/Kg	0.2	0.2	0.00
	Thallium	mg/Kg	26	0	N/A
	Vanadium	mg/Kg	2.7	3.4	22.95
	Zinc	mg/Kg	1.9	3.1	48.00

(1) Duplicates were also analyzed for 8020 Aromatic Volatiles and 418.1 TRPH.

There were no 8020, and 418.1 detections. This table lists only detections.

(1) RPD = Relative Percent Difference

TABLE 6.2-8
SUMMARY OF DUPLICATE RESULTS AND QUALIFICATIONS BASED ON RPD - SWMU 230

LOCATOR			230-003-SB-009	230-025-SB-009	
COLLECT DATE			6/8/98	6/8/93	
SAMPLE DELIVERY GROUP			6694	6694	
		Units	Result Qual	Result Qual	RPD (1)(%)
EPA 8020	Ethylbenzene	ug/Kg	3800	5900	43.30
	Xylenes	ug/Kg	3100	5200	50.60
	Toluene	ug/Kg	1000	570	54.78
EPA 6010	Aluminum	mg/Kg	3180	2430	26.74
	Arsenic	mg/Kg	0.8	0.7	13.33
	Barium	mg/Kg	32.4	38.9	18.23
	Calcium	mg/Kg	99300	83300	17.52
	Cobalt	mg/Kg	1.5	0	N/A
	Chromium	mg/Kg	4	4.6	13.95
	Copper	mg/Kg	1.9	1.9	0.00
	Iron	mg/Kg	4600	3350	31.45
	Potassium	mg/Kg	915	673	30.48
	Magnesium	mg/Kg	2390 J	38400 J	176.56
	Manganese	mg/Kg	83.5	73.1	13.28
	Sodium	mg/Kg	132	111	17.28
	Nickel	mg/Kg	5.8	4.2	32.00
	Lead	mg/Kg	3	1.9	44.90
	Vanadium	mg/Kg	6.6	5.6	16.39
	Zinc	mg/Kg	10.6	9.2	14.14
EPA 418.1	Total Petroleum	mg/Kg	1200	850	34.15

(1) RPD = Relative Percent Difference

TABLE 6.2-9
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 230

LOCATOR	230-001-MW-001			230-002-MW-001			230-003-MW-001			230-004-MW-001			230-006-MW-001			230-007-MW-001		
LAB SAMPLE NUMBER	D93-7041-3			D93-7108-2			D93-7108-3			D93-7041-4			D93-8154-2			D93-8154-1		
COLLECT DATE	06/17/93			06/18/93			06/18/93			06/17/93			07/16/93			07/16/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/L)																		
Benzene	<	2	DU	<	2	DU	12000	1000	D	6	2	D	<	2	U	<	2	U
1,4-Dichlorobenzene	<	3	DU	<	3	DU	<	1500	DU	<	3	DU	5	3		<	3	U
Ethylbenzene	<	2	DU	<	2	DU	3900	1000	D	4	2	D	<	2	U	<	2	U
Toluene	1	2	DJ	3	2	D	22000	1000	D	16	2	D	<	2	U	<	2	U
Xylenes	5	2	D	2	2	DJ	18000	1000	D	10	2	D	<	2	U	<	2	U
Metals (mg/L)																		
Aluminum	4.56	0.05	J	7.3	0.05	J	6.31	0.05	J	18.5	0.05	J						
Barium	0.08	0.01		0.06	0.01		0.07	0.01		0.16	0.01		0.07	0.02		0.1	0.02	
Calcium	1240	5	DJ	660	0.5	D	705	0.05		947	5	DJ	1020	10	D	522	5	D
Iron	3.16	0.05		5.07	0.05	J	4.42	0.05	J	13.8	0.05		<	0.1	U			
Magnesium	633	0.01	J	327	0.01		377	0.01		46.7	0.01	J	650	5	D	259	2.5	D
Manganese	0.33	0.01		0.21	0.01		1.21	0.01		0.32	0.01							
Mercury	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U	0.001	0.001	J	<	0.001	U
Potassium	20.9	0.1	J	26.8	0.1	J	17.3	0.1	J	6.5	0.1	J	24.3	1		18.3	1	
Selenium	<	0.01	DU	0.003	0.002	J	<	0.002	UJ	<	0.002	U	0.004	0.005	JJ	<	0.002	DUJ
Silver	0.02	0.01		<	0.01	UJ	<	0.01	UJ	<	0.01	U	0.02	0.01		<	0.01	U
Sodium	3200	1	DJ	1070	0.1	J	1350	0.1	J	59.7	0.01	DJ	3240	10	D	65.1	0.1	
Vanadium	0.01	0.01		0.03	0.01	J	0.02	0.01	J	0.04	0.01							
Zinc	0.02	0.01		0.04	0.01		0.02	0.01		0.04	0.01							
Water Quality (mg/L)																		
Alkalinity	129	0.1		221	0.1		196	0.1		464	0.1		141	0.1				
Chemical Oxygen Demand													335	5				
Chloride	7580	1		917	1		244	1		43.4	1		8240	1				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-9
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 230

LOCATOR	230-001-MW-001			230-002-MW-001			230-003-MW-001			230-004-MW-001			230-006-MW-001			230-007-MW-001		
LAB SAMPLE NUMBER	D93-7041-3			D93-7108-2			D93-7108-3			D93-7041-4			D93-8154-2			D93-8154-1		
COLLECT DATE	06/17/93			06/18/93			06/18/93			06/17/93			07/16/93			07/16/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Fluoride	3.5	0.1		4.2	0.1		3.7	0.1		0.7	0.1		2.6	0.1				
Nitrate-Nitrite Nitrogen	9.4	0.1	D	5.8	0.1	D	1.16	0.05	D	0.7	0.01		8.3	0.1	D			
Nitrogen, Total Kjeldahl													2	0.1				
Sulfate	2590	50	D	2750	50	D	2910	50	D	2980	20	D	2620	50	D			
Total Dissolved Solids	15900	1		6880	1		9030	1		2750	1		16400	1				
Total Phosphate	0.16	0.01		0.17	0.01		0.27	0.01		0.54	0.01							
Total Phosphorus													0.35	0.01				

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-9
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 230

LOCATOR	230-025-MW-001		
LAB SAMPLE NUMBER	D93-7108-5		
COLLECT DATE	06/18/93		
	Result	RL	Qual
Volatile Aromatic Organics (ug/L)			
Benzene	15000	500	D
1,4-Dichlorobenzene	<	800	DU
Ethylbenzene	2800	500	D
Toluene	20000	500	D
Xylenes	13000	500	D
Metals (mg/L)			
Aluminum	9.08	0.05	J
Barium	0.09	0.01	
Calcium	665	5	D
Iron	6.83	0.05	J
Magnesium	366	0.01	
Manganese	1.35	0.01	
Mercury	<	0.001	U
Potassium	18.8	0.1	J
Selenium	<	0.002	UJ
Silver	<	0.01	UJ
Sodium	1280	1	J
Vanadium	0.02	0.01	J
Zinc	0.05	0.01	
Water Quality (mg/L)			
Alkalinity	258	0.1	
Chemical Oxygen Demand			
Chloride	1980	1	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-9
SUMMARY OF CHEMICALS IN GROUNDWATER SAMPLES AT SWMU 230

LOCATOR	230-025-MW-001		
LAB SAMPLE NUMBER	D93-7108-5		
COLLECT DATE	06/18/93		
	Result	RL	Qual
Fluoride	3.7	0.1	
Nitrate-Nitrite Nitrogen	1.07	0.01	
Nitrogen, Total Kjeldahl			
Sulfate	3150	50	D
Total Dissolved Solids	8450	1	
Total Phosphate	0.27	0.01	
Total Phosphorus			

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-001-SB-09.5			230-002-SB-003			230-002-SB-006			230-002-SB-009			230-003-SB-003			230-003-SB-006		
LAB SAMPLE NUMBER	D93-6690-6			D93-6804-2			D93-6804-3			D93-6804-4			D93-6694-15			D93-6694-16		
COLLECT DATE	06/07/93			06/10/93			06/10/93			06/10/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	DU	600	500	D	<	10	DU	<	2	DU	<	50	DU
Ethylbenzene	<	2	DU	<	2	DU	7400	500	D	130	10	D	<	2	DU	160	50	D
Toluene	<	2	DU	<	2	DU	1600	500	D	10	10	DJ	<	2	DU	380	50	D
Xylenes	<	2	DU	<	2	DU	12000	500	D	370	10	D	<	2	DU	1100	50	D
Metals (mg/Kg)																		
Aluminum	1840	1	J	522	1		828	1		2130	1		2090	1	J	603	1	J
Arsenic	1	0.1		0.6	0.1		0.6	0.1		1	0.1		0.9	0.1		0.9	0.1	
Barium	46.4	1		5.1	1		7.3	1		28.4	1		25.4	1		27.9	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	UJ	<	1	UJ
Calcium	117000	100	D	144000	10	D	81200	100	D	136000	100	D	100000	1	DJ	95900	10	DJ
Chromium	4.2	1		<	1	U	1.2	1		3.7	1		2.9	1		2.1	1	
Cobalt	1.7	1		<	1	U	<	1	U	<	1	U	1.4	1		<	1	U
Copper	<	1	UJ	1.7	1		<	1	U	1.4	1		2.3	1		<	1	U
Iron	2750	1		650	1		1390	1		3450	1		2290	1	J	865	1	J
Lead																		
Lead	1.8	0.1		<	0.1	U	0.3	0.1		1.8	0.1		5.2	0.5	D	0.7	0.1	
Magnesium	1800	1		1150	1		1040	1		2800	1		3550	10	J	1020	1	J
Manganese	102	1		11.6	1		15.5	1		47.7	1		65.3	1	J	20.2	1	J
Mercury	0.03	0.01		<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	3.9	1		1.2	1		1.8	1		3.8	1		3.7	1	J	1.8	1	J
Potassium	461	1	J	244	1		336	1		709	1		659	1	J	232	1	J
Selenium	<	0.5	DU	0.5	0.5	D	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	UJ	<	1	U	<	1	U	<	1	U	<	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-001-SB-09.5			230-002-SB-003			230-002-SB-006			230-002-SB-009			230-003-SB-003			230-003-SB-006		
LAB SAMPLE NUMBER	D93-6690-6			D93-6804-2			D93-6804-3			D93-6804-4			D93-6694-15			D93-6694-16		
COLLECT DATE	06/07/93			06/10/93			06/10/93			06/10/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	131	U	351	1	J	<	169	U	<	195	U	<	138	U	<	130	U
Thallium	<	1	UJ	<	1	U	<	1	U	<	1	U	<	1	UJ	<	1	UJ
Vanadium	6.7	0.1	J	2.7	0.1		4.5	0.1		5.2	0.1		4.3	0.1	J	2.6	0.1	J
Zinc	8.7	1	J	1.5	1		1.9	1		8.9	1		11.3	1	J	2.9	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	10	10		1100	100	D	260	10		<	10	U	190	10	
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	83.9	0.01		78	0.01		81.8	0.01		77	0.01		77.9	0.01		76.8	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-003-SB-009			230-004-SB-003			230-004-SB-005			230-004-SB-008			230-005-SB-003			230-005-SB-006		
LAB SAMPLE NUMBER	D93-6694-17			D93-6694-12			D93-6694-13			D93-6694-14			D93-6804-5			D93-6804-6		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	50	DU	<	2	DU	<	2	DU	<	10	DU	<	2	DU	<	2	DU
Ethylbenzene	3800	50	D	<	2	DU	<	2	DU	200	10	D	<	2	DU	<	2	DU
Toluene	1000	50	D	<	2	DU	<	2	DU	<	10	DU	<	2	DU	<	2	DU
Xylenes	3100	50	D	<	2	DU	<	2	DU	260	10	D	<	2	DU	<	2	DU
Metals (mg/Kg)																		
Aluminum	3180	1	J	96.1	1	J	319	1	J	2560	1	J	646	1		483	1	
Arsenic	0.8	0.1		1	0.1		1.1	0.1		1	0.1		0.9	0.1		0.3	0.1	
Barium	32.4	1		3.9	1		10.1	1		49.8	1		18.3	1		5.8	1	
Beryllium	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U
Calcium	99300	100	DJ	135000	100	DJ	116000	10	DJ	86300	10	DJ	141000	100	D	89800	10	D
Chromium	4	1		<	1	U	1.6	1		7.3	1		<	1	U	<	1	U
Cobalt	1.5	1		<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Copper	1.9	1		<	1	U	<	1	U	1.5	1		1.8	1		<	1	U
Iron	4600	1	J	80.2	1	J	275	1	J	4410	1	J	665	1		660	1	
Lead																		
Lead	3	0.5	D	<	1	U	<	0.1	U	3.8	0.5	D	0.4	0.1		0.2	0.1	
Magnesium	2390	10	DJ	1200	1	J	1280	1	J	3310	10	DJ	1210	1		595	1	
Manganese	83.5	1	J	2.9	1	J	18.3	1	J	95.5	1	J	13.8	1		8	1	
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	5.8	1	J	<	1	J	<	1	UJ	4.4	1	J	<	1	U	<	1	U
Potassium	915	1	J	67.7	1	J	132	1	J	712	1	J	228	1		158	1	
Selenium	<	0.1	U	<	0.1	U	<	0.1	U	<	0.1	U	<	0.5	DU	<	0.5	DU
Silver	<	1	UJ	<	1	UJ	1.2	1	J	<	1	UJ	<	1	U	<	1	U

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-003-SB-009			230-004-SB-003			230-004-SB-005			230-004-SB-008			230-005-SB-003			230-005-SB-006		
LAB SAMPLE NUMBER	D93-6694-17			D93-6694-12			D93-6694-13			D93-6694-14			D93-6804-5			D93-6804-6		
COLLECT DATE	06/08/93			06/08/93			06/08/93			06/08/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	132	U	<	182	U	<	182	U	<	107	U	<	164	U	<	165	U
Thallium	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U
Vanadium	6.6	0.1	J	<	1	UJ	2.7	0.1	J	8.2	0.1	J	2.7	0.1		2	0.1	
Zinc	10.6	1	J	<	1	UJ	1.5	1	J	10.2	1	J	1.8	1		<	1	U
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	1200	100	D	<	10	U	52	10		1300	100	D	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	79	0.01		74.1	0.01		73.9	0.01		79.2	0.01		79.1	0.01		74.2	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-005-SB-009			230-006-SB-003			230-006-SB-006			230-006-SB-009			230-007-SB-005			230-007-SB-007		
LAB SAMPLE NUMBER	D93-6804-7			D93-6804-8			D93-6804-9			D93-6804-10			D93-6752-14			D93-6752-15		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	DU	<	2	DU	<	2	DU	500	200	D	3900	500	D
Ethylbenzene	<	2	DU	5	2	D	<	2	DU	<	2	DU	4600	200	D	11000	500	D
Toluene	<	2	DU	7	2	D	<	2	DU	<	2	DU	2200	200	D	18000	500	D
Xylenes	<	2	DU	5	2	D	<	2	DU	<	2	DU	8300	200	D	21000	500	D
Metals (mg/Kg)																		
Aluminum	971	1		4170	1		2200	1		766	1		1750	1		450	1	
Arsenic	0.4	0.1		1.5	0.1		1.1	0.1		0.2	0.1		1.4	0.2	DJ	0.4	0.1	J
Barium	8.6	1		34	1		53.5	1		8.7	1	J	14.4	1		6.8	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	126000	100	D	82600	100	D	77700	100	D	104000	100	D	97600	100	D	66700	5	D
Chromium	<	1	U	4.6	1		2.1	1		1.4	1		<	1	U	<	1	U
Cobalt	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Copper	1.1	1		6.6	1		1.7	1		<	1	U	1.5	1		<	1	U
Iron	1130	1		5380	1		2750	1		977	1		1560	1	J	702	1	J
Lead																		
Lead	0.2	0.1		22	3	D	1	0.1		0.2	0.1	J	0.3	0.1	J	0.2	0.1	J
Magnesium	1190	1		8500	10	D	1020	1		832	1		2030	1		1070	1	
Manganese	11.9	1		117	1		50.1	1		30.4	1	J	27.9	1		23.4	1	
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.6	1		4.5	1		3.1	1		1.8	1		<	1	U	<	1	U
Potassium	268	1		1230	1		840	1		269	1		588	1		178	1	
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	U	<	1	U	<	1	U	<	1	UJ	1.2	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-005-SB-009			230-006-SB-003			230-006-SB-006			230-006-SB-009			230-007-SB-005			230-007-SB-007		
LAB SAMPLE NUMBER	D93-6804-7			D93-6804-8			D93-6804-9			D93-6804-10			D93-6752-14			D93-6752-15		
COLLECT DATE	06/10/93			06/10/93			06/10/93			06/10/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	164	U	288	1	J	241	1	J	<	1	U	223	1	J	127	1	J
Thallium	26	1		<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Vanadium	2.7	0.1		7.7	0.1		5.7	0.1		1.6	0.1		4.3	0.1		2.2	0.1	
Zinc	1.9	1		26.1	1		6.5	1		1.1	1		5.3	1		2.1	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	81	10		<	10	U	<	10	U	260	10		2100	100	D
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	72.7	0.01		83.5	0.01		81.2	0.01		74.8	0.01		69.5	0.01		76.2	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-007-SB-009			230-008-SB-003			230-008-SB-006			230-008-SB-009			230-009-SB-004			230-009-SB-007		
LAB SAMPLE NUMBER	D93-6755-1			D93-6755-2			D93-6755-3			D93-6755-4			D93-6690-7			D93-6690-8		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/09/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	1500	200	D	<	2	DU	<	5000	DU	190000	20000	D	<	2	DU	<	2	DU
Ethylbenzene	3400	200	D	<	2	DU	43000	5000	D	370000	20000	D	<	2	DU	<	2	DU
Toluene	3400	200	D	5	2	D	38000	5000	D	1100000	20000	D	<	2	DU	<	2	DU
Xylenes	9100	200	D	4	2	D	200000	5000	D	1400000	20000	D	<	2	DU	<	2	DU
Metals (mg/Kg)																		
Aluminum	675	1	J	3140	1	J	380	1	J	623	1	J	412	1	J	457	1	J
Arsenic	<	0.1	U	1.3	0.1		0.6	0.1		0.5	0.1		0.7	0.1		0.5	0.1	
Barium	5.7	1		52.3	1		19.1	1		6.4	1	J	5.7	1		5.1	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	86000	100	D	93500	100	D	131000	100	D	85400	100	D	46500	100	D	23200	100	D
Chromium	2.6	1		4.9	1		1.5	1		2.2	1		<	1	U	<	1	U
Cobalt	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U
Copper	<	1	U	2.4	1		<	1	U	<	1	U	<	1	UJ	<	1	UJ
Iron	836	1	J	3200	1	J	505	1	J	872	1	J	342	1		507	1	
Lead																		
Lead	0.2	0.1		0.8	0.1		0.3	0.1		<		R	<	0.1	U	0.2	0.1	
Magnesium	788	1		1750	1		634	1		511	1		899	1		560	1	
Manganese	8.5	1		53.6	1		9.9	1		14.2	1		7.7	1		8.9	1	
Mercury	<	0.01	U	<	0.02	U	<	0.02	U	<	0.03	U	0.04	0.01		<	0.01	U
Nickel	<	1	U	2.5	1		<	1	U	<	1	U	<	1	U	<	1	U
Potassium	233	1	J	1120	1	J	154	154	J	217	1	J	147	1	J	154	1	J
Selenium	<	0.5	DU	<	0.1	U	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	J	<	1	J	<	1	J	<	1	J	<	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-007-SB-009			230-008-SB-003			230-008-SB-006			230-008-SB-009			230-009-SB-004			230-009-SB-007		
LAB SAMPLE NUMBER	D93-6755-1			D93-6755-2			D93-6755-3			D93-6755-4			D93-6690-7			D93-6690-8		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/09/93			06/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	153	U	<	87.9	U	<	152	U	<	95.3	U	<	99	U	<	163	U
Thallium	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ
Vanadium	1.9	0.1		6.6	0.1		1.6	0.1		2.1	0.1		2.3	0.1		1.3	0.1	
Zinc	2.4	1		9	1		2.1	1		2	1	J	1.2	1		1.8	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	1300	100	D	<	10	U	1000	100	D	9840	100	D	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	74.3	0.01		82.1	0.01		81.2	0.01		79.4	0.01		83.9	0.01		81.5	0.01	

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J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-009-SB-009			230-010-SB-003			230-010-SB-006			230-010-SB-009			230-011-SB-003			230-011-SB-006		
LAB SAMPLE NUMBER	D93-6690-9			D93-6755-6			D93-6755-7			D93-6755-8			D93-6804-15			D93-6804-16		
COLLECT DATE	06/08/93			06/09/93			06/09/93			06/09/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	9	2	D	<	10	DU	40000	2000	D	<	2	DU	<	2	DU
Ethylbenzene	<	2	DU	2	2	D	120	10	D	61000	2000	D	<	2	DU	<	2	DU
Toluene	<	2	DU	6	2	D	32	10	D	170000	2000	D	<	2	DU	<	2	DU
Xylenes	<	2	DU	7	2	D	650	10	D	210000	2000	D	<	2	DU	<	2	DU
Metals (mg/Kg)																		
Aluminum	1350	1	J	2900	1	J	934	1	J	1450	1	J	1530	1		750	1	
Arsenic	0.7	0.1		1.1	0.1		0.8	0.1		0.8	0.1		0.9	0.1		0.5	0.1	
Barium	19.9	1		52.7	1		8.5	1		16.1	1		25.1	1		7.4	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	97700	100	D	101000	100	D	91400	100	D	116000	100	D	114000	100	D	96400	10	D
Chromium	1.9	1		2.8	1		2.8	1		3.6	1		1.3	1		<	1	U
Cobalt	1.2	1		<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U
Copper	<	1	UJ	2.8	1		<	1	U	<	1	U	1.8	1		<	1	U
Iron	1560	10	D	2610	1	J	1130	1	J	1680	1	J	1530	1		924	1	
Lead																		
Lead	0.7	0.1		1.3	0.1		0.5	0.1		0.7	0.1		0.5	0.1		<	0.1	U
Magnesium	1630	1		7620	10	D	900	1		2490	10	D	5130	10	D	644	1	
Manganese	19.5	1		64.6	1		19.9	1		56.4	1		27	1		15.2	1	
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	1.4	1		1.4	1		1.1	1		1.9	1		<	1	U	<	1	U
Potassium	427	1	J	934	1	J	349	1	J	375	1	J	492	1		220	1	
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	UJ	<	1	J	<	1	J	<	1	J	<	1	U	<	1	U

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-009-SB-009			230-010-SB-003			230-010-SB-006			230-010-SB-009			230-011-SB-003			230-011-SB-006		
LAB SAMPLE NUMBER	D93-6690-9			D93-6755-6			D93-6755-7			D93-6755-8			D93-6804-15			D93-6804-16		
COLLECT DATE	06/08/93			06/09/93			06/09/93			06/09/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	322	1		<	115	U	<	126	U	286	1	J	<	172	U	<	147	U
Thallium	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U
Vanadium	2.4	0.1		5.4	0.1		3.3	0.1		3.4	0.1		4.1	0.1		2.3	0.1	
Zinc	5.2	1	J	8.7	1		2.6	1		4.4	1		3.7	1		1.1	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	<	10	U	7200	100	D	<	10	U	330	10	
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	82	0.01		79.6	0.01		83.1	0.01		76	0.01		77.9	0.01		85.8	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-011-SB-009			230-012-SB-003			230-012-SB-006			230-012-SB-009			230-013-SB-003			230-013-SB-006		
LAB SAMPLE NUMBER	D93-6804-17			D93-6752-5			D93-6752-6			D93-6752-7			D93-6752-8			D93-6752-9		
COLLECT DATE	06/10/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	7	2	D	19	2	D	11000	1000	D	<	2	DU	28	2	D
Ethylbenzene	<	2	DU	9	2	D	22	2	D	44000	1000	D	<	2	DU	100	2	D
Toluene	<	2	DU	11	2	D	40	2	D	92000	1000	D	2	2	D	190	2	D
Xylenes	<	2	DU	29	2	D	68	2	D	140000	1000	D	4	2	D	160	2	D
Metals (mg/Kg)																		
Aluminum	2740	1		2010	1		5210	1		7710	1		1080	1		494	1	
Arsenic	0.5	0.1		0.7	0.1	J	0.6	0.1	J	0.5	0.1	J	0.9	0.1	J	1	0.5	DJ
Barium	40.1	1		16.9	1		16.1	1		45.1	1		16.8	1		4.9	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	96600	100	D	18600	100	D	38400	10	D	57700	100	D	35200	100	D	62900	100	D
Chromium	3.6	1		<	1	U	4.6	1		7.7	1		<	1	U	<	1	U
Cobalt	<	1	U	<	1	U	<	1	U	1.6	1		<	1	U	<	1	U
Copper	1.2	1		1.8	1		4.2	1		6	1		1.3	1		<	1	U
Iron	3540	1		1580	1	J	4860	1	J	7020	1	J	973	1	J	590	1	J
Lead																		
Lead	2.5	0.1		0.3	0.1	J	0.9	0.1	J	1.5	0.1	J	7.4	0.5	DJ	6.3	0.5	DJ
Magnesium	4080	10	D	3150	1		7880	1		10700	1		1660	1		637	1	
Manganese	37.9	1		47.1	1		116	1		175	1		31.9	1		6.7	1	
Mercury	<	0.01	U	0.03	0.01		0.02	0.01		<	0.01	U	<	0.01	U	0.02	0.01	
Nickel	3.4	1		1.3	1		3.8	1		6.7	1		<	1	U	<	1	U
Potassium	650	1		618	1		1610	1		2420	1		440	1		205	1	
Selenium	<	0.5	DU	<	0.1	U	<	0.1	U	<	0.1	U	<	0.1	U	<	0.1	U
Silver	<	1	U	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-011-SB-009			230-012-SB-003			230-012-SB-006			230-012-SB-009			230-013-SB-003			230-013-SB-006		
LAB SAMPLE NUMBER	D93-6804-17			D93-6752-5			D93-6752-6			D93-6752-7			D93-6752-8			D93-6752-9		
COLLECT DATE	06/10/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	497	1	J	92.2	1	J	116	1	J	216	1	J	102	1	J	352	1	J
Thallium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Vanadium	3.8	0.1		2.6	0.1		7.3	0.1		11.3	0.1		3	0.1		1.5	0.1	
Zinc	6.4	1		5.8	1		15.9	1		23.2	1		3.6	1		1.5	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	24	10		5700	100	D	22	10		480	10	
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	77	0.01		71.6	0.01		73.9	0.01		75.3	0.01		82.9	0.01		82.2	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
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TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-013-SB-009			230-014-SB-003			230-014-SB-006			230-014-SB-009			230-015-SB-003			230-015-SB-006		
LAB SAMPLE NUMBER	D93-6752-10			D93-6752-11			D93-6752-12			D93-6752-13			D93-6752-1			D93-6752-2		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	19000	1000	D	<	2	DU	<	2	DU	4	2	D	15	2	D	<	1000	DU
Ethylbenzene	31000	1000	D	<	2	DU	<	2	DU	<	2	DU	47	2	D	14000	1000	D
Toluene	83000	1000	D	<	2	DU	<	2	DU	4	2	D	29	2	D	15000	1000	D
Xylenes	80000	1000	D	6	2	D	<	2	DU	8	2	D	130	2	D	32000	1000	D
Metals (mg/Kg)																		
Aluminum	229	1		3470	1		847	1		324	1		1780	1		774	1	
Arsenic	0.3	0.1	J	1.2	0.1	J	0.7	0.1	J	0.3	0.1	J	0.9	0.1	J	1	0.1	J
Barium	5	1		53	1		8.3	1		5.1	1		20.6	1		7.8	1	J
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	26800	5	D	72000	100	D	110000	100	D	76900	100	D	106000	25	D	78800	10	D
Chromium	<	1	U	2.7	1		<	1	U	<	1	U	<	1	U	<	1	UJ
Cobalt	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	UJ
Copper	<	1	U	3.4	1		<	1	U	<	1	U	2.2	1		<	1	UJ
Iron	365	1	J	3110	1	J	907	1	J	373	1	J	1790	1	J	925	1	J
Lead																		
Lead	0.2	0.1	J	3.3	0.5	DJ	<	0.1	UJ	0.1	0.1	J	<	0.1	U	0.1	0.1	J
Magnesium	435	1		6570	1		1070	1		622	1	J	3150	1		1130	1	
Manganese	4.5	1		89.7	1		17.3	1		4.9	1		39	1		9.3	1	
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	0.05	0.01		0.02	0.01	
Nickel	<	1	U	3.4	1		<	1	U	<	1	U	1.4	1		<	1	UJ
Potassium	117	1		1090	1		337	1		159	1		684	1		291	1	
Selenium	<	0.1	U	0.3	0.1		<	0.1	U	<	0.1	U	0.1	0.1		<	0.1	J
Silver	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-013-SB-009			230-014-SB-003			230-014-SB-006			230-014-SB-009			230-015-SB-003			230-015-SB-006		
LAB SAMPLE NUMBER	D93-6752-10			D93-6752-11			D93-6752-12			D93-6752-13			D93-6752-1			D93-6752-2		
COLLECT DATE	06/09/93			06/09/93			06/09/93			06/09/93			06/09/93			06/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	219	1	J	147	1	J	114	1	J	201	1	J	213	1	J	197	1	J
Thallium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	J
Vanadium	1	0.1		6.3	0.1		3.6	0.1		1.2	0.1		5.1	0.1		3.3	0.1	
Zinc	1.1	1		11.5	1		2.6	1		1.4	1		5.8	1		2.7	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	2300	100	D	<	10	U	<	10	U	<	10	U	<	10	U	1330	100	D
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	78	0.01		92	0.01		69.6	0.01		69.6	0.01		86.6	0.01		74.7	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
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TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-015-SB-009			230-016-SB-006			230-016-SB-009			230-017-SB-003			230-017-SB-006			230-017-SB-009		
LAB SAMPLE NUMBER	D93-6752-4			D93-6804-18			D93-6804-19			D93-6804-12			D93-6804-13			D93-6804-14		
COLLECT DATE	06/09/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	23000	5000	D	<	2	DU	<	2	DU	<	2	DU	<	2	DU	<	2	DU
Ethylbenzene	77000	5000	D	<	2	DU	<	2	DU	<	2	DU	<	2	DU	<	2	DU
Toluene	180000	5000	D	<	2	DU	<	2	DU	<	2	DU	<	2	DU	<	2	DU
Xylenes	290000	5000	D	<	2	DU	<	2	DU	<	2	DU	<	2	DU	<	2	DU
Metals (mg/Kg)																		
Aluminum	629	1		788	1		3020	1		576	1		926	1		1190	1	
Arsenic	0.8	0.1	J	0.2	0.1		0.4	0.1		0.5	0.1		0.7	0.1		0.4	0.1	
Barium	34.8	1		8.7	1		16.8	1		13.8	1		11.5	1		13.4	1	
Beryllium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Calcium	69400	100	D	115000	100	D	95200	100	D	94200	100	D	98500	10	D	74600	100	D
Chromium	5.3	1		<	1	U	4.5	1		1.9	1		<	1	U	<	1	U
Cobalt	1.1	1		<	1	U	1.2	1		<	1	U	<	1	U	<	1	U
Copper	5.1	1		<	1	U	1.8	1		1.7	1		<	1	U	<	1	U
Iron	6100	1	J	984	1		4450	1		540	1		1160	1		1460	1	
Lead																		
Lead	0.6	0.1	J	0.2	0.1		2.1	0.1		<	0.1	U	0.4	0.1		0.3	0.1	
Magnesium	8470	1		427	1		3500	10	D	1250	1		1210	1		1970	1	
Manganese	150	1		11.5	1		5.6	1		10.7	1		19.9	1		69.6	1	
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	5.1	1		<	1	U	5.6	1		1.4	1		1.3	1		2.6	1	
Potassium	1910	1		257	1		823	1		266	1		503	1		383	1	
Selenium	<	0.1	U	<	0.5	DU	<	0.5	DU	0.5	0.5	DJ	<	0.5	DU	<	0.5	DU
Silver	<	1	J	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U

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R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-015-SB-009			230-016-SB-006			230-016-SB-009			230-017-SB-003			230-017-SB-006			230-017-SB-009		
LAB SAMPLE NUMBER	D93-6752-4			D93-6804-18			D93-6804-19			D93-6804-12			D93-6804-13			D93-6804-14		
COLLECT DATE	06/09/93			06/10/93			06/10/93			06/10/93			06/10/93			06/10/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	192	1	J	<	149	U	<	153	U	<	153	U	250	1	J	504	1	J
Thallium	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U	<	1	U
Vanadium	8.8	0.1		2.3	0.1		6.3	0.1		2.1	0.1		3	0.1		2.3	0.1	
Zinc	19.6	1		1.4	1		10.6	1		<	1	U	2.2	1		4.1	1	
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	1100	100	D	31	10		<	10	U	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	77.7	0.01		77.1	0.01		77.2	0.01		73.7	0.01		80.7	0.01		75.7	0.01	

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TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-018-SB-009			230-020-SB-003			230-020-SB-007			230-021-SB-003			230-021-SB-006			230-025-SB-009		
LAB SAMPLE NUMBER	D93-6804-20			D93-7779-2			D93-7779-3			D93-7779-4			D93-7779-5			D93-6694-18		
COLLECT DATE	06/10/93			07/08/93			07/08/93			07/08/93			07/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	U	1500	200	D	<	2	U	<	2	U	<	100	DU
Ethylbenzene	<	2	DU	<	2	U	1300	200	D	<	2	U	<	2	U	5900	100	D
Toluene	<	2	DU	<	2	U	3800	200	D	<	2	U	<	2	U	570	100	D
Xylenes	<	2	DU	<	2	U	2600	200	D	<	2	U	<	2	U	5200	100	D
Metals (mg/Kg)																		
Aluminum	2700	1														2430	1	J
Arsenic	5.2	0.1		0.8	0.5	D	0.8	0.5	D	0.7	0.5	D	0.7	0.5	D	0.7	0.1	
Barium	34.6	1		14.3	1		15.9	1		14.3	1		6.3	1		38.9	1	
Beryllium	<	1	U													<	1	UJ
Calcium	84300	100	D	127000	100	D	127000	100	D	78100	100	D	112000	100	D	83300	10	DJ
Chromium	6.2	1		1.1	1		1.7	1		<	1	U	<	1	U	4.6	1	
Cobalt	<	1	U													<	1	U
Copper	3.8	1														1.9	1	
Iron	5920	1														3350	1	J
Lead																		
Lead	3.6	0.1		0.2	0.1		0.3	0.1		0.3	0.1		<	0.1	UJ	1.9	0.1	
Magnesium	4080	10	D	918	1		1480	1		853	1		725	1		38400	10	J
Manganese	67.9	1														73.1	1	J
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	UJ	<	0.01	U
Nickel	5	1														4.2	1	J
Potassium	663	1		372	1		387	1		383	1		281	1		673	1	J
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.1	U
Silver	<	1	U	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ	<	1	UJ

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J = Estimated value.
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TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-018-SB-009			230-020-SB-003			230-020-SB-007			230-021-SB-003			230-021-SB-006			230-025-SB-009		
LAB SAMPLE NUMBER	D93-6804-20			D93-7779-2			D93-7779-3			D93-7779-4			D93-7779-5			D93-6694-18		
COLLECT DATE	06/10/93			07/08/93			07/08/93			07/08/93			07/08/93			06/08/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	147	U	330	1	J	376	1	J	<	90.8	U	<	161	U	<	111	U
Thallium	<	1	U													<	1	UJ
Vanadium	19.7	0.1														5.6	0.1	J
Zinc	10.8	1														9.2	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	3500	100	D	<	10	U	<	10	U	850	10	
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen																		
Nitrogen, Total Kjeldahl																		
pH																		
Total Phosphorus																		
Total Organic Carbon																		
Total Solids	85.1	0.01		79.6	0.01		78.2	0.01		77.1	0.01		86.7	0.01		79.1	0.01	

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J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-027-SB-009			230-036-SB-006			230-MW1-SB-010			230-MW10-SB-006			230-MW2-SB-010			230-MW3-SB-010		
LAB SAMPLE NUMBER	D93-6804-1			D93-6755-9			D93-6806-20			D93-7779-1			D93-6957-4			D93-6957-3		
COLLECT DATE	06/10/93			06/09/93			06/11/93			07/08/93			06/15/93			06/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	<	2	DU	<	2	DU	9000	2000	D	<	2	DU	4300	200	D
Ethylbenzene	<	2	DU	<	2	DU	<	2	DU	93000	2000	D	<	2	DU	3600	200	D
Toluene	<	2	DU	3	2	D	<	2	DU	180000	2000	D	<	2	DU	14000	200	D
Xylenes	<	2	DU	3	2	D	<	2	DU	350000	2000	D	<	2	DU	14000	200	D
Metals (mg/Kg)																		
Aluminum	1450	1		644	1	J	3830	1					1850	1	J	1810	1	J
Arsenic	0.4	0.1		1.3	0.1	J	1	0.1		1.7	0.5	D	0.5	0.1		0.5	0.1	
Barium	11.9	1		13.8	1		50	1		50.4	1		17	1		14.5	1	
Beryllium	<	1	U	<	1	U	<	1	U				<	1	UJ	<	1	UJ
Calcium	129000	100	D	84400	100	D	53300	10	D	46100	100	D	69900	100	D	66500	10	D
Chromium	1.6	1		1.9	1		7.5	1		4.5	1		1.4	1		2.6	1	
Cobalt	<	1	U	<	1	UJ	1.4	1					<	1	UJ	<	1	UJ
Copper	<	1	U	2	1		2	1					1.1	1		<	1	U
Iron	1580	1		683	1	J	4750	1					1850	1	J	1780	1	J
Lead																		
Lead	0.2	0.1		0.4	0.1		2.6	0.1		1.7	0.1		0.5	0.1		0.4	0.1	
Magnesium	1960	1		2880	10	J	3470	1		1020	1		2250	1		2860	1	
Manganese	27.2	1	J	19.7	1		99.6	1					49.4	1	J	36.6	1	J
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	.<	0.01	U	<	0.01	U
Nickel	2.6	1		<	1	U	5.5	1					1.4	1	J	1.6	1	J
Potassium	430	1		307	1	J	862	1		763	1		530	1	J	509	1	J
Selenium	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU	<	0.5	DU
Silver	<	1	U	<	1	J	<	1	U	<	1	UJ	<	1	UJ	<	1	UJ

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
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U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-027-SB-009			230-036-SB-006			230-MW1-SB-010			230-MW10-SB-006			230-MW2-SB-010			230-MW3-SB-010		
LAB SAMPLE NUMBER	D93-6804-1			D93-6755-9			D93-6806-20			D93-7779-1			D93-6957-4			D93-6957-3		
COLLECT DATE	06/10/93			06/09/93			06/11/93			07/08/93			06/15/93			06/15/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	<	206	U	<	132	U	599	1		<	66.3	U	112	1	J	159	1	J
Thallium	<	1	U	<	1	UJ	<	1	U				<	1	UJ	<	1	UJ
Vanadium	3.4	0.1		3.5	0.1		5.7	0.1					3.5	0.1	J	3.9	0.1	J
Zinc	3.1	1		2.9	1		12.4	1					4.8	1	J	5.1	1	J
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	<	10	U	<	10	U	4300	100	D	10	10		120	10	
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen										<	0.1	U						
Nitrogen, Total Kjeldahl										98	10							
pH										7.6								
Total Phosphorus										53	20	D						
Total Organic Carbon										1300	100							
Total Solids	75.1	0.01		79.3	0.01		80.8	0.01		93.2	0.01		67	0.01		64.3	0.01	

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-MW4-SB-010			230-MW5-SB-003			230-MW5-SB-006			230-MW6-SB-003			230-MW6-SB-006			230-MW7-SB-003		
LAB SAMPLE NUMBER	D93-6871-2			D93-7779-7			D93-7779-8			D93-7848-1			D93-7848-2			D93-7848-3		
COLLECT DATE	06/12/93			07/08/93			07/08/93			07/09/93			07/09/93			07/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)																		
Benzene	<	2	DU	10	2		10000	5000	D	<	2	U	<	2	U	<	2	U
Ethylbenzene	<	2	DU	13	2		160000	5000	D	<	2	U	<	2	U	<	2	U
Toluene	<	2	DU	17	2		300000	5000	D	<	2	U	<	2	U	<	2	U
Xylenes	<	2	DU	25	2		600000	5000	D	3	2		<	2	U	<	2	U
Metals (mg/Kg)																		
Aluminum	7520	1																
Arsenic	5.5	0.1		2.9	0.5	D	1.5	0.5	D	1.6	0.5		0.6	0.5		1.1	0.5	
Barium	23.1	1		55.3	1		40	1		44.7	2		11.7	2		31	2	
Beryllium	4	1																
Calcium	103000	100	D	43300	100	D	37000	100	D	120000	1000	D	107000	1000	D	125000	1000	D
Chromium	9.8	1		8.4	1		3.8	1		3.6	7	J	1.8	7	J	2.8	7	J
Cobalt	3	1																
Copper	6.4	1																
Iron	10800	1																
Lead										2.3	5	J	<	1	U	1.6	5	J
Lead	4	0.5	D	5.3	0.5	D	2.2	0.1										
Magnesium	3180	1		5630	1		1110	1		2820	5		662	5		4700	5	
Manganese	68.1	1																
Mercury	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Nickel	8.9	1																
Potassium	1710	1		2530	1		891	1		1150	100		245	100		589	100	
Selenium	<	0.1	U	<	0.5	DU	<	0.5	DU	0.5	2.5	DJ	0.6	2.5	DJ	<	0.5	DU
Silver	<	1	UJ	<	1	UJ	<	1	UJ	<	1	U	<	1	U	<	1	U

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J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-MW4-SB-010			230-MW5-SB-003			230-MW5-SB-006			230-MW6-SB-003			230-MW6-SB-006			230-MW7-SB-003		
LAB SAMPLE NUMBER	D93-6871-2			D93-7779-7			D93-7779-8			D93-7848-1			D93-7848-2			D93-7848-3		
COLLECT DATE	06/12/93			07/08/93			07/08/93			07/09/93			07/09/93			07/09/93		
	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
Sodium	235	1	J	<	159	U	<	67	U	190	10		96	10		186	10	
Thallium	<	1	U															
Vanadium	27.8	0.1																
Zinc	24	1																
TPH (mg/Kg)																		
Total Petroleum Hydrocarbon	<	10	U	21	10		4000	100	D	<	10	U	<	10	U	<	10	U
Water Quality (mg/Kg)																		
Nitrate-Nitrite Nitrogen				<	0.1	U	<	0.1	U	12.3	0.1		1.62	0.1		13.6	0.1	
Nitrogen, Total Kjeldahl				308	10		154	10		266	10		112	10		238	10	
pH				7.7			7.8			8			7.9			7.9		
Total Phosphorus				205	100	D	72	50	D	101	50	D	17	20	DJ	92	50	D
Total Organic Carbon				12000	100		1300	100		6900	100		2400	100		3900	100	
Total Solids	73.2	0.01		89.8	0.01		90.7	0.01		87.2	0.01		91.2	0.01		88.2	0.01	

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U = Nondetected value. RL = Reporting Limit.

TABLE 6.2-10
SUMMARY OF CHEMICALS IN SOIL SAMPLES AT 230

LOCATOR	230-MW7-SB-006		
LAB SAMPLE NUMBER	D93-7848-4		
COLLECT DATE	07/09/93		
	Result	RL	Qual
Volatile Aromatic Organics (ug/Kg)			
Benzene	<	2	U
Ethylbenzene	<	2	U
Toluene	<	2	U
Xylenes	<	2	U
Metals (mg/Kg)			
Aluminum			
Arsenic	0.9	0.5	
Barium	12.3	2	
Beryllium			
Calcium	140000	1000	D
Chromium	2	7	J
Cobalt			
Copper			
Iron			
Lead	<	1	U
Lead			
Magnesium	2120	5	
Manganese			
Mercury	<	0.01	U
Nickel			
Potassium	459	100	
Selenium	<	0.5	DU
Silver	<	1	U

(1) Results presented here are only those chemicals which were detected at least once at this SWMU and have passed data review.
J = Estimated value.
R = Rejected value. D = Sample was diluted for analysis.
U = Nondetected value. RL = Reporting Limit.