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Records Package 32
Table of Contents
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Date	Type	Subject/Title	Symbol	Pages	ER/ID
Volume I					
8/15/95	TOC	Table of Contents	none	3	
	List	List of Appendixes	none	1	
	List	Acronyms and Abbreviations	none	1	
	Text	Summary of 1994 Field Activities TA-46, OU 1140	Section 1	5	
			Section 2	2	
			Section 3	3	
			Section 4	6	
			Section 5	2	
			Section 6	1	
			Section 7	1	
			Section 8	1	
			Section 9	2	
			Section 10	3	
	Table	Standard Operating Procedures	Exhibit 1	2	
	Table	Additional Samples Collected	Exhibit 2	1	
	Table	Summary of 94 Sampling	Exhibit 3	7	
	Table	Sample Database	Appendix 1	152	
	Report	Land Survey Report	Appendix 2	5	
	Report	Radiation Survey Report	Appendix 3	33	
	Report	Geophysical Investigations	Appendix 4	7	
	Plan	FIP	Appendix 5	45	
	Notebook	Daily Field Log Notebook	Appendix 6	57	
Volume II					
	Data	Radiochemistry Screening	Appendix 7	86	
	Plan	Sampling Plan	Appendix 8	15	
	Forms	Sample Collection Log	Appendix 9	156	
	Forms	Chain of Custody	Appendix 10	115	
	Report	Daily Field Report	Appendix 11	55	
Volume III					
	Table	Photo Documentation	Appendix 12	69	
	Plan	SSQA/QCP	Appendix 13	7	
	Plan	SSHASP	Appendix 14	130	
	Forms	Tailgate Safety Meeting	Appendix 15	52	
	Logs	Instrument Calibration	Appendix 16	24	
	Report	SSO Field Summary	Appendix 17	5	
	Report	HPT Field Summary	Appendix 18	3	
	Plan	SSWMP	Appendix 19	20	
	Report	Daily Field Report	Appendix 20	85	

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SUMMARY OF 1994 FIELD ACTIVITIES

AT TA-46, OU 1140

AUGUST 1995

VOLUME 1

ICF KAISER

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SUMMARY OF 1994 FIELD ACTIVITIES

AT TA-46, OU 1140

ICF KAISER ENGINEERS, INC.

AUGUST 1995

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SELECTION AND MANAGEMENT OF SAMPLING LOCATIONS 6

2.1 Reconnaissance Sample Locations 6

2.2 Collocated Field Duplicate Samples 7

2.3 Management of Sampling Activities 7

3.0 FIELD SURVEYS 8

3.1 Land Survey 8

3.2 Radiation Survey 9

3.3 Geophysical Survey 9

4.0 FIELD SAMPLING ACTIVITIES 11

4.1 Field Team Members 11

4.2 Sampling Approach 11

4.3 Transportation of Personnel and Equipment 12

4.4 Field Documentation 12

4.5 Environmental Samples 13

4.5.1 Surface Sampling 14

4.5.2 Shallow Hand-Auger Sampling 14

4.5.3 Near-Surface Sampling 14

4.5.4 Sediment/Sludge Sampling 15

4.6 Additional RFI Sampling 15

4.7 Quality Control Samples 16

5.0 HEALTH AND SAFETY 17

5.1 Health and Safety Requirements 17

5.2 Monitoring With Direct-Reading Instrumentation 17

5.3 Personal Monitoring 18

6.1 Radiation Screening for 1994 Sampling Activities....19

6.2 Radiation Screening Results....19

7.0 EQUIPMENT DECONTAMINATION PROCEDURES....20

7.1 Decontamination of Manual Sampling Equipment....20

8.0 EQUIPMENT RELEASE PROCEDURES....21

9.0 WASTE MANAGEMENT....22

10.0 CONCLUSION....24

REFERENCES....25

FIGURES

Figure 1 Location of TA-46....2
Figure 2 Location of Outfalls and Sample Locations....3
Figure 3 Locations of Surface Release Sample Locations....4
Figure 4 Locations of Stack Emissions Sample Locations....5

EXHIBITS

Exhibit 1 Standard Operating Procedures Used During TA-46 Sampling Activities
Exhibit 2 Additional Samples Collected at TA-46
Exhibit 3 Summary of 1994 Sampling Results at TA-46

LIST OF APPENDIXES

Appendix 1	Sample Database
Appendix 2	Land Survey Report
Appendix 3	Radiation Survey Report
Appendix 4	Geophysical Investigations of TA-46
Appendix 5	OU 1140 Field Implementation Plan
Appendix 6	Daily Field Log Notebook
Appendix 7	Radiochemistry Screening Data for Soil Samples
Appendix 8	Sampling Plan for Additional RFI Sampling
Appendix 9	Sample Collection Log Forms
Appendix 10	Chain of Custody Forms
Appendix 11	Daily Field Report
Appendix 12	Photo Documentation
Appendix 13	Site-Specific Quality Assurance/Quality Control Plan
Appendix 14	Site-Specific Health and Safety Plan
Appendix 15	Tailgate Safety Meeting Forms
Appendix 16	Instrument Calibration Logs
Appendix 17	Site Safety Officer's Field Summary Report
Appendix 18	Health Physics Technician's Field Summary Report
Appendix 19	Site-Specific Waste Management Plan
Appendix 20	Daily Field Report

ACRONYMS AND ABBREVIATIONS

CRZ	contamination reduction zone
DRI	direct-reading instrument
DU	depleted uranium
EM	electromagnetic induction
EPA	U.S. Environmental Agency
ER	environmental restoration
EZ	exclusion zone
FTL	field team leader
GPR	ground-penetrating radar
GPS	Global Positioning System
HE	high explosives
HPT	health physics technician
ICF KE	ICF Kaiser Engineers
LAMC	Los Alamos Medical Center
LANL, Laboratory	Los Alamos National Laboratory
MAG	magnometer/gradiometer
OU	Operable Unit
PID	photoionization detector
PPE	personal protective equipment
PRS	potential release site
RadCon	Radiological Control
RCRA	Resource Conservation and Recovery Act
RCT	radiological control technician
RFI	RCRA Facility Investigation
RWP	radiological work permit
SOP	standard operating procedure
SSHASP	site-specific Health and Safety Plan
SSO	site safety officer
SWMU	solid waste management unit
SZ	support zone
TA	Technical Area
VOC	volatile organic compound

Section 1

SUMMARY OF 1994 FIELD ACTIVITIES
TA-46, OU 1140

1.0 INTRODUCTION

This report summarizes surveying and sampling activities conducted at the Los Alamos National Laboratory (Laboratory),Technical Area (TA)-46, from August 18 through October 5, 1994. This work was done as part of the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for Operable Unit (OU) 1140. Figure 1 shows the location of OU 1140.

The solid waste management units (SWMU) at TA-46 have been organized into potential release sites (PRS). The PRSs are assigned to aggregates based on similarities in sampling strategies and conceptual exposure models. Assignments are based on factors such as topography surface, origin and function, COPCs, and contaminant transport mechanisms.

Three aggregates were sampled during the 1994 field effort:

- Outfalls (Figure 2)
- Surface release (Figure 3)
- Stack emissions (Figure 4)

Field activities during this RFI included the following:

- Land, radiation, and geophysical surveys. The land survey established geodetic control in the form of grids and identified radiation and geophysics survey points and sample location coordinates. The radiation and geophysics surveys determined sample locations based on subsurface structures and elevated (above-background) radiation levels.
- Sampling. Surface, near-surface (beneath asphalt), shallow subsurface, and sludge/sediment sampling was conducted during this investigation. Field personnel collected approximately 160 surface soil, 24 subsurface soil, 5 near-surface, 4 sediment/sludge, 9 PE field blanks, and 11 rinsate samples.

This summary report discusses the selection and management of sampling locations and activities, radiation screening during sampling activities, and decontamination and waste management procedures.

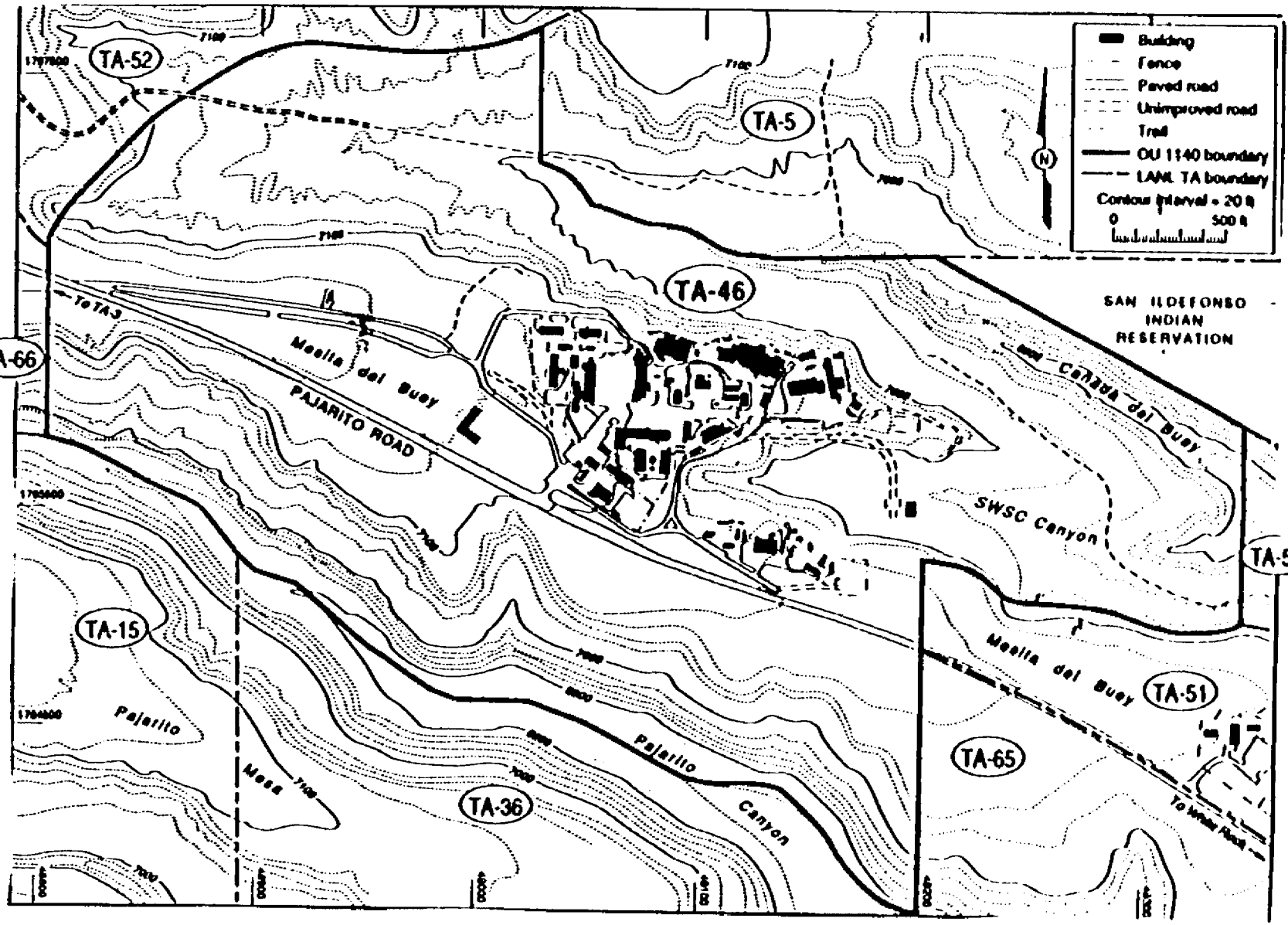

Figure 1. Location of OU 1140

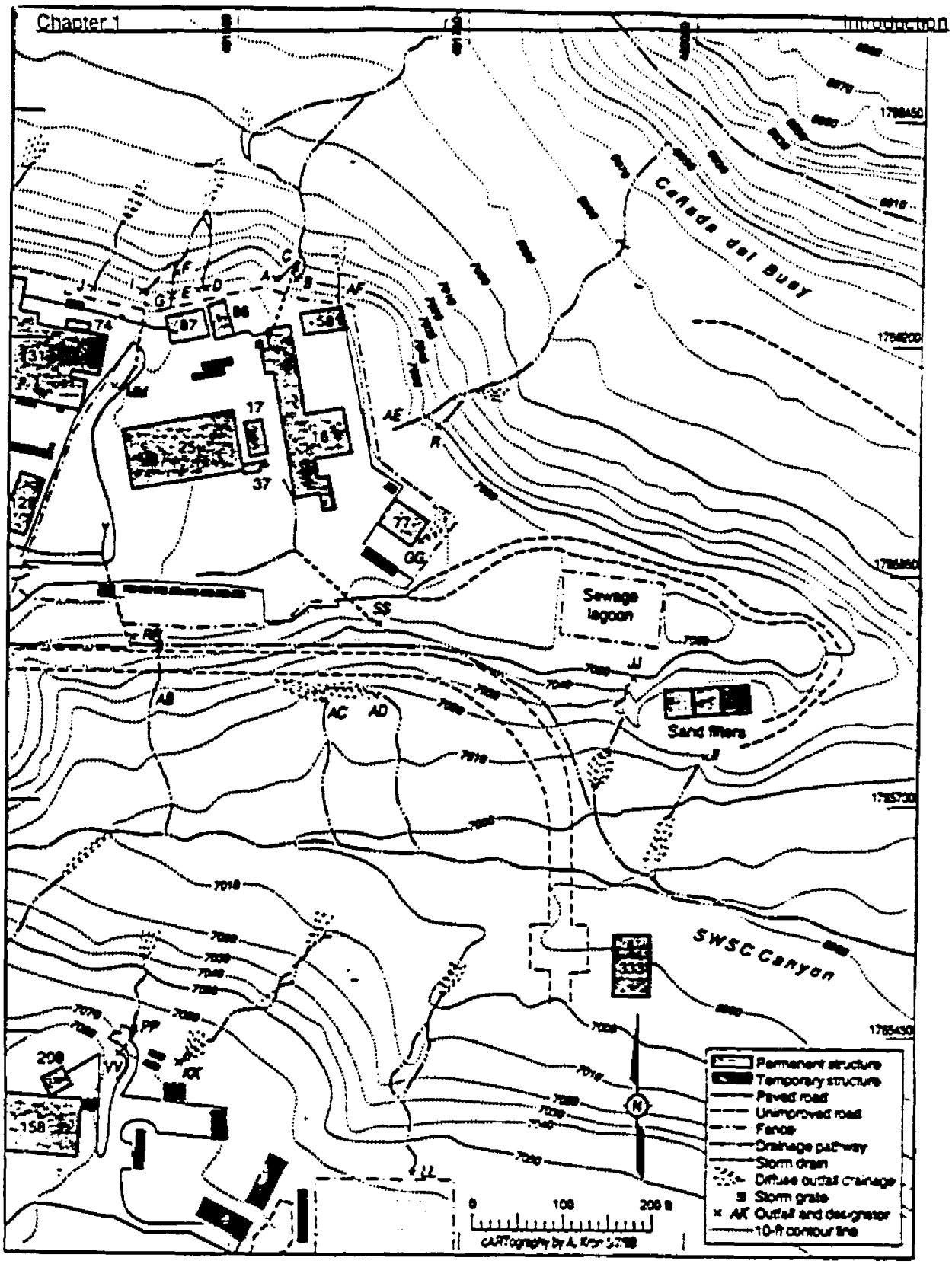

Figure 2. Location of outfall samples

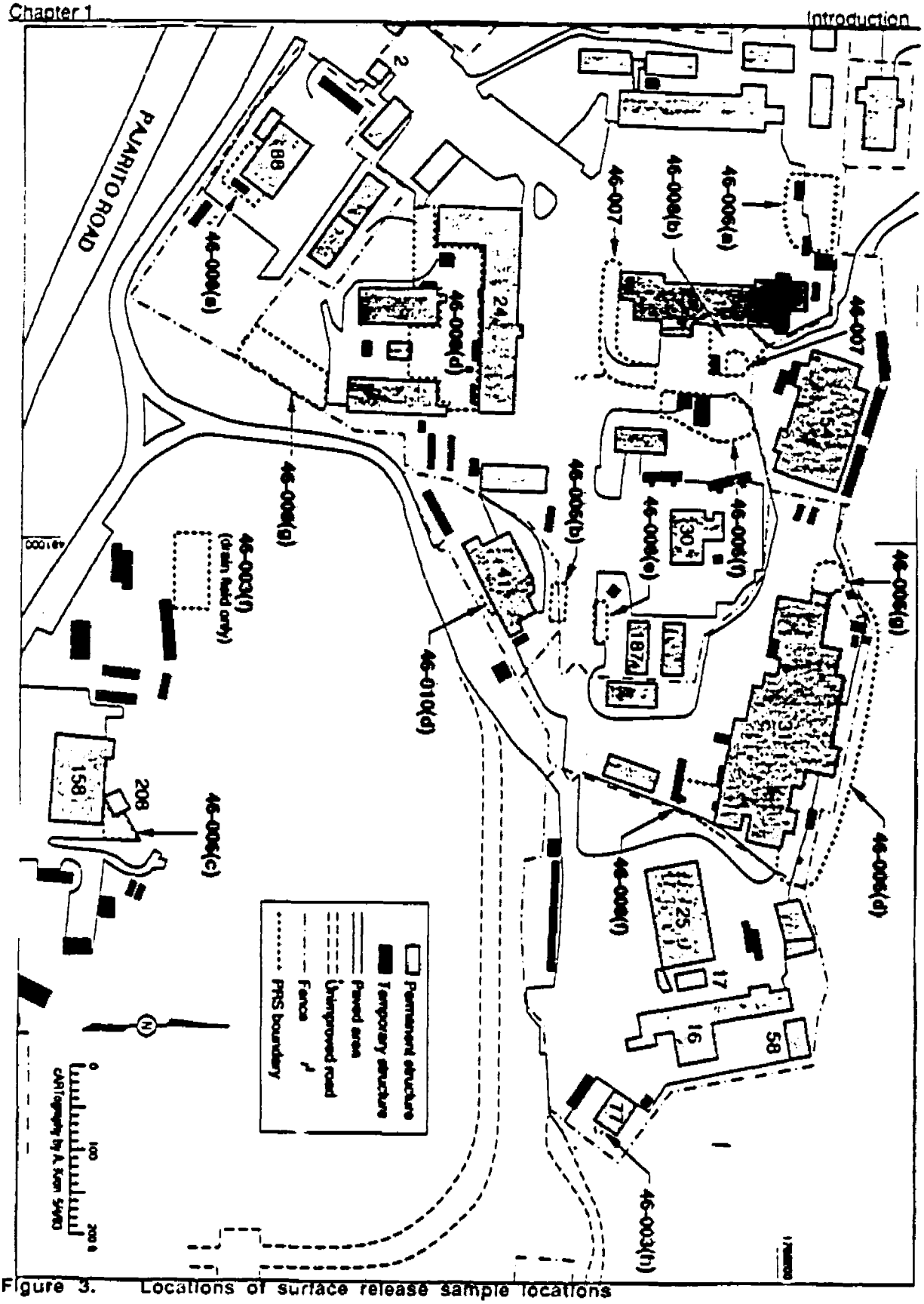

Figure 3. Locations of surface release sample locations

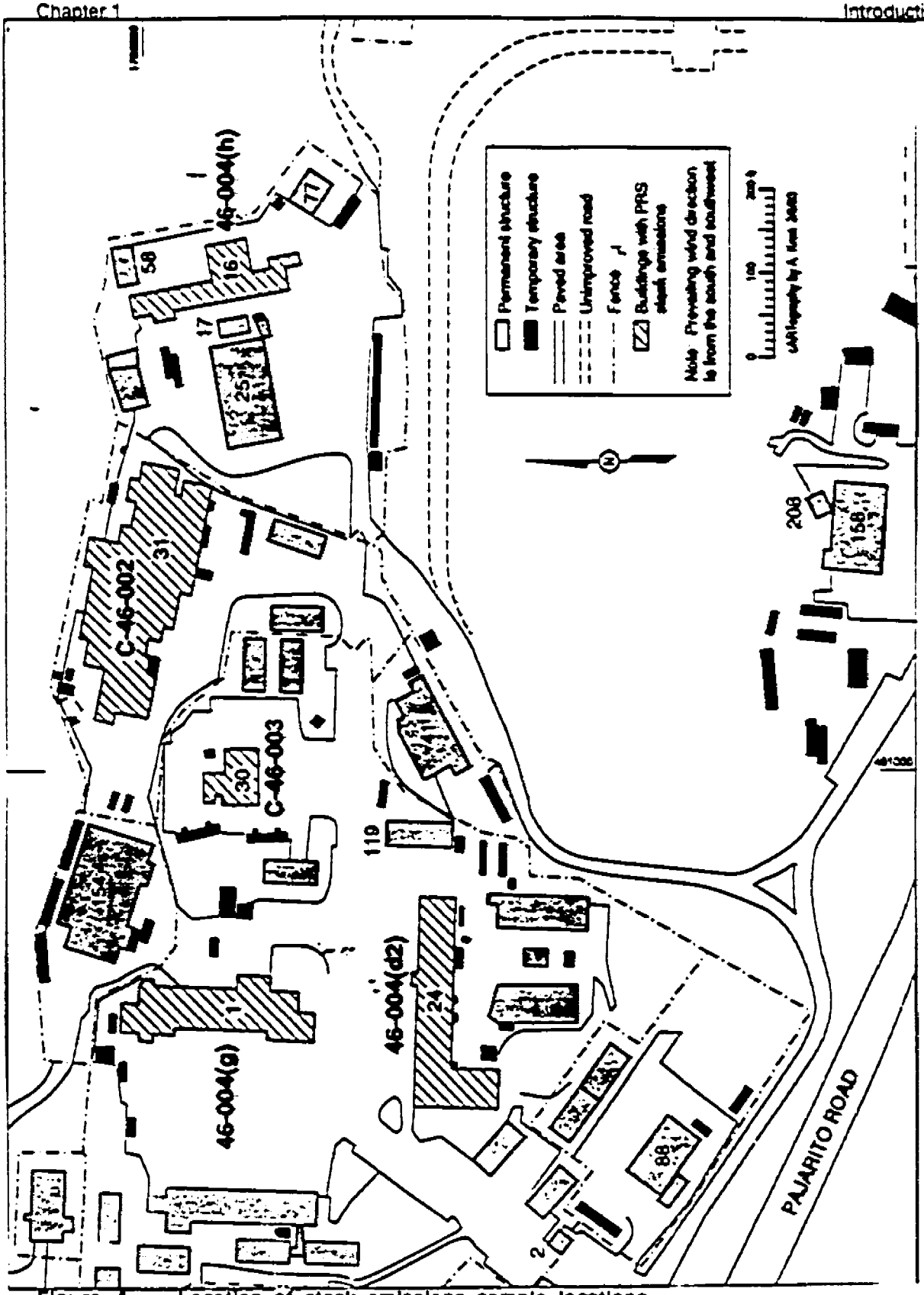

Figure 4. Location of stack emissions sample locations

Section 2

2.0 SELECTION AND MANAGEMENT OF SAMPLING LOCATIONS

Sample locations at TA-46 were selected using the criteria outlined in the RFI Work Plan for Operable Unit 1140 (LANL 1993, 1093). This chapter describes the selection and management of those locations. Reconnaissance sampling is discussed in Section 2.1. Collocated samples are discussed in Section 2.2. Management of sampling activities is described in Section 2.3.

2.1 Reconnaissance Sample Locations

Reconnaissance sampling was the main sampling strategy for the Phase I screening assessment survey at TA-46. Reconnaissance sample locations were selected specifically to maximize the detection of any contamination that might be present within the SWMU of interest. The samples taken from these locations are also called "biased samples" because the sample locations are chosen according to specific site characteristics and professional judgment. For example, samples were collected at sediment catchment areas because these areas were known to be in the pathway of contaminants translocated by surface water from upgradient drainages. Surface and subsurface soil sample locations were selected at the following locations:

- Under outfall pipes and in outfall drainage channels at SWMUs

46-004(a2)	46-004(f)	46-004(r)*	46-004(x)
46-004(b2)	46-004(g)	46-004(s)	46-004(y)
46-004(c2)	46-004(h)	46-004(u)	46-004(z)
46-004(e2)	46-004(m)	46-004(v)	46-006(c)
46-004(f2)	46-004(q)	46-004(w)*	

- At surface release areas at SWMUs

46-003(h)	46-006(d)	46-008(a)*	46-008(f)*
46-004(b)	46-006(f)	46-008(b)	46-008(g)*
46-006(a)	46-006(g)	46-008(d)*	46-010(d)
46-006(b)	46-007	46-008(e)*	AOC-01

- For stack emissions at Aggregate 5.6 (SWMUs 46-004(d2), 46-004(g), 46-004(n), 46-004(h), C-46-002, C-46-003).
- *PRSs where sampling is not complete

The reconnaissance sampling scheme also included the selection of biased sample locations using field indicators (e.g., visible stains on pavement or soil and anomalous radiation or geophysical survey measurements).

2.2 Collocated Field Duplicate Samples

Collocated samples, designated as field duplicates in the RFI Work Plan, were established 1 foot north of their respective grid-based sample locations at the following SWMUs:

46-004h (H-94)	46-004x (H-70)	46-006d (H-32)
46-004c2 (H-5)	Aggregate 5.6 (H-162)	46-004c2 (H-49)
46-008e (S-10)	46-006d (s-1)	46-008f (S-29)

These samples provided data to estimate the spatial variability of contaminants in the surface and subsurface soils and sediments and to evaluate whether the data is complete, representative, and comparable. Doing this will help determine whether to conduct a baseline risk assessment or to proceed with remediation. (LANL 1992, 0875)

2.3 Management of Sampling Activities

Information for the 1994 sampling activities at TA-46 was managed using a Claris FileMaker® Pro database. The database includes information on historical operations , engineering design, chemicals of potential concern (COPC), and sampling parameters such as number of samples and analytical methods. The field team used the database not only to organize and plan field activities but also to minimize the number of samples collected and analyses performed. The information presented in this section was particularly useful for implementing the sampling activities at TA-46 and is therefore included in this summary report.

Sampling information is presented on a PRS basis in Table E-1 of the database (Appendix 1). Information, as it relates to a given PRS, includes PRS/Sample Group, Outfall Field ID, SWMU/Outfall Type, Sample Notes, Sampling Approach, Field Surveys, Sampling-Group Information, Sampling Totals for PRSs, and Aggregate. This table illustrates the sample domain summary for each PRS.

Sampling information is presented on a sample location basis in Table E-4 of the database (Appendix 1). Information, as it relates to a given sample location, includes Sample Location, PRS, Field Surveys, Field Screening, Field Laboratory, and Laboratory Analyses. Selection of sampling locations included aggregating PRSs by similar risk scenarios and sampling approaches. By aggregating PRSs, sample locations were found to overlap. Each sample location was evaluated to determine if an adjacent location(s), could be eliminated. For the sample locations that overlapped and were compiled together, the analyte suite included COPCs from each PRS aggregate. This minimized the number of samples taken and analyses performed. Table E-4 identifies all COPCs for each of the PRSs that have been aggregated to a single sample location. The table illustrates the selection of analyte suites for each sample location.

Section 3

3.0 FIELD SURVEYS

Land surveys, radiation surveys, and geophysical surveys were conducted at TA-46 to assist in

- establishing geodetic control points and coordinates of sample locations;
- biasing sampling locations to areas that exhibit above-background levels of radioactive contamination; and
- locating subsurface structures.

Techniques that were determined by professional judgment to be redundant or unnecessary were eliminated.

3.1 Land Survey

The initial land survey was conducted at TA-46 by Santiago Romero, Jr. and Associates, surveyors, and ICF Kaiser Engineers (ICF KE) personnel between October 18 and November 8, 1993. The land survey established geodetic control points at TA-46 from primary Global Positioning System (GPS) survey points published in the Laboratory Survey Procedures Manual (LANL1993b). Grid systems were then established, and sample locations were set. Hubs and tacks were set at most points; for those points on hard surfaces, P-K nails were set. A Lietz Set-3 Total Station Theodolite Transit with SDR-2 Data Collector was used to conduct the survey. This system uses a transit that "shoots" an infrared beam of light into a range pole prism. The data collector then processes the signals and calculates the plane coordinates.

Data was downloaded to a Hewlett-Packard Model 9000 computer using PacSoft surveying/engineering design software. All points were plotted in the NAD 27 and NAD 83 coordinate system. The survey coordinates for sample locations are presented in Appendix 2.

Following the initial survey, many sample locations were changed and new locations were added. Because of this, a second land survey was conducted in April 1995 using a Trimble® GPS Total Station. This system uses single-frequency, real-time kinematics technology. It relays the position of different satellites to ground-based receivers. The GPS processes the signal and calculates plane coordinates via trilateration to within 1 cm.

The surveyor controls the system with a data collector as well as with controls on the receivers and a low-power radio. Data are displayed and recorded on board. The GPS system provides a Macintosh-format electronic copy of the FIMAD location ID/NAD 83 plane coordinates.

The Lietz Set-3 transit with the SDR-2 collector was used in areas where the GPS Total Station could not operate (e.g., under heavy tree cover or inside buildings). The coordinates for the second survey sample locations are presented in Appendix 2.

3.2 Radiation Survey

Radiation surveys were conducted by Environmental Dimensions Inc. (EDI) on November 16 and 17, 1993, and January 18, 1994. The objective of the surveys was to direct the location of reconnaissance samples if above-background radiation levels were found.

Two surveys, one at the sand filters (PRS 46-002) and the other just north of TA-46-WA-195, were conducted on a fixed grid using the Ludlum Model 2221 44-9 probe and the Ludlum 2221 Fidler probe. The grids were approximately 50 ft by 100 ft with readings taken every 10 ft. Sampling at the sand filters was not conducted during the 1994 field season. The survey results are presented in Appendix 3.

A survey was also conducted at Outfall K (behind TA-46-31). The first grid was a 25-ft by 20-ft grid, with readings taken every 5 ft. Another 10-ft by 30-ft grid was located immediately under the outfall pipe, with readings taken every 5 ft.

Data from the TA-46 radiation surveys were recorded in a field notebook and on Laboratory-supplied Radiation Survey Forms (Appendix 3). The results revealed no elevated readings at any of the surveyed locations.

3.3 Geophysical Survey

Geophysical surveys were conducted at TA-46 by ICF KE personnel. The RFI Work Plan states that electromagnetic (EM) and ground-penetrating radar (GPR) surveys will be conducted to determine the precise boundaries of subsurface structures, such as outfall pipes and septic systems. Results from the geophysical surveys are presented in Appendix 4.

Several drain lines shown on the engineering maps had outfalls that could not be located in the field. A GPR survey was conducted on July 14, 1994, to assess the location of one unlocated outfall pipe north of TA-46-31 and one unlocated outfall pipe north of TA-46-87. GPR traverses were performed near the buildings to determine where the pipes extended from the buildings into Cañada del Buey.

3.3.1 Survey Methods

The GPR system operates by continuously radiating an EM pulse into the ground from a transducer (antenna) as it is moved along a traverse. A portion of the radar signal is reflected back to the surface from interfaces representing relatively small variations in electrical properties. However, when the signal encounters a buried metal object, or other source of significant contrast, a large portion of the energy is reflected back to the surface. These signals are received by the same transducer and are printed in cross-section from a graphical recorder or on a video display unit. The resulting records can provide information

regarding the location of buried objects, possible geologic stratification, thickness and extent of lateral fill material, and changes in material conditions, such as saturation. The GPR system used for the TA-46 survey was a Geophysical Survey Systems Inc. SIR-3 system with a 500 MHz antenna.

3.3.2 Geophysical Survey Results

Two GPR traverses were performed parallel to the wall of TA-46-31; three reflection patterns typical of buried utilities were found in the records. One of the patterns was located close to the suspected location of the outfall pipe; this pattern, the westernmost of the three, was assumed to represent the outfall. The middle reflection pattern was very shallow (less than 1.5 ft deep) and has a small diameter (less than 8 in.). It was assumed that the middle reflector did not represent the outfall pipe. A third GPR traverse was performed north of TA-46-87. One reflection typical of a buried utility was located approximately 14 ft east of the northwest corner of TA-46-87 and appeared to end in the obvious Outfall G.

Section 4

4.0 FIELD SAMPLING ACTIVITIES

Field sampling was conducted at TA-46 from August 18 through October 5, 1994. This chapter includes information about field team personnel (Section 4.1), the sampling approach (Section 4.2), transportation of personnel and equipment (Section 4.3), field documentation (Section 4.4), and environmental (Section 4.5) and quality control (QC) sampling (Section 4.6). The following information, including the Sample Schedule, is detailed in the Field Implementation Plan (Appendix 5).

4.1 Field Team Members

The sampling team(s) consisted of the following field team members:

Field Team Member	Role(s)	Organization
Lynn Kidman	Field Team Manager	ICF KE
Linda Fluk	Field team Leader	ICF KE
Jim Roberts	Field Coordinator	LANL CST-2
Mike Powell	Health Physics Technician	EDI
Manly Lee	Health Physics Technician alternate	EDI
Cornelius Flynn	Site Safety Officer	MK
Ken Hansel	Sampler	ICF KE
Kristi Aamodt	Sampler	ICF KE
Spence Sepponen	Sampler	ICF KE

The field team members onsite during any given workday are listed in the Field Log Notebook (Appendix 6).

4.2 Sampling Approach

All 1994 field sampling at TA-46 was conducted with one sampling team. This team typically consisted of a field team leader (FTL); a site safety officer (SSO); a health physics technician (HPT); and two samplers, one to take field notes and one to physically take the environmental sample.

Before each sample was taken, the HPT and the SSO checked the undisturbed sample location for the presence of above-background levels of radioactivity and volatile organic compounds (VOC). The samplers then proceeded to collect the sample, document weather and site conditions and sample descriptions, and take photos of every sample location. If VOCs or elevated levels of radioactivity were detected, the site was evacuated and sampling procedures for that site were reevaluated.

As soon as possible after collection, all samples were packed into portable ice chests cooled with ice packs. Samples collected in the morning and mid-afternoon were submitted to the Laboratory CST-9 mobile radiation laboratory on the day of collection. Samples collected in the late afternoon were maintained in coolers at the site and submitted to the mobile radiation laboratory on the following morning. The mobile laboratory provided radiochemistry screening data for gross alpha/beta and gamma for all samples (Appendix 7).

4.3 Transportation of Personnel and Equipment

During 1994 sampling activities, the TA-46 sampling team implemented an innovative approach to moving personnel and equipment between the exclusion zone (EZ), the contamination area where samples were collected, and the contamination reduction zone (CRZ), where decontamination took place, and between EZ and EZ. This approach involved the use of a golf cart-like transportation vehicle with trailer to transport personnel and equipment to individual sampling locations. The congested nature of Mesita del Buey, (i.e., many parking lots and buildings where people work) made it necessary for the team to move to the sample location, set up the EZ, collect the samples, and dismantle the EZ as quickly as possible. These carts allowed the sampling team to move quickly and with little disturbance to ongoing operations at TA-46. They also allowed the team to travel easily to more distant sample locations, thus eliminating need for the time-consuming and costly establishment of multiple support zones (SZ), the clean area in which administrative and support work was conducted, and CRZs.

The interior areas of the cart with which personnel and equipment came in contact were designated as part of the EZ; that is, they were considered to be potentially contaminated. Team members entered and exited the EZ directly from the cart. The wheels of the cart, however, never entered the EZ and therefore were considered to be uncontaminated.

The transportation cart benefited the field sampling team in several ways:

- The team could travel farther to conduct sampling, thus reducing the number of times needed to mobilize and demobilize the SZ and CRZ.
- Because the team did not have to walk long distances carrying heavy equipment, they were able to spend more time sampling.
- The cart reduced the amount of physical exertion to which the team was exposed as well as the probability of muscle strain, particularly during hot weather.

4.4 Field Documentation

Laboratory standard operating procedures (SOP) were used for all field documentation and sampling activities. These SOPs are listed in Exhibit 1. Field documentation, in accordance with LANL-ER-SOP-1.04, Sample Control and Field Documentation (LANL 1994, 0875), provided the necessary evidence to

ensure and defend sample data quality. This documentation includes Field Log Notebooks, Sample Collection Logs, Chain of Custody/Request for Analysis forms, daily field reports, and photographs.

Field Log Notebook. Field notes during the 1994 sampling activities were recorded in a Field Log Notebook (Appendix 6). The field notes include descriptions of the following:

- General field conditions
- Monitoring and sampling procedures
- Sampling and health and safety (HS) equipment
- Photograph descriptions
- Decontamination equipment and practices
- Other pertinent observations

Sample Collection Logs. Sample Collection Logs (Appendix 9) were completed for each sample. The logs contained the following information:

- Date and time of collection
- Sample identification, location, type, and depth
- Containers used
- Field monitoring results
- Weather conditions at the time of sample collection
- Photograph numbers and descriptions

Chain of Custody/Request for Analysis forms (Appendix 10) were completed at the time of sampling to identify and document those personnel responsible for safeguarding the integrity of the samples. These forms maintain a record of sample collection and transfer between field personnel and analytical personnel at the CST-9 mobile radiation laboratory.

Daily field reports and summaries. The FTL faxed copies of the Daily Field Report and Summary to ER Project Office at the end of each work day. These documents are presented in Appendix 11.

Photographs. Photographs of sampling activities and each sample location were taken, and a brief description was written for each. These are presented in Appendix 12.

4.5 Environmental Samples

Environmental samples taken during the 1994 field sampling activities at TA-46 conformed to the RFI Work Plan. Additional samples were collected as noted in Section 4.6. The following types of environmental samples were taken:

- Surface samples (Section 4.5.1)
- Near-surface samples (Section 4.5.2)
- Shallow hand auger samples (Section 4.5.3)
- Sediment/sludge samples (Section 4.5.4)

Detailed descriptions of sampling activities for each day during the 1994 TA-46 investigation are presented in the Sample Collection Logs (Appendix 9). Exhibit 3 presents a summary of the samples.

4.5.1 Surface Sampling

All surface sample collection activities at TA-46 conformed to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992, 0875). Surface soil samples (defined in the RFI Work Plan as samples taken from the surface to a depth of 6 in.) were taken within a diameter of approximately 6-8 in. VOC samples were taken from a depth greater than 6 in. but no deeper than 12 in. Soil was collected from each sample location using a dedicated stainless steel spoon. The soil was placed in a stainless steel bowl and homogenized by mixing with the stainless steel spoon. Team members used his method to collect approximately 160 samples during the 1994 sampling activities.

4.5.2 Shallow Hand-Auger Sampling

All shallow hand-auger sample collection activities at TA-46 conformed to LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler (LANL 1992, 0875).

Subsurface soil samples were recovered from depths to 10 ft using a stainless steel auger that was manually driven into the soil. Boreholes were manually driven with the auger directly underneath outfall pipes, in outfall drainage channels, in sediment traps, and beneath asphalt surfaces. The soil or sediment was removed from the auger, placed into a stainless steel bowl, and homogenized with a stainless steel spoon.

The RFI Work Plan required collecting three samples from each borehole at the following depths:

- Soil surface (0-6 in.)
- Mid-subsurface soil(18-60 in.)
- Either the soil/tuff interface or greater than 60 in., whichever was shallower.

The number of samples taken from any borehole was often limited by the depth of the soil/tuff interface. If the soil/tuff interface was encountered before all of these criteria were met, a final sample was taken at that location. Where the soil/tuff interface was encountered within 6 in. of the surface, only one sample was collected.

Hand-augering was attempted at a total of 113 sample locations, and 24 subsurface samples were collected.

4.5.3 Near-Surface Sampling

The RFI Work Plan required the collection of near-surface soil samples from 0-6 in. beneath asphalt pavements. The work plan stated that boreholes would be drilled with a small (≤ 2 in. diameter) diamond coring drill through the asphalt pavement, allowing a 6-in. core of the subsoil to be collected. However, a

jackhammer was used instead of a diamond coring drill. The asphalt surface was broken up and cleared away to reveal the subsoil surface. All near-surface sample collection conformed to LANL-ER-SOP-06.09. When the sampling was finished, the asphalt was repaired. Five near-surface samples were collected.

4.5.4 Sediment/Sludge Sampling

All sediment/sludge sample collection activities at TA-46 conformed to LANL-ER-SOP-06.09 and LANL-ER-SOP-06.14, Sediment Material Collection. Four sediment/sludge samples were collected during the 1994 sampling activities, two from a natural pond and two from beneath two individual storm grates.

Because of seasonal rains, the first attempt to sample the natural pond was unsuccessful, since the sample stakes were covered by 1 ft of water. The sampling team had to wait several weeks for the water to recede before they were able to successfully collect the samples.

The storm-grate sampling required the team to use a jackhammer to free the grate from the asphalt surface. After removing the grate, the sampler collected the sediment from the bottom of the catch basin, which was approximately 3 ft deep. The grate situated just west of TA-46-119 was relatively easy to remove, and the catch basin held enough sediment to fill all the required sample containers. However, the grate situated southwest of TA-46-187 required a forklift to lift the grate from the asphalt, and the catch basin held very little sediment. The sampler was able to collect adequate amounts of sediment, which consisted mostly of gravel and pieces of concrete, to partially fill all the sample containers except for the VOC containers. No VOCs or elevated levels of radioactivity were detected.

4.6 Additional RFI Sampling

Sampling activities not called out by the RFI Work Plan were conducted during the 1994 sampling campaign at TA-46. These samples were included to provide more information for the following reasons:

- Newly located outfalls
- Locations requested by New Mexico Environment Department DOE oversight board personnel
- Locations required by the U.S. Environmental Protection Agency
- Locations modified and/or added by Field Unit 3 team members
- Expanded boundary of an existing SWMU

The following SWMUs were sampled as part of the additional sampling activities:

46-003(h)	46-004(ez)	46-004 (fz)
46-004 (m)	46-006(b)	46-006(d)
46-007	46-008(a)	46-008(g)

These additional samples are listed in Exhibit 2. The sampling plan for these additional samples is included in Appendix 8.

4.7 Quality Control Samples

Field QC samples, in the form of rinsate blanks and performance evaluation (PE) field blank samples, were collected during 1994 TA-46 field sampling activities. These samples, which provide the means to assess the quality of the sampling data, were collected as specified and defined in the site-specific Quality Assurance/Quality Control Plan for TA-46 (Appendix 13). All QC samples are presented in Exhibit 3.

Rinsate blank samples were submitted to check for cross-contamination of samples resulting from ineffective decontamination procedures. Following the decontamination of non-dedicated equipment, the equipment was rinsed again with commercially packaged distilled water. This rinsate was collected in dedicated stainless steel bowls. Rinsate blank samples were collected from this water under the same conditions as the environmental field samples.

PE samples are collected to check for contamination that may have been introduced from ambient conditions or improper handling procedures and to evaluate matrix effects on laboratory recovery of metals and radioactive constituents. PE samples also provide information on how well the analytical procedures work for the Laboratory-like matrix.

Since the majority of the samples collected at TA-46 are soil, the PE blanks were of fine-grained and homogenous soil matrix purchased from offsite sources. Inorganic Ventures, Inc. provided soil spiked with known concentrations of inorganic constituents suspected to be present at TA-46. Idaho National Engineering Laboratory provided soil spiked with known amounts of radioactive and metal constituents suspected to be present at TA-46. The PE soil was supplied in bulk and placed in sample containers along with the environmental samples.

Section 5

5.0 HEALTH AND SAFETY

HS monitoring was conducted to protect field workers from suspected or known physical, chemical, and radiological hazards during on-site operations. This section discusses field monitoring for physical and chemical hazards. Field monitoring for radiological hazards is discussed in Section 6.0. General heath and safety requirements are described in Section 5.1, direct-reading instrument (DRI) monitoring is described in Section 5.2, and other personal monitoring is described is Section 5.3.

5.1 Health and Safety Requirements

The SSO was responsible for enforcing all HS requirements according the Site-Specific Health and Safety Plan (Appendix 14). The SSO led tailgate safety meetings every sampling day before site workers were allowed to enter the EZ; Tailgate Safety Meeting Forms (Appendix 15) document these meetings. The SSO also briefed visitors on HS issues, conducted or oversaw HS monitoring, and ensured that all HS concerns were met.

A task-by-task risk analysis was conducted to identify hazards associated with given tasks. The identified hazards were then evaluated to determine levels of protection needed for field personnel. On the basis of these evaluations, Modified Level D personal protective equipment (PPE) was recommended and used during sampling activities. Modified Level D PPE consisted of

- chemical resistant boots;
- cloth coveralls;
- inner and outer chemical-resistant gloves (or one pair of inner gloves and a pair of cotton gloves depending on role of sampling team member); and
- safety glasses.

Three work zones — the EZ, CRZ, and SZ — were established to ensure that hazardous substances were not spread from the potentially contaminated areas.

The Laboratory Industrial Hygiene and Safety Group (ESH-5) was responsible for overseeing all health and safety issues during the 1994 sampling activities

5.2 Monitoring With Direct-Reading Instrumentation

DRI were used to monitor the work environment of on-site workers. The following instruments and their action levels were used for sampling activities:

Direct Reading Instrument	Action Level
HNu photoionization detector (PID), Model PI101 with a 10.2 ev probe	8.5 ppm.
MSA oxygen/combustible gas meter	22% ≤ O_2 ≥19.5% combustible gas ≥ 10% of lower explosive limit

Each instrument was calibrated and logged at the beginning of the workday (Appendix 16). The PID was used to monitor organic vapor concentrations in the breathing zone of the sampler and downwind of sampling activities where VOCs were COPCs. Monitoring results are documented in the Sample Collection Logs (Appendix 9) and the Field Log Notebook (Appendix 6).

Results. Using the PID, organic vapors were detected at sample locations but not in the breathing zone of field workers. The field team concluded that since many of the samples were collected from moist soil locations covered with dense vegetation layers, the organic readings on the PID may have resulted from the breakdown of the vegetation. Because this could not be confirmed, all safety precautions were followed while collecting the samples. Results are presented in Appendix 17.

5.3 Personal Monitoring

Personal air sampler pumps (SKC Universal Constant Flow Sampler) were worn by selected site workers periodically during the sampling activities. The individual determined to be the most exposed to contamination was chosen to wear the sampler. The personal air pumps sampled air from the working environment through 37-mm paper filters during a sampling period of approximately eight hours. These filters were then removed and submitted for beryllium, cadmium and lead analyses.

Results. Results from personal-air pump monitoring indicate that personnel involved with sampling activities at TA-46 were not exposed to harmful or measurable levels of contaminants. The three filters analyzed for beryllium, cadmium and lead were all below the reported detection limit. Results are presented in Appendix 17.

Section 6

6.0 RADIATION SCREENING DURING SAMPLING ACTIVITIES

Radiation screening was conducted by a HPT during field sampling activities to protect the health and safety of field team members. Radiation screening at TA-46 consisted of scanning sample locations and soil samples for radiation. Personnel, equipment, and material were also screened for radiation before leaving the exclusion zone. Surveys were conducted on equipment and material before release from TA-46. Radiation screening for the 1994 sampling event is discussed in Section 6.1.

Pre- and post-sampling radiation screening of soil sample locations was performed using the Ludlum 2221 with a 44-9 alpha-beta-gamma detector. Results were recorded in the Field Log Notebook (Appendix 3) and on Sample Collection Forms (Appendix 9). Approximately 200 samples were taken, the majority of which were surface samples. Of the 200, 4 showed elevated readings. Results of the radiation screening and elevated readings of soil samples and their locations are discussed in Appendix 18.

6.1 Radiation Screening for 1994 Sampling Activities

Radiation screening was conducted by EDI personnel using the Ludlum 2221, 44-9 beta/gamma probe and a Ludlum 139 43-32 alpha probe, and a Ludlum 2221 43-10 alpha tray counter. Results for each sample location and sample were recorded on the Daily Field Log Notebook (Appendix 3) and Sample Collection Logs (Appendix 9). A report detailing the procedures and observations of the EDI personnel is presented in Appendix 18.

6.2 Radiation Screening Results

Radiation screening readings for all samples and sample locations at TA-46 were less than the set action levels of 800 cpm beta/gamma and 100 cpm alpha. Two sample locations at SWMU 46-006(d), S-84 and S-85, exhibited above-background levels of radiation. The sample locations were situated in a drainage area north of TA-46-58 that was noted to have elevated beta/gamma readings. Sample S-84 (AAA9496), located at the top of the drainage, had a direct reading of 200-250 counts per minute (cpm) beta/gamma. Activities decreased down-drainage, and sample S-85 (AAA9497), located at the bottom of the drainage on the edge of Cañada del Buey, had a direct reading of 100-140 cpm beta/gamma. These activities were above background; however, they were below the action levels.

Two sample locations at SWMU 46-006(g), NS-1 and NS-2, were located in a storage shed (46-WA-128) on the west end of TA-46-31. The storage shed was used from 1982 to 1984 to house a vacuum pump used in experiments involving plasma vaporization of DU powder. Although the sample locations did not exhibit elevated readings of radiation, several parts of the shed surface did show elevated readings of 300 to 350 cpm beta/gamma. These activities were above background but below the action levels.

Section 7

7.0 EQUIPMENT DECONTAMINATION PROCEDURES

Decontamination of non-expendable equipment is a critical part of data QA. All sampling equipment was carefully decontaminated before reuse. Sampling equipment such as bowls and spoons were not reused during the field campaign but were decontaminated and placed in waste containers pending analytical results of the corresponding rinsate samples (see Section 8.0). This equipment may be reused for future activities if the equipment rinsate samples indicate that no contamination was present.

Specific procedures used to decontaminate the manual sampling equipment is described in Section 7.1.

7.1 Decontamination of Manual Sampling Equipment

Sampling equipment such as hand augers were decontaminated before each reuse. Decontamination procedures entailed scanning the equipment with the Ludlum 2221 GM Probe for beta/gamma radiation, swiping the equipment with the Ludlum 2221 43-10 alpha tray counter to verify the absence or the presence of radiation, washing the equipment in a solution of Alconox® and water, rinsing in water, and rinsing again in distilled water. As specified in the site-specific Waste Management Plan (Appendix 19), decontamination sediments were deposited back onto the SWMU from which the samples were collected.

Section 8

8.0 EQUIPMENT RELEASE PROCEDURES

Before releasing equipment from TA-46, a swipe survey of equipment was conducted in accordance with Health Physics Operations Group (ESH-1) requirements. Swipes for gross alpha were taken with Defensap™ cloth filters and were counted in the field using a laboratory-grade Ludlum 222 43-10 alpha tray counter. All swipes were collected over an area of 100 cm^2. The swipe surveys conformed to the Laboratory's Administrative Requirement (AR) 3-7, Radiation Exposure Control.

During the TA-46 sampling activities, equipment was released by the radiological control technician (RCT) and removed from Laboratory property if swipe survey results indicated the equipment contained activities below ESH-1 surface contamination limits for removable material (1,000 dpm for alpha). ESH-1 requirements also allow equipment to be surveyed by an RCT for conditional release; conditional release is defined as movement of equipment between Controlled Areas (e.g., EZs or areas enclosed by physical barriers where contamination occurs or potentially occurs).

A conditional release swipe survey was conducted on the transportation cart and trailer which involved collecting five alpha, beta and gamma swipes from the interior surfaces of the cart and the trailer bed. Results for all equipment release swipes are found in Appendix 20.

Section 9

9.0 WASTE MANAGEMENT

All wastes generated during sampling activities at TA-46 were managed in accordance with the Site-Specific Waste Management Plan (Appendix 19). This plan also complies with the following Laboratory requirements and procedures :

- AR 10-1, Radioactive Liquid Waste
- AR 10-2, Radiation Exposure Control
- AR 10-3, Hazardous and Mixed Waste
- AR 10-9, Waste Profile Form
- LANL-ER-AP-05.03, Management of Environmental Restoration Program Wastes (formerly ER-SOP-1-06.)

The practice of waste minimization (as required by Laboratory AR 10-8) was incorporated into the plan and greatly reduced the amount of waste that needed to be stored and managed.

All RCRA hazardous wastes were stored at two satellite accumulation areas, one located at the bottom of Cañada del Buey and one on the mesa top near the northwest side of TA-46-231. Each satellite accumulation area contained two drums — one for RCRA hazardous solid waste (PPE, used and broken sample containers, swipes and Kimwipes™) and one for RCRA hazardous liquid waste (primarily decontamination liquid).

PPE was placed in heavy-duty bags and transferred (a few times per week) into the drums. A label describing the waste was affixed to each bag as well as to the outside of each drum.

Liquid wastes generated from decontamination wash and rinse process during 1994 sampling activities at TA-46 were minimal. Any rinse water generated was placed in 5-gal. plastic containers and transferred into the satellite accumulation area at the end of each day. Dry sediments that remained in the tub bottoms were returned to the SWMUs from which associated samples were taken.

All wastes generated as a result of sampling activities were screened for gross beta/gamma activity and were swiped and counted for alpha activity. No radioactive or mixed waste was generated from the sampling activities.

Steel waste drums with rigid plastic liners provide primary containment. Secondary containment is provided by the bermed areas constructed at each waste management area. These areas consist of wooden pallets set inside a PVC pipe framework with heavy plastic underlying the waste drums and overlying the frameworks. The entire storage area is covered with tarps to prevent the drums from exposure to weather and the accumulation of rainwater inside the bermed area.

Wastes are permitted to be stored in the satellite accumulation areas until 55 gal. of each wastestream has been accumulated; this volume was never reached during the 1994 sampling activities. At the completion of sampling activities, the satellite accumulation area near TA-46-231 was designated as a less-than-90-day storage area and all wastes (a total of two drums) from these activities were moved to the less-than-90-day storage area.

All drums are labeled with information about the activities (e.g., dates and sample identification numbers) potentially responsible for any potential contamination of the wastes contained in the drum. The drums remained at the less-than-90-day storage area until the material was picked up by Laboratory Waste Management Group (CST-17) and disposed of appropriately.

Section 10

C.E. • ROUNDFOLD • GOLD

10.0 CONCLUSION

The 1994 RFI sampling at the Outfall, Surface Release, and Stack Emissions aggregates completes Phase I sampling at these areas The one exception is Outfall W, which was presumably located on the east end of TA-46-1 (Figure 2). This outfall pipe could not be located. Sampling of this outfall pipe will occur once the pipe has been located through a geophysical investigation of the area.

Land, radiation, and geophysical surveys were conducted in accordance with ER SOPs and the RFI Work Plan. All surface soil, subsurface soil, sediment, fluid, and sludge samples were collected in accordance with ER SOPs and the RFI Work Plan. HS monitoring was conducted in compliance with the Site-Specific Health and Safety Plan. Decontamination and waste management were conducted in compliance with the Waste Management Plan.

Results from this Phase I Investigation will determine the need for a Phase II investigation. If required, the Phase II data will be designed to characterize the nature and extent of contamination for a baseline risk assessment or to evaluate remedial alternatives at the site.

REFERENCES

EPA (U.S. Environmental Protection Agency), February 1989. "Methods for Evaluating the Attainment of Cleanup Standards," Volume 1: Soils and Solid Media, EPA 230/02-89-042, National Technical Information Service, Springfield, Virginia. (EPA 1989, 0794)

LANL (Los Alamos National Laboratory) April 1993. "Administrative and Quality Procedures for Environmental Restoration," Los Alamos, New Mexico. (LANL 1993, 0951)

LANL (Los Alamos National Laboratory), 1991. "Low-Level Radioactive Solid Waste," Administrative Requirement 3-7, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1991 (LANL 1991c)

LANL (Los Alamos National Laboratory), 1991. "Radiation Exposure Control," Administrative Requirement 10-2, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1991 (LANL 1991b)

LANL (Los Alamos National Laboratory), 1991. "Waste Minimization," Administrative Requirement 10-8, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1991 (LANL 1991d)

LANL (Los Alamos National Laboratory), 1991. Quality Program Plan and Quality Assurance Project Plan for Environmental Restoration, Environmental Restoration Program, Los Alamos, New Mexico, 1991 (LANL 1991a)

LANL (Los Alamos National Laboratory), 1992. Los Alamos National Laboratory, "Radioactive Liquid Waste," Administrative Requirement 10-1, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1992 (LANL 1992d)

LANL (Los Alamos National Laboratory), 1993. Los Alamos National Laboratory, Survey Procedures Manual, Facilities Engineering Division, Los Alamos, New Mexico, 1993 (LANL 1993b)

LANL (Los Alamos National Laboratory), 1993. Los Alamos National Laboratory, "Hazardous and Mixed Waste," Administrative Requirement 10-3, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1993 (LANL 1993d)

LANL (Los Alamos National Laboratory), 1993. Los Alamos National Laboratory, "Waste Profile Form," Administrative Requirement 10-9, The Laboratory Manual, Chapter 1, Health and Safety Manual, Los Alamos, New Mexico, 1993 (LANL 1993e)

LANL (Los Alamos National Laboratory), August 1993. "RFI Work Plan for Operable Unit 1140," Los Alamos National Laboratory Report LA-UR-93-1940, Los Alamos, New Mexico. (LANL 1993, 1093)

LANL (Los Alamos National Laboratory), August 1993. "RFI Work Plan for Operable Unit 1140," Los Alamos National Laboratory Report LA-UR-93-1940, Los Alamos, New Mexico. (LANL 1993, 1093)

LANL (Los Alamos National Laboratory), March 16, 1992. "Los Alamos National Laboratory Environmental Restoration Program Standard Operating Procedures," LANL-ER-SOP-06.09, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1992, 0875)

LANL (Los Alamos National Laboratory), March 16, 1992. "Los Alamos National Laboratory Environmental Restoration Program Standard Operating Procedures," LANL-ER-SOP-06.10, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1992, 0875)

LANL (Los Alamos National Laboratory), March 16, 1992. "Los Alamos National Laboratory Environmental

Restoration Program Standard Operating Procedures," LANL-ER-SOP-06.15, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1992, 0875)

LANL (Los Alamos National Laboratory), May 5, 1994. "Los Alamos National Laboratory Environmental Restoration Program Standard Operating Procedures," LANL ER-SOP-1.04, Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1994, 0875)

LANL (Los Alamos National Laboratory),September 6, 1994. "Administrative and Quality Procedures Manual for Environmental Restoration," ER-AP-05.03, Los Alamos, New Mexico. (LANL 1994, 0819)

Exhibit 1

EXHIBIT 1
STANDARD OPERATING PROCEDURES USED DURING 1994
SAMPLING ACTIVITIES AT TA-46

Procedure	Procedure Title	ER	Other
Survey/Sampling Instructions			
Channel Mapping	Geomorphic Characterization	3.08	
Magnetic	General Surface Geophysics	3.02	
Electromagnetic		3.02	
Excavation and Logging	Trenching and Logging	3.10	
Radiation	Measurements of Gamma-Ray Fields Using a NaI Detector	6.23	
Surface Soil Sampling	Spade and Scoop Method for Collection of Soil Samples	6.09	
Sludge Sampling from Tank	Coliwasa Samples for Liquids and Slurries	6.15	
Soil Sample from Auger Hole	Hand Auger and Thin-Wall Tube Sampler	6.10	
Tuff Sample from Auger Hole		6.10	
Land Survey	LANL Survey Procedures Manual		ENG-3
Waste Management			
Handling of Liquid Wastes	Management of RFI-Generated Waste	1.06*	
Handling of Solid Wastes		1.06*	
General Instructions			
General Field Investigation	General Introduction for Field Investigation	1.01	
Sample Containers	Sample Containers and Preservation	1.02	
Sample Handling	Handling, Packaging, and Shipping Samples	1.03	
Documentation	Sample Control and Field Documentation	1.04	
QC/Chain of Custody	Field Quality Control Samples	1.05	

*Now ER-AP 05.3, Management of Environmental Restoration Program Wastes

EXHIBIT 1
STANDARD OPERATING PROCEDURES USED DURING 1994
SAMPLING ACTIVITIES AT TA-46 (CONTINUED)

Health and Safety in the Field

Procedure	Procedure Title	ER	Other
Health and Safety	Guidance on Tailgate Safety Meetings	2.05	
	Radiation Safety and Monitoring for Environmental Restoration	2.1	
	Respiratory Protection	NA	HS-5
	Anti-Contamination Apparel	NA	HS-1
	Heat and Cold Stress and Natural Hazards	2.06, Rev 1	
	Guidance on Field Safety & Health Requirements	2.03	
	Noise Monitoring	2.04	
	Field Monitoring Instrumentation - Chemical Parameters	2.11	
	Personal Protective Equipment for Physical Hazards	2.01, Rev 1	
	Bloodborne Pathogen Control	2.12	
	Drilling Safety	2.14	
	Safety Requirements for Canyon/Mesa Samp	2.15	
	Exposure Monitoring Strategy	2.16	

Exhibit 2

EXHIBIT 2

ADDITIONAL SAMPLES COLLECTED AT TA-46

PRS	PRS/SAMP GROUP	SAMPLE	SAMPLE LOCATION	OUTFALL	COMMENTS
46-003-h	46-003-h-2	H-177	sink drain	GG	was S-31
46-004-e2	46-004-e2-1	H-176	outfall pipe	AP	new outfall
46-004-f2	46-004-f2-1	H-179	outfall-surf	AQ	new outfall
46-004-f2	46-004-f2-1	H-180	outfall-surf	AQ	new outfall
46-004-f2	46-004-f2-1	H-181	outfall-surf	AQ	new outfall
46-004-h	46-003-h-2	H-175	sink drain	GG	was S-74
46-006-b	46-006-b-1	NS-4	gen storage	–	AIP sample
46-006-b	46-006-b-1	NS-5	gen storage	–	AIP sample
46-006-d	46-006-d-2	H-170	surf disposal	–	AIP sample
46-006-d	46-006-d-2	H-171	surf disposal	–	was S-27
47-006-d	46-006-d-2	H-172	surf disposal	–	was S-3
46-006-d	46-006-d-2	H-173	surf disposal	–	was S-1
46-006-d	46-006-d-2	H-174	surf disposal	–	was S-2
46-006-d	46-006-d-5	S-83	surf disposal	–	AIP sample
46-006-d	46-006-d-5	S-84	surf disposal	–	field team addition
46-006-d	46-006-d-5	S-85	surf disposal	–	field team addition
46-007	–	S-86	surf disposal	–	EPA sample
46-008-a	46-008-a-1	S-82	drum storage	–	AIP sample
46-008-g	46-008-g-1	H-178	drum storage	–	EPA sample
46-008-m	46-004-m-2	H-169	outfall pipe	M	AIP sample

Exhibit 3

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-003(h)	46-1145	AAA9479	S-30	SS	9/21/94	0	6	in	Surface Release
46-003(h)	46-1148	AAA9510	S-31	SS	10/4/94	6	12	in	Surface Release
46-003(h)	46-1146	AAA9508	S-74	SS	10/4/94	6	12	in	Surface Release
46-003(h)	46-1147	AAA9509	S-88	SS	10/4/94	0	6	in	Surface Release
46-004(a2)	46-1010	AAA9067	H-74-A	SS	8/23/94	0	6	in	Outfall
46-004(a2)	46-1010	AAA9068	H-74-B	HA	8/23/94	13	19	in	Outfall
46-004(a2)	46-1011	AAA9070	H-75-A	SS	9/13/94	6	12	in	Outfall
46-004(a2)	46-1011	AAA9071	H-75-B	HA	9/13/94	18	24	in	Outfall
46-004(a2)	46-1012	AAA9073	H-76-A	SS	8/23/94	0	6	in	Outfall
46-004(a2)	46-1013	AAA9076	H-77-A	SS	8/24/94	0	6	in	Outfall
46-004(a2)	46-1013	AAA9077	H-77-B	HA	8/24/94	12	18	in	Outfall
46-004(a2)	46-1021	AAA9100	H-78-A	SS	8/25/94	0	4	in	Outfall
46-004(a2)	46-1022	AAA9103	H-79-A	SS	8/25/94	0	6	in	Outfall
46-004(a2)	46-1114	AAA9323	H-82-A	SS	9/23/94	0	6	in	Outfall
46-004(a2)	46-1116	AAA9326	H-83-A	SS	9/23/94	0	6	in	Outfall
46-004(a2)	46-1115	AAA9329	H-84-A	SS	9/23/94	0	6	in	Outfall
46-004(a2)	NA	AAA9438	QAPE	SS	8/23/94	0	0		NA
46-004(b2)	46-1077	AAA9256	H-54-A	SS	9/29/94	0	6	in	Outfall
46-004(b2)	46-1078	AAA9259	H-55-A	SS	9/29/94	0	3	in	Outfall
46-004(b2)	46-1079	AAA9262	H-56-A	SS	9/29/94	0	6	in	Outfall
46-004(b2)	46-1080	AAA9265	H-57-A	SS	9/29/94	6	12	in	Outfall
46-004(b2)	NA	AAA9452	QAPE	SS	9/29/94	0	0		NA
46-004(c2)	46-1059	AAA9208	H-14-A	SS	9/12/94	0	6	in	Outfall
46-004(c2)	46-1060	AAA9211	H-15-A	SS	9/12/94	0	6	in	Outfall
46-004(c2)	46-1060	AAA9212	H-15-B	HA	9/12/94	30	36	in	Outfall
46-004(c2)	46-1061	AAA9214	H-16-A	SS	9/12/94	0	6	in	Outfall
46-004(c2)	46-1061	AAA9215	H-16-B	HA	9/12/94	36	42	in	Outfall
46-004(c2)	46-1062	AAA9217	H-17-A	SS	9/12/94	0	6	in	Outfall
46-004(c2)	46-1062	AAA9218	H-17-B	HA	9/12/94	36	42	in	Outfall
46-004(c2)	46-1058	AAA9205	H-4-A	SS	9/8/94	36	42	in	Outfall
46-004(c2)	46-1072	AAA9241	H-48-A	SS	9/27/94	0	6	in	Outfall
46-004(c2)	46-1076	AAA9250	H-49-A	SS	9/27/94	0	6	in	Outfall

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-004(c2)	46-1075	AAA9466	H-49 A-dup	SS	9/27/94	0	4	in	Outfall
46-004(c2)	46-1055	AAA9196	H-5-A	SS	9/8/94	0	6	in	Outfall
46-004(c2)	46-1055	AAA9460	H-5-A-dup	SS	9/8/94	0	6	in	Outfall
46-004(c2)	46-1076	AAA9253	H-50-A	SS	9/27/94	0	0		Outfall
46-004(c2)	46-1056	AAA9199	H-6-A	SS	9/8/94	0	6	in	Outfall
46-004(c2)	46-1057	AAA9202	H-7-A	SS	9/8/94	6	8	in	Outfall
46-004(c2)	NA	AAA9450	QAPE	SS	9/13/94	0	0		NA
46-004(e2)	46-1125	AAA9458	H-176-A	SS	9/27/94	0	4	in	Outfall
46-004(l)	46-1097	AAA9294	SS-15	SS	9/29/94	0	6	in	Outfall
46-004(l2)	46-1140	AAA9499	H-179-A	SS	9/8/94	0	6	in	Outfall
46-004(l2)	46-1141	AAA9502	H-180-A	SS	9/8/94	0	6	in	Outfall
46-004(l2)	46-1142	AAA9505	H-181-A	SS	9/8/94	0	6	in	Outfall
46-004(g)	46-1048	AAA9175	H-20-A	SS	9/7/94	0	6	in	Outfall, surface
46-004(g)	46-1048	AAA9176	H-20-B	HA	9/7/94	48	54	in	Outfall, surface
46-004(g)	46-1049	AAA9178	H-21-A	SS	9/9/94	0	6	in	Outfall, surface
46-004(g)	46-1049	AAA9179	H-21-B	HA	9/9/94	42	48	in	Outfall, surface
46-004(g)	46-1050	AAA9181	H-22-A	SS	9/7/94	0	6	in	Outfall, surface
46-004(g)	46-1051	AAA9184	H-23-A	SS	9/7/94	0	6	in	Outfall, surface
46-004(g)	46-1052	AAA9187	H-44-A	SS	9/9/94	0	3	in	Outfall, surface
46-004(g)	46-1053	AAA9190	H-45-A	SS	9/9/94	0	4	in	Outfall, surface
46-004(g)	46-1054	AAA9193	H-46-A	SS	9/9/94	0	4	in	Outfall, surface
46-004(g)	46-1044	AAA9163	H-8-A	SS	9/7/94	0	6	in	Outfall, surface
46-004(g)	46-1045	AAA9166	H-9-A	SS	9/7/94	0	6	in	Outfall, surface
46-004(h)	46-1008	AAA9061	H-72-A	SS	9/13/94	0	12	in	Outfall
46-004(h)	46-1009	AAA9064	H-73-A	SS	9/13/94	6	12	in	Outfall
46-004(h)	46-1005	AAA9052	H-87-A	SS	8/22/94	0	6	in	Outfall
46-004(h)	46-1004	AAA9049	H-88-A	SS	8/22/94	6	12	in	Outfall
46-004(h)	46-1003	AAA9046	H-89-A	SS	8/22/94	0	6	in	Outfall
46-004(h)	46-1006	AAA9055	H-91-A	SS	8/19/94	6	12	in	Outfall
46-004(h)	46-1006	AAA9056	H-91-B	HA	8/19/94	18	24	in	Outfall

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3

Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-004(h)	46-1007	AAA9058	H-92-A	SS	8/19/94	0	6	in	Outfall
46-004(h)	46-1007	AAA9059	H-92-B	HA	8/19/94	12	18	in	Outfall
46-004(h)	46-1000	AAA9037	H-93-A	SS	8/18/94	0	6	in	Outfall, exhaust stack emissions, drain line
46-004(h)	46-1000	AAA9038	H-93-B	HA	8/18/94	2	2.5	ft	Outfall, exhaust stack emissions, drain line
46-004(h)	46-1001	AAA9040	H-94-A	SS	8/18/94	0	6	in	Outfall, exhaust stack emissions, drain line
46-004(h)	46-1001	AAA9437	H-94-A-dup	SS	8/18/94	0	6	in	Outfall, exhaust stack emissions, drain line
46-004(h)	46-1001	AAA9041	H-94-B	HA	8/18/94	3	3.5	ft	Outfall, exhaust stack emissions, drain line
46-004(h)	NA	AAA9436	QAPE	SS	8/18/94	0	0		NA
46-004(h)	NA	AAA9272	QARi	NA	8/24/94	0	0		NA
46-004(m)	46-1046	AAA9169	H-10-A	SS	9/7/94	0	6	in	Outfall
46-004(m)	46-1047	AAA9172	H-11-A	SS	9/7/94	0	6	in	Outfall
46-004(m)	46-1124	AAA9485	H-169-A	SS	9/9/94	0	6	in	Outfall
46-004(m)	46-1111	AAA9314	H-51-A	SS	9/23/94	0	6	in	Outfall
46-004(m)	46-1112	AAA9317	H-52-A	SS	9/23/94	0	6	in	Outfall
46-004(m)	46-1113	AAA9320	H-53-A	SS	9/23/94	0	6	in	Outfall
46-004(m)	NA	AAA9454	QAPE	SS	9/26/94	0	0		NA
46-004(q)	46-1002	AAA9043	H-90-A	SS	8/19/94	0	6	in	Outfall
46-004(s)	46-1088	AAA9275	H-60-A	SS	9/26/94	6	12	in	Outfall
46-004(s)	46-1089	AAA9278	H-61-A	SS	9/26/94	0	6	in	Outfall
46-004(s)	46-1090	AAA9281	H-62-A	SS	9/26/94	0	6	in	Outfall
46-004(u)	46-1023	AAA9106	H-80-A	SS	8/25/94	0	3	in	Outfall
46-004(v)	46-1024	AAA9109	H-81-A	SS	8/25/94	0	6	in	Outfall
46-004(w)	46-1371	AAA9295	SS-16	SS	9/20/94	0	6	in	Outfall
46-004(x)	46-1014	AAA9079	H-65-A	SS	8/24/94	6	12	in	Outfall
46-004(x)	46-1015	AAA9082	H-66-A	SS	8/24/94	0	6	in	Outfall
46-004(x)	46-1016	AAA9085	H-67-A	SS	8/24/94	0	6	in	Outfall
46-004(x)	46-1017	AAA9088	H-68-A	SS	8/24/94	0	6	in	Outfall
46-004(x)	46-1018	AAA9091	H-69-A	SS	8/25/94	0	6	in	Outfall

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-004(x)	46-1019	AAA9094	H-70-A	SS	8/25/94	0	6	in	Outfall
46-004(x)	46-1019	AAA9439	H-70-A-dup	SS	8/25/94	0	6	in	Outfall
46-004(x)	46-1020	AAA9097	H-71-A	SS	8/25/94	0	6	in	Outfall
46-004(x)	NA	AAA9446	QA PE	SS	8/25/94	0	0		NA
46-004(y)	46-1121	AAA9336	H-38-A	SS	8/29/94	0	6	in	Outfall
46-004(y)	46-1122	AAA9339	H-39-A	SS	8/29/94	0	6	in	Outfall
46-004(y)	46-1123	AAA9342	H-40-A	SS	8/29/94	0	6	in	Outfall
46-004(y)	46-1025	AAA9112	H-63-A	SS	8/29/94	0	6	in	Outfall
46-004(y)	46-1026	AAA9115	H-64-A	SS	8/29/94	0	6	in	Outfall
46-004(y)	46-1026	AAA9116	H-64-B	HA	8/29/94	24	34	in	Outfall
46-004(y)	NA	AAA9447	QA PE	SS	8/29/94	0	0		NA
46-004(z)	46-1042	AAA9157	H-24-A	SS	9/6/94	6	12	in	Outfall
46-004(z)	46-1042	AAA9158	H-24-B	HA	9/6/94	42	48	in	Outfall
46-004(z)	46-1043	AAA9160	H-25-A	SS	9/6/94	6	12	in	Outfall
46-004(z)	46-1043	AAA9161	H-25-B	HA	9/6/94	30	36	in	Outfall
46-004(z)	46-1038	AAA9145	H-26-A	SS	9/6/94	0	4	in	Outfall
46-004(z)	46-1039	AAA9148	H-27-A	SS	9/6/94	0	4	in	Outfall
46-004(z)	46-1039	AAA9527	H-27-A	SS	10/4/94	0	4	in	Outfall
46-004(z)	46-1041	AAA9154	H-28-A	SS	9/6/94	6	12	in	Outfall
46-004(z)	46-1040	AAA9151	H-29-A	SS	9/6/94	0	6	in	Outfall
46-004(z)	46-1034	AAA9133	H-30-A	SS	8/31/94	0	6	in	Outfall
46-004(z)	46-1035	AAA9136	H-31-A	SS	9/6/94	0	6	in	Outfall
46-004(z)	NA	AAA9448	QA PE	SS	9/6/94	0	0		NA
46-006(a)	46-1073	AAA9244	H-2-A	SS	9/27/94	0	6	in	Surface release, drum storage
46-006(a)	46-1074	AAA9247	H-3-A	SS	9/27/94	0	6	in	Surface release, drum storage
46-006(a)	NA	AAA9457	QA Ri	NA	10/5/94	0	0		NA
46-006(b)	46-1096	AAA9291	H-100	SS	9/20/94	0	6	in	Outfall
46-006(b)	46-1094	AAA9288	H-99	SS	9/20/94	0	5	in	Outfall
46-006(b)	46-1137	AAA9498	NS-3	SS	9/20/94	0	6	in	General storage
46-006(b)	46-1128	AAA9462	NS-4	SS	9/20/94	0	6	in	General storage
46-006(b)	46-1129	AAA9464	NS-5	SS	9/20/94	0	6	in	General storage

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-006(c)	46-1157	AAA9519	H-146-A	SS	10/4/94	0	6	in	Outfall
46-006(c)	46-1157	AAA9525	H-146-B	HA	10/4/94	54	60	in	Outfall
46-006(c)	46-1157	AAA9526	H-146-C	HA	10/4/94	64	78	in	Outfall
46-006(c)	46-1158	AAA9520	H-147-A	SS	10/4/94	0	6	in	Outfall
46-006(c)	46-1149	AAA9511	S-67	SS	10/4/94	0	6	in	Drum storage
46-006(c)	46-1150	AAA9512	S-68	SS	10/4/94	0	6	in	Drum storage
46-006(d)	46-1133	AAA9482	H-170-A	SS	9/22/94	0	6	in	Surface release
46-006(d)	46-1133	AAA9483	H-170-B	HA	9/22/94	36	48	in	Surface release
46-006(d)	46-1131	AAA9488	H-171-A	SS	9/22/94	6	12	in	Surface release
46-006(d)	46-1132	AAA9491	H-172-A	SS	9/21/94	0	6	in	Surface release
46-006(d)	46-1132	AAA9476	H-172-A dup	SS	9/21/94	0	6	in	Surface release
46-006(d)	46-1132	AAA9492	H-172-B	HA	9/21/94	54	60	in	Surface release
46-006(d)	46-1132	AAA9493	H-172-C	HA	9/21/94	72	84	in	Surface release
46-006(d)	46-1130	AAA9465	H-173-A	SS	9/22/94	0	6	in	Surface release
46-006(d)	46-1138	AAA9469	H-174-A	SS	9/22/94	0	6	in	Surface release
46-006(d)	46-1036	AAA9139	H-32-A	SS	8/31/94	0	6	in	Surface release
46-006(d)	46-1036	AAA9440	H-32-A dup	SS	8/31/94	0	6	in	Surface release
46-006(d)	46-1033	AAA9130	H-33-A	SS	8/31/94	0	6	in	Surface release
46-006(d)	46-1037	AAA9142	H-34-A	SS	8/31/94	0	6	in	Surface release
46-006(d)	46-1030	AAA9121	H-35-A	SS	9/6/94	0	6	in	Surface release
46-006(d)	46-1030	AAA9122	H-35-B	HA	9/6/94	36	42	in	Surface release
46-006(d)	46-1031	AAA9124	H-36-A	SS	9/6/94	0	6	in	Surface release
46-006(d)	46-1032	AAA9127	H-37-A	SS	8/31/94	0	5	in	Surface release
46-006(d)	46-1110	AAA9313	S-28	SS	9/22/94	0	6	in	Surface release
46-006(d)	46-1134	AAA9495	S-83	SS	9/21/94	0	6	in	Surface release
46-006(d)	46-1135	AAA9496	S-84	SS	9/21/94	0	6	in	Surface release
46-006(d)	46-1136	AAA9497	S-85	SS	9/21/94	0	6	in	Surface release
46-006(f)	46-1081	AAA9268	S-4	SS	9/29/94	0	6	in	Surface release
46-006(f)	46-1082	AAA9269	S-5	SS	9/29/94	0	3	in	Surface release
46-006(f)	46-1083	AAA9270	S-6	SS	9/29/94	0	4	in	Surface release
46-006(g)	46-1104	AAA9307	NS-1	SS	9/29/94	0	6	in	Surface release

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-006(g)	46-1105	AAA9308	NS-2	SS	9/29/94	0	6	in	Surface release
46-007	46-1086	AAA9273	S-14	SS	9/26/94	0	6	in	Surface release
46-007	46-1087	AAA9274	S-15	SS	9/26/94	0	6	in	Surface release
46-007	46-1126	AAA9461	S-86	SS	9/26/94	0	4	in	Surface release
46-008(a)	46-1118	AAA9333	S-40	SS	9/15/94	0	6	in	Surface release
46-008(a)	46-1119	AAA9334	S-41	SS	9/15/94	0	6	in	Surface release
46-008(a)	46-1372	AAA9494	S-82	SS	9/15/94	0	6	in	Surface Release
46-008(b)	46-1084	AAA9271	S-7	SS	9/26/94	0	5	in	Surface release
46-008(b)	46-1370	AAA9441	S-8	SS	9/26/94	0	6	in	Surface release
46-008(d)	46-1099	AAA9296	S-69	SS	9/27/94	6	12	in	Surface release
46-008(d)	46-1100	AAA9297	S-70	SS	9/27/94	0	6	in	Surface release
46-008(e)	46-1155	AAA9517	H-131-A	SS	10/4/94	0	4	in	Surface release
46-008(e)	46-1156	AAA9518	H-132-A	SS	10/4/94	0	6	in	Surface release
46-008(e)	46-1153	AAA9515	H-85-A	SS	10/4/94	0	4	in	Surface release
46-008(e)	46-1154	AAA9516	H-86-A	SS	10/4/94	0	3	in	Surface release
46-008(e)	46-1091	AAA9284	S-10	SS	9/15/94	0	6	in	Surface release
46-008(e)	46-1091	AAA9472	S-10-dup	SS	9/15/94	0	6	in	Surface release
46-008(e)	46-1092	AAA9285	S-11	SS	9/15/94	6	8	in	Surface release
46-008(e)	46-1093	AAA9286	S-12	SS	9/15/94	0	6	in	Surface release
46-008(e)	46-1095	AAA9287	S-13	SS	9/15/94	0	6	in	Surface release
46-008(f)	46-1117	AAA9332	S-29	SS	9/21/94	0	6	in	Surface release
46-008(f)	46-1117	AAA9478	S-29 dup	SS	9/21/94	0	6	in	Surface release
46-008(g)	46-1127	AAA9300	H-178-A	SS	9/16/94	6	12	in	Surface release
46-008(g)	46-1101	AAA9298	H-96-A	SS	9/16/94	0	6	in	Surface release
46-008(g)	46-1102	AAA9301	H-97-A	SS	9/16/94	0	6	in	Surface release
46-008(g)	46-1103	AAA9304	H-98-A	SS	9/16/94	6	12	in	Surface release
46-008(g)	46-1103	AAA9305	H-98-B	HA	9/16/94	12	18	in	Surface release

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

EXHIBIT 3
Summary of 1994 Sampling at TA-46

PRS Identifier	Location ID	Sample ID	Sample Location	Technique	Collection Date	Start Depth	End Depth	Depth Units	PRS Type
46-010(d)	46-1151	AAA9513	S-38	SS	10/4/94	6	8	in	Surface release
46-010(d)	46-1152	AAA9514	S-39	SS	10/4/94	6	12	in	Surface release
Agg 5.6	46-1065	AAA9226	H-12-A	SS	9/12/94	0	6	in	Outfall pipe
Agg 5.6	46-1065	AAA9227	H-12-B	HA	9/12/94	24	30	in	Outfall pipe
Agg 5.6	46-1066	AAA9229	H-13-A	SS	9/12/94	0	6	in	Outfall pipe
Agg 5.6	46-1066	AAA9230	H-13-B	HA	9/12/94	24	30	in	Outfall pipe
Agg 5.6	46-1067	AAA9232	H-162-A	SS	9/13/94	0	6	in	Outfall pipe
Agg 5.6	46-1067	AAA9463	H-162-A-dup	SS	9/13/94	0	4	in	Outfall pipe
Agg 5.6	46-1068	AAA9235	H-163-A	SS	9/13/94	0	6	in	Outfall pipe
Agg 5.6	46-1063	AAA9220	H-18-A	SS	9/12/94	0	4	in	Outfall, surface
Agg 5.6	46-1064	AAA9223	H-19-A	SS	9/12/94	0	6	in	Outfall, surface
Agg 5.6	46-1071	AAA9240	S-16	SS	9/15/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1029	AAA9120	S-17	SS	8/29/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1027	AAA9118	S-32	SS	8/29/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1028	AAA9119	S-33	SS	8/29/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1120	AAA9335	S-52	SS	9/16/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1069	AAA9238	SS-1	SS	9/27/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	46-1070	AAA9239	SS-2	SS	9/27/94	0	6	in	Exhaust Stack Emissions
Agg 5.6	NA	AAA9451	QA PE	SS	9/15/94	0	0		NA
Agg 5.6	NA	AAA9456	QA Rs	NA	9/13/94	0	0		NA

SS: Spade and scoop sampling technique
HA: Hand auger sampling technique

Appendix 1

Table E-1

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(1)	Agg 5 6	Agg 5 6 1		Stack Emission	Recom	1			Soil	☐	2	☐	SU	S-16 S-52	1	2	
	Two soil samples on mesa top																
(2)	Agg 5 6	Agg 5 6 3		Stack Emission	Recom	1			Soil/Sediment	☐	2	☐	SS	SS 1 SS 2	1	2	
	Two soil/sediment samples from seasonal pond on mesa top northwest of TA 46																
(3)	46-004 h	46-004 h 1	A	Outfall pipe	Recom	1			Sediments	☐	☐	3	H	H 72 H 73 H 89	3	9	
	3 hand augered sample holes x (3) specimens .																
(4)	46 004 q	46 004 q 1	B	Outfall pipe	Recom	1			Sediments	☐	☐	1	H	H 90	3	3	
	1 Hand augered sample holes, 3 specimens each																

Sampling Totals for PRS: Agg 5

Total Sample Locations: 419
Total Number Of Samples: 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample due
(5)		Agg 5 6 6	C	Outfall pipe	Reconn	1			Sediments	☐	☐	2	H	H 87 H 88	3	6	
	2 Hand Augered sample holes, 3 specimens																
(6)	46 004 u	46 004 u 1	F	Outfall pipe	Reconn	1			Sediments	☐	☐	1	H	H 80	3	3	
	1 hand augered sample holes x (3) specimens each																
(7)	46 004 v	46 004 v 1	G	Outfall pipe	Reconn	1			Sediments	☐	☐	1	H	H 81	3	3	
	1 hand augered sample hole x (3) specimens																
(8)		46 004 a2 2	I	Outfall pipe	Reconn	1			Sediments	☐	☐	6	H	H 74 H 75 H 76 H 77 H 78 H 79	3	18	
	6 hand augered sample holes x (3) specimens .																

Sampling Totals for PRS:

Total Sample Locations 419
Total Number Of Samples 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 1

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information 1: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(9)	46-004 z	46-004 z 1	J	Outfall pipe	Reconn	1			Sediments	☐	☐	7	H	H 65 H 66 H 67 H 68 H 69 H 70 H 71	3	21	
z		7 hand augered sample hole x (3)specimens .															
(10)	46-004 y	46-004 y 1	K	Outfall pipe	Reconn	1			Sediments	☐	☐	5	H	H 38 H 39 H 40 H 63 H 64	3	15	
z		5 hand augered sample hole x (3)specimens .															
(11)	46-004 z	46-004 z 1	L	Outfall pipe	Reconn	1			Sediments	☐	☐	8	H	H 24 H 25 H 26 H 27 H 28 H 29 H 30 H 31	3	24	
z		Eight hand augered sample hole x (3)specimens .															
(12)		46-004 m 2	M	Outfall pipe	Reconn	1			Sediments	☐	☐	3	H	H 10 H 11 H 169	3	9	
z		3 hand augered sample hole x (3)specimens .															

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 1

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(13)	46 004 g	46 004 g 1	N	Outfall Surface	Reconn	1			Sediments	☐	☐	8	H	H-8 H-9 H-20 H-22 H-23 H-44 H-45 H-46	3	24	
				8 hand augered sample hole x (3) specimens .													
(14)		46 004 c2 4	P	Outfall pipe	Reconn	1			Sediments	☐	☐	8	H	H-4 H-5 H-6 H-7 H-14 H-15 H-16 H-17	3	24	
				8 hand augered sample hole x (3)specimens .													
(15)		Agg 5 6 4	Q	Outfall pipe	Reconn	1			Sediments	☐	☐	2	H	H-162 H-163	3	6	
				2 hand augered sample hole x (3)specimens .													
(16)	46 004 c2	46 004 c2 4	S	Outfall pipe	Reconn	1			Sediments	☐	☐	3	H	H-48 H-49 H-50	3	9	
				3 hand augered sample hole x (3)specimens .													

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-004

Total Sample Locations: 419
Total Number Of Samples: 1000

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(17)	46-004 b2	46-004 b2-1	U	Outfall pipe	Reconn	1			Sediments	☐	☐	4	H	H 54 H 55 H 56 H 57	3	12	
	Four hand augered sample hole x (3)specimens .																
(18)	46-004 s	46-004 s-1	X	Outfall pipes	Reconn	1			Sediments	☐	☐	3	H	H 60 H 61 H 62	3	9	
	Three hand augered sample hole x (3) specimens .																
(19)	46-004 f	46-004 f-1	Y	Outfall pipe	Reconn	1			Sludge/Sediments	☐	1	☐	SS	SS-15	1	1	
	1 sludge/sediment sample x 1 specimen																
(20)	46-004 r		Z	Outfall pipe	Reconn	1			Sediments	☐	☐	☐	SS		0	0	
	Samples for this SWMU are included 46-004 w																

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-004

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I. D.	Samples Per Location	Number of Samples	Sample dup
(21)	46-004-w	46-004-w-1	AA	Outfall pipe	Recomn	1			Sediments	☐	1	☐	SS	SS-16	1	1	
	One surface sludge/sediment sample x (1) specimen. Sample analytes will include PCOCs from 46-004-r because of overlapping situation																
(22)		46-004-l-3	BB	Outfall pipe	Recomn	1			Sediments	☐	☐	2	H	H-114 H-115	3	6	
	2 hand augered sample hole x (3)specimens.																
(23)	46-004-m	46-004-m-1	CC	Outfall pipe	Recomn	1			Sediments	☐	☐	3	H	H-51 H-52 H-53	3	9	
	3 hand augered sample hole x (3)specimens.																
(24)	46-003-l	46-003-l-1	II	Outfall pipe	Recomn	1			Sediments	☐	☐	6	H	H-117 H-118 H-119 H-120 H-121 H-122	3	18	
	6 hand augered sample hole x (3)specimens.																

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-003

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I. D.	Samples Per Location	Number of Samples	Sample dup
(25)	46-003 a	46-003 a-1	HH	Outfall pipe	Reconn	1			Sediments	☐	☐	7	H	H-103 H-104 H-105 H-106 H-107 H-108 H-109	3	21	
	7 hand augered sample hole x (3) specimens																
(26)	46-002	46-002-1	II JJ	Outfall pipe	Reconn	1			Sediments	☐	☐	10	H	H-133 H-134 H-135 H-136 H-137 H-138 H-139 H-140 H-141 H-142	3	30	
	10 hand augered sample holes x (3) specimens																
(27)	46-003-g	46-003g-1	KK	Outfall pipe	Reconn	1			Sediments	☐	☐	9	H	H-148 H-149 H-150 H-151 H-152 H-153 H-154 H-155 H-156	3	27	
	9 hand augered sample holes x (3)specimens .																
(28)	46-005	46-005-1	LL	Outfall surface	Reconn	1			Sediments	☐	☐	5	H	H-157 H-158 H-159 H-160 H-161	3	15	
	5 hand augered sample hole x (3)specimens .																

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-004-

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(29)	46-004 a2	46 004 a2-	MM	Outfall pipe	Recom	1			Sediments	☐	☐	3	H	H 82 H 83 H 84	3	9	
		3 hand augered sample holes x (3)specimens .															
(30)		46 004 l 2	NN	Outfall pipe	Recom	1			Sediments	☐	☐	3	H	H 111 H 112 H 113	3	9	
		3 hand augered sample holes x (3)specimens .															
(31)		46 004 n 1	OO	Outfall pipe	Recom	1			Sediments	☐	☐	2	H	H 101 H 102	3	6	
		2 hand augered sample hole x (3)specimens .															
(32)	46 006 c	46 006 c 2	PP	Outfall pipe	Recom	1			Sediments	☐	☐	2	H	H 146 H 147	3	6	
		2 hand augered sample hole x (3)specimens .															

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(33)		46-006 a -2	OO	Outfall pipe	Reconn	1			Sediments	☐	☐	2	H	H 99 H 100	3	6	
		2 hand augered sample hole x (3)specimens .															
(34)		46-006 e-2	HH	Outfall pipe	Reconn	1			Sediments	☐	☐	2	H	H 85 H 86	3	6	
		2 hand-augered sample hole x (3)specimens .															
(35)		Agg 5 6 5	TT	Outfall pipe	Reconn	1			Sediments	☐	☐	2	H	H 12 H 13	3	6	
		2 hand-augered sample hole x (3)specimens .															
(36)	46-004 t	46-004 t 1	YY	Outfall pipe	Reconn	1			Sediments	☐	☐	1	H	H 116	3	3	
		1 hand augered sample hole x (3)specimens .															

Sampling Totals for PRS:

Total Sample Locations 419

Total Number Of Samples 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRG/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(37)		46.006 a 2	ZZ	Outfall pipe	Recon	1			Sediments	☐	☐	☒	II	II 123 II 124	3	6	
		2 hand augered sample holes x (3)specimens .															
(38)		46.006 e 3	AB	Outfall pipe	Recon	1			Sediments	☐	☐	☒	II	II 131 II 132	3	6	
		2 hand augered sample holes x (3)specimens .															
(39)		46.004 h 3	AE	Outfall surface	Recon	1			Sediments	☐	☐	☒	II	II 93 II 94	3	6	
		2 hand augered sample holes x (3)specimens .															
(40)		46.004 h 2	AF	Outfall surface	Recon	1			Sediments	☐	☐	☒	II	II 91 II 92	3	6	
		2 hand augered sample holes x (3)specimens															

Sampling Totals for PRS:

Total Sample Locations: 419
Total Number Of Samples: 1021

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I. D.	Samples Per Location	Number of Samples	Sample dup
(41)		46 006 d 4	AG	Outfall surface	Recom	1			Sediments	☐	☐	2	H	H 35 H 36	3	6	
		2 hand augered sample hole x (3)specimens .															
(42)		46 006 d 3	AH	Outfall surface	Recom	1			Sediments	☐	☐	2	H	H 37 H 34	3	6	
		2 hand augered sample hole x (3)specimens .															
(43)		46 006 d -2	AI	Outfall surface	Recom	1			Sediments	☐	☐	2	H	H 32 H 33	3	6	
		2 hand augered sample hole x (3)specimens .															
(44)		Agg 5 6 8	AI	Outfall surface	Recom	1			Sediments	☐	☐	2	H	H 18 H 19	3	6	
		2 hand augered sample hole x (3)specimens .															

Sampling Totals for PRS:

Total Sample Locations 419
Total Number Of Samples 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(45)		Agg 5 6 7	AN	Outfall-surface	Reconn	1			Sediments	☐	☐	1	H	H 21	3	3	
		2 hand augered sample hole x (3)specimens . (only one sample location listed, also use sample location H-23 located for outfall N)															
(46)	46-003-h	46-003-h-1	GG	Sink Drain	Reconn	1			Soil	☐	1	☐	SU	S-31	1	1	
		One surface soil samples (0 to 6 in), one specimen per sample hole															
(47)	46-006-a	46-006a-1		Drum Storage	Reconn	1			Soil	☐	☐	2	H	H-2 H-3	3	6	
		Three hand-augered holes into the ditch to soil/tuff interface, three specimens per core, top, middle, bottom, 2 ft min (H-1 eliminated, overlap with H-48)															
(48)	46-006-b	46-006-b-1		General Storage	Reconn	1			Soil/Paving	☐	☐	3	NS	NS-3 NS-4 NS-5	1	3	
		Three near surface diamond core sample into pavement, one specimen per hole. Located in depressions in asphalt pavement on south side of SWMU															

Sampling Totals for PRS:

Total Sample Locations 419
Total Number Of Samples 1070

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-00

Total Sample Locations 419
Total Number Of Samples 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(53)	46-007			Surface Disposal	Recomm	1			Soil	☐	3	☐	SU	S-14 S-15 S-86	1	3	
				Two surface soil samples, 0 to 6 in. In ditch south of TA-46-1. One surface soil sample adjacent to copper stained rock													
(54)	46-008-a	46-008-a-1		Drum Storage	Recomm	1			Soil	☐	3	☐	SU	S-40 S-41 S-82	1	3	
				Three surface soil samples, 0 to 6 in. Off of paved area of SWMU.													
(55)	46-008-b	46-008-b-1		Drum Storage	Recomm	1			Soil	☐	2	☐	SU	S-7 S-8 S-9	1	2	
				Three surface soil samples, 0 to 6 in., in the storage area east of TA-46-1. (S-9 eliminated, overlap with 1154)													
(56)	46-008-d	46-008-d-1		Drum Storage	Recomm	1			Soil	☐	2	☐	SU	S-69 S-70	1	2	
				Two surface soil samples south west end of TA-46-24													

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-008

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I. D.	Samples Per Location	Number of Samples	Sample dup
(57)	46-008-e	46-008-e-1		Drum Storage	Reconn	1			Soil		4		SU	S-10 S-11 S-12 S-13	1	4	
				Four surface soil samples, 0 to 6 in., one specimen per sample hole													
(58)	46-008-f	46-008-f-1		Drum Storage	Reconn	1			Soil		1		SU	S-29	1	1	
				One surface soil sample, 0 to 6 in., east of paved area where sediments are likely to accumulate from runoff.													
(59)	46-008-g	46-008-g-1		Drum Storage	Reconn	1			Soil			4	H	H-96 H-97 H-98 H-178	2	8	
				Three hand-augered samples into the swale, two samples per core, top and bottom, 5 ft min. One hand-auger sample at expected location of drum storage													
(60)	46-010-d	46-010-d-1		General Storage	Reconn	1			Soil		2		SU	S-38 S-39	1	2	
				Two surface soil samples, 0 to 6 in. south of TA 46-41.													

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	FHS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase I Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(85)	46-003-c	46-003-c-2		Septic Sys /Tank	Recorrn	1	1		Sludge/Tuff	1			V	V-38	3	3	
		One boreholo thru center of tank (TA 46-49) collect continuous core in 5 ft runs to 15 ft TD. One VOA per 5 ft, one homogenized sample per 5 ft for metals, rad, semi VOA															
(86)	46-003-c	46-003-c-3		Septic Drain field	Recorrn	1	1		Soil/Tuff			3	V	V-43 V-44 V-46	3	9	
		Three boreholes into drain field , collect continuous core in 5 ft runs to 15 ft TD. One VOA per 5 ft, one homogenized sample per 5 ft for metals, rad, semi VOA															
(87)	46-003-c	46-003-c-4		Dry Well	Recorrn	1	1		Sludge	1			SS	SS-17	1	1	
		One Sludge Sample in Dry Well in Room B 30															
(88)	46-003-d	46-003-d-1		Septic Sys /Tank	VCA	1	1	1	Soil/Tuff		4		SU	S-21 S-23 S-80 S-81	1	4	
		Two surface samples beneath septic tank, one beneath distribution box, one adjacent to tank for drainline															

Sampling Totals for PRS: 46-003

Total Sample Locations 419
Total Number Of Samples 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-00

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(109)	46-009 a	46-009 a-3		Landfill	Reconn	1			Sediment/Soil			2	H	H-165 H-166	3	6	
				Two hand augered holes, assume 3 specimens per hole													
(110)	46-004 c	46-004 c-2		Dry Well	Reconn	1	1		Sediment/ Sludge	2			SU	SS-18 SS-19	1	2	
				Two sediment/sludge grab samples prior to excavation of drywell													
(111)	46-004 d	46-004 d-2		Dry Well	Reconn	1	1		Sediment/ Sludge	2			SU	SS-20 SS-21	1	2	
				Two sediment/sludge grab samples prior to excavation of drywell													
(112)	46-004 e	46-004 e-2		Dry Well	Reconn	1	1		Sediment/ Sludge	2			SU	SS-22 SS-23	1	2	
				Two sediment/sludge grab samples prior to excavation of drywell													

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-004

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp. Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(113)	46 004 p	46 004 p-2		Dry Well	Recomn	1	1		Sediment/ Sludge	2			SU	SS 24 SS 25	1	2	
	Two sediment/sludge grab samples prior to excavation of drywell																
(114)	46 aoc-001			Mercury Spill	Recomn												
(115)	46-BI 94			blanks	QC				water	1				QC-1	11	11	
	QC blanks for 94 based on 5% of 212 samples (11 blanks)																
(116)	46-MS 94			Matrix spikes	QC				Soil/Tuff	1				QC-2	22	22	
	Matrix spikes for 94 based on 5% of 212 samples, includes ms duplicates (22 MS)																

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 7

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(133)	46 Rl 95S			blanks	QC				water	1				QC-17	16	16	
	OC blanks for '95 based on 5% of 309 samples (16 blanks)																
(134)	46 Rn 95S			rinsate samples	QC				soil	1				QC-19	14	14	
	OC rinsate samples for '95 based on 5% of 278 non-surface samples (14 rinsates)																
(135)	46-006-d	46-006-d ?		Surface Disposal	Recomn	1			Soil			5	H	H-170 H-171 H-172 H-173 H-174	3	15	
	Five hand-auger sample immediately north of TA-46-31 at stained or runoff areas and at site of building expansion areas. Auger to soil tuff interface or refusal. Three 0.2 ft specimens, top, mid, bottom																
(136)	46-004-e	46-004-e ?	AP	Outfall Pipe	Recomn	1			Soil			1	H	H-176	3	3	
	One hand augered hole into the ditch to soil/tuff interface, three specimens per core, top, middle, bottom, 5 ft min																

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase I Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample dup
(137)	46-006-d	46-006-d-5		Surface Disposal	Reconn	1			Soil	☐	3	☐	SU	S-83 S-84 S-85	1	3	
		Three surface soil samples (0 to 6 in), north of Building TA-46-56															
(138)	46-003-h	46-003-h-2	GO	Sink Drain	Reconn	1			Soil	☐	0	2	H	H-177 H-175	3	6	
		Two hand-auger samples Auger to soil tuff interface or refusal Three 0 5 ft specimens, top, mid, bottom.															
(139)	46-004-l	46-004-l2-1	AO	46-004-l-2 Outfall surface	Reconn	1			Sediments	☐	☐	3	H	H-179 H-180 H-181	3	9	
		3 hand-augered sample hole x (3)specimens .															
(140)	46-008-l	46-008-l-1		Drum Storage	Reconn	1			Soil	☐	1	☐	SU	S-30	1	1	
		One surface soil sample, 0 to 6 in , east of paved area where sediments are likely to accumulate from runoff															

Sampling Totals for PRS: 46-006

Total Sample Locations: 419
Total Number Of Samples: 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

	PRS	PRS/ Samp. Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I. D.	Samples Per Location	Number of Samples	Sample dup
(141)	46-003-h	46-003-h-1	GO	Sink Drain	Reconn	1			Soil	☐	1	☐	SU	S-88	1	1	

One surface soil samples (0 to 6 in.), one specimen per sample hole

Sampling Totals for PRS: 46-003

Total Sample Locations: 419

Total Number Of Samples: 1020

Table E-1
OU 1140 PRS Specific Site Survey and Sampling Summary

Sampling Totals for PRS: 46-006

Total Sample Locations: 419
Total Number Of Samples: 1020

	PRS	PRS/ Samp Group	Outfall Field ID	SWMU/Outfall Type, Sample Notes	Phase 1 Approach	Field Surveys: Land Survey	Geophysics	Radiation	Sampling Group Information: Sampled Media	Structure	Surface	Subsurface	Sample Type	Sample Location I.D.	Samples Per Location	Number of Samples	Sample due
(49)	46-006-c	46-006-c-1		Drum Storage	Reconn	1			Soil	☐	2	☐	SU	S-67 S-68	1	2	
		Two surface soil samples (0 to 6 in), in exit from drainage culvert															
(50)	46-006-d	46-006-d-1		Surface Disposal	Reconn	1			Soil	☐	1	☐	SU	S-26	1	1	
		One surface soil sample (0 to 6 in), north of pavement at TA-46-31.															
(51)	46-006-f	46-006-f-1		General Storage	Reconn	1			Soil	☐	3	☐	SU	S-4 S-5 S-6	1	3	
		Three surface soil samples, 0 to 6 in. in drainage behind (east) of buildings															
(52)	46-006-g	46-006-g-1		Surface Release	Reconn	1			Paving	☐	☐	2	NS	NS-1 NS-2	1	2	
		Two near surface core samples into oil stained spots in shed															

Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																Master Analyses Suite	ID Order
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	Pesticides	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
H1	not needed overlap w																															not needed overlap w	ID Order
H2	46 OU4 c1 46 OU4 c2																															46 OU4 c1 46 OU4 c2	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PHS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Lead Paint	Spectroscopic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analysis: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, F)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Metal Analysis Suite	
H3	46 016 8	1			1	1	1		1	1	1			1	1	1	1	1		1		1		1	1		1	1		1		1	46 016 8	ID Order
	46 014 c2	1			1	1	1		1	1	1			1		1	1			1				1	1		1			1			46 014 c2	
H4	46 014 c2	1			1	1	1		1	1	1			1		1	1			1		1		1	1		1			1		1	46 014 c2	ID Order
	46 016 8	1			1	1	1		1		1			1	1	1	1	1		1		1		1	1		1	1		1			46 016 8	
	Agg 5 6	1			1	1					1			1			1			1		1					1						Agg 5 6	
	46 017	1			1	1	1		1		1			1		1	1			1			1	1	1		1			1			46 017	

1 Specifically Beryllium in addition to the full suite of metals

— VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma-Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	ID Order
HS	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1		1			1			46 004 c2	
	46 016 a	1			1	1	1		1		1			1	1	1	1	1	1				1	1		1	1				1	46 016 a	
	Agg 5 6	1			1	1								1			1		1		1					1						Agg 5 6	
	46 017	1			1	1	1		1		1			1		1	1		1			1	1	1		1			1			46 017	
HS	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1		1			1			46 004 c2	
	46 016 a	1			1	1	1		1		1			1	1	1	1	1	1				1	1		1	1				1	46 016 a	
	Agg 5 6	1			1	1								1			1		1		1					1						Agg 5 6	
	46 017	1			1	1	1		1		1			1		1	1		1			1	1	1		1			1			46 017	

1 = Specifically for plume in addition to the full suite of metals
v = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alkaly Reactivity	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Tritium	Acid Metals (Cd, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Pesticides	Herbicides	Metals Analysis Suite	
[illegible]	46.004 c2	1			1	1	1		1		1			1			1		1	1		1		1	1		1			1			46.004 c2	
	46.004 g	1			1	1	1		1		1			1	1	1	1	1	1	1		1		1	1		1	1				1	46.004 g	
	Agg 5 6	1			1	1								1			1		1	1	1	1					1						Agg 5 6	
	46.017	1			1	1	1		1		1			1		1	1		1	1		1	1	1	1		1			1			46.017	
[illegible]	46.004 g	1			1	1	1		1	1	1			1		1	1			1		1		1	1		1			1			46.004 g	
	46.017	1			1	1	1		1		1			1		1	1			1		1	1	1	1		1			1			46.017	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
	46.014 m	1			1	1	1		1	1	1			1		1	1			1				1	1		1			1			46.014 m	

1 - Specifically Beryllium in addition to the full suite of metals
- - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: GPS Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Log/PID	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, I)	VOA (SW8240)	Semivolatiles (SW8270)	Total Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
1119	46 004 g	1			1	1	1		1	1	1			1		1	1			1		1		1	1	1			1			46 004 g	1
	46 007	1			1	1	1		1		1			1		1	1			1		1	1	1		1			1			46 007	
	Agg 5 6	1			1	1								1			1			1		1										Agg 5 6	
	46 004 m	1			1	1	1		1	1	1			1		1	1			1				1	1	1			1			46 004 m	
1110	46 004 m	1			1	1	1		1	1	1			1	1	1	1			1				1	1	1			1			46 004 m	1
	46 004 s	1			1	1	1		1	1	1			1	1	1	1			1				1	1	1	1		1			46 004 s	
	46 004 b2	1			1	1	1		1	1	1			1	1	1	1			1		1		1	1	1			1			46 004 b2	
	46 006 f	1			1	1	1		1		1			1	1	1	1			1				1	1	1	1	1	1			46 006 f	
	46 007	1			1	1	1		1		1			1	1	1	1			1		1		1	1	1			1			46 007	
	46 006 b	1			1	1								1	1		1			1					1		1					46 006 b	
	Agg 5 6	1			1	1								1			1			1		1				1						Agg 5 6	

1 - Specifically Designed in addition to the full suite of metals

- - VOA only on specimens from sample sites in upper most feet of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	QC Order
H12	Agg 5.6	1			1	1								1			1			1		1					1						Agg 5.8	3D Order
H13	Agg 5.6	1			1	1								1			1			1		1					1						Agg 5.8	3D Order

‡ - Specifically Beryllium in addition to the full suite of metals

-- - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PTS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Major Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Master Analytes Suite	
H14	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1			1	1		1			1		46 004 c2	10 Order
	46 016 8	1			1	1	1		1		1			1	1	1	1	1	1		1			1	1		1	1			1	46 016 8	
	Agg 5 6	1			1	1					1			1			1		1			1										Agg 5 6	
	46 017	1			1	1	1		1		1			1		1	1		1				1	1	1		1			1		46 017	
H15	46 004 c2	1			1	1	1		1	1	1			1	1	1	1	1	1		1			1	1		1	1		1		46 004 c2	10 Order
	46 016 8	1			1	1	1		1		1			1		1	1		1		1			1	1		1	1			1	46 016 8	
	Agg 5 6	1			1	1					1			1			1		1			1										Agg 5 6	
	46 017	1			1	1	1		1		1			1		1	1		1				1	1	1		1			1		46 017	

1 = Specifically for plutonium in addition to the full suite of metals

— = VOA only on samples from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: x-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H16	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1	1		1			1		1	46 004 c2	ID Order
	46 006 a	1			1	1			1		1			1	1	1	1	1	1		1	1		1	1		1	1					46 006 a	
	Agg 5 6	1			1	1								1			1		1								1						Agg 5 6	
	46 007	1			1	1	1		1		1			1		1	1		1				1	1	1		1			1			46 007	
H17	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1	1		1			1		1	46 004 c2	ID Order
	46 006 a	1			1	1	1		1		1			1	1	1	1	1	1		1	1		1	1		1	1					46 006 a	
	Agg 5 6	1			1	1								1			1		1								1						Agg 5 6	
	46 007	1			1	1	1		1		1			1		1	1		1				1	1	1		1			1			46 007	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alpha Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Metals (CLP)	VOA (SW8240)	Semivolatiles (SW8270)	TPH	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
1119	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1		1			1		1		46 004 c2	JD Order
	46 005 a	1			1	1	1		1		1			1	1	1	1	1	1		1		1	1		1	1	1				1	46 005 a	
	Agg 5 6	1			1	1					1			1			1		1		1	1				1							Agg 5 6	
	46 007	1			1	1	1		1		1			1		1	1		1			1	1	1		1			1				46 007	
1119	46 004 c2	1			1	1	1		1	1	1			1		1	1		1		1		1	1		1			1		1		46 004 c2	JD Order
	46 005 a	1			1	1	1		1		1			1	1	1	1	1	1		1		1	1		1	1	1				1	46 005 a	
	Agg 5 6	1			1	1					1			1			1		1		1	1				1							Agg 5 6	
	46 007	1			1	1	1		1		1			1		1	1		1			1	1	1		1			1				46 007	

1 - Specifically identified in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	PCB	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
1120	46 004 g 46 007 Agg 5 6 46 004 m	1 1 1 1			1 1 1 1	1 1 1 1	1 1 1 1		1 1 1	1 1 1	1 1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	46 004 g 46 007 Agg 5 6 46 004 m	ID Order
1121	46 004 g 46 007 Agg 5 6 46 004 m	1 1 1 1			1 1 1 1	1 1 1 1	1 1 1 1		1 1 1	1 1 1	1 1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	46 004 g 46 007 Agg 5 6 46 004 m	ID Order

1 - Spec Acally Beryllium in addition to the full suite of metals
- - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Valley Fluorescence	Field Screening: Ultrasonic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: Eh	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: Tritium	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytical Suite	
[H22]	46 004 g 46 007 Agg 5 6 46 004 m	1 1 1 1			1 1 1 1	1 1 1	1 1 1		1 1	1 1	1 1		1 1 1	1 1	1 1	1 1	1 1 1		1 1 1	1 1 1	1	1 1	1	1 1	1 1	1 1 1	1 1		1 1 1			46 004 g 46 007 Agg 5 6 46 004 m	3D Order
[H23]	46 004 g 46 007 Agg 5 6 46 004 m	1 1 1 1			1 1 1 1	1 1 1	1 1 1		1 1	1 1	1 1		1 1 1	1 1	1 1	1 1	1 1 1		1 1 1	1 1 1	1	1 1	1	1 1	1 1	1 1 1	1 1		1 1 1			46 004 g 46 007 Agg 5 6 46 004 m	3D Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Radiochem	Master Analytes Suite	
H20	46 004 z	1			1	1	1		1	1	1			1	1	1	1			1		1		1	1		1		1			46 004 z	ID Order
	46 006 d	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1		1			46 006 d	
	46 006 g	1			1	1	1				1			1		1	1			1				1	1		1					46 006 g	
H25	46 004 z	1			1	1	1		1	1	1			1	1	1	1			1		1		1	1		1		1			46 004 z	ID Order
	46 006 d	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1		1			46 006 d	
	46 006 g	1			1	1	1				1			1		1	1			1				1	1		1					46 006 g	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Lithology Possibilities	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Thorium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Arsenic Metals (Cd, Cr)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
H26	46 004 z	1			1	1	1			1	1			1	1	1	1			1	1		1	1	1	1	1	1	1				46 004 z	3D Order
	46 006 d	1			1	1	1			1	1			1	1	1	1			1	1		1	1	1	1	1	1	1				46 006 d	
	46 006 g	1			1	1	1				1			1		1	1			1			1	1	1								46 006 g	
H27	46 004 z	1			1	1	1			1	1			1	1	1	1			1	1		1	1	1	1	1	1	1				46 004 z	3D Order
	46 006 d	1			1	1	1			1	1			1	1	1	1			1	1		1	1	1	1	1	1	1				46 006 d	
	46 006 g	1			1	1	1				1			1		1	1			1			1	1	1								46 006 g	

1 - Specifically Benzidine in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FIMS	Field Surveys: Land Surface	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Uranyl Acetate	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cr, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	46 004 a	1			1	1	1			1	1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 004 a	ID Order
	46 006 d	1			1	1	1			1	1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 006 d	
	46 008 g	1			1	1	1				1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 008 g	
[illegible]	46 004 a	1			1	1	1			1	1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 004 a	ID Order
	46 006 d	1			1	1	1			1	1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 006 d	
	46 008 g	1			1	1	1				1			1	1	1	1		1	1	1	1	1	1	1	1	1	1	1				46 008 g	

1 - Specifically Designed in addition to the full suite of metals
— - VOA only on specimens from sample filters in upper two feet of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Safety Presence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Percent	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Major Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH	Laboratory Analyses: Metals (SW 601C)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
H-10	46 004 z	1			1	1	1		1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	46 004 z	to Order
	46 016 d	1			1	1	1		1		1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	46 016 d	
	46 016 g	1			1	1	1				1			1	1	1	1		1				1	1	1								46 016 g	
H-31	46 004 z	1			1	1	1		1	1	1		1	1	1	1	1		1	1		1	1	1	1	1	1	1	1	1	1	1	46 004 z	to Order
	46 016 d	1			1	1	1		1		1		1	1	1	1	1		1	1		1	1	1	1	1	1	1	1	1	1	1	46 016 d	
	46 016 g	1			1	1	1				1			1	1	1	1		1				1	1	1								46 016 g	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

U1140 TOU1-S-OU1 (OCR)

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FSTS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Indoor Radioactive	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: ECD	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H 32	46 016 d	1			1	1	1				1			1	1	1	1			1	1		1	1	1		1	1		1			46 016 d	30 Order
	46 016 g	1			1	1	1							1		1	1			1	1		1	1	1		1	1		1			46 016 g	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
H 33	46 016 d	1			1	1	1			1	1			1	1	1	1			1	1		1	1	1		1	1		1			46 016 d	30 Order
	46 016 g	1			1	1	1				1			1		1	1			1	1		1	1	1		1	1		1			46 016 g	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	

1 - Spectrally Burplume in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

OU-1140-01-001

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PRS	Field Surveys			Field Screening							Field Lab					Laboratory Analyses																		Master Analyses Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Helium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asbestos Metals (Ca, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides			
H34	46 (Inf) & Aug 5 6	1 1			1 1	1 1	1		1		1			1 1	1	1	1 1			1 1	1 1	1		1	1		1 1			1				46 (Inf) & Aug 5 6	30 Order
H35	46 (Inf) & Aug 5 6	1 1			1 1	1 1	1		1		1			1 1	1	1	1 1			1 1	1 1	1		1	1		1 1			1				46 (Inf) & Aug 5 6	30 Order

1 - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

H34 Analyte Suite—
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FIDS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Safety Presence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA
H 16	46 (HE 4 Aug 5 6	1 1			1 1	1 1	1		1		1			1 1	1	1
H 17	46 (HE 4 Aug 5 6	1 1			1 1	1 1	1		1		1			1 1	1	1

Sample Location	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	[illegible]	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Nitrate	Herbicides	Pesticides	Master Analyses Suite	
H 16	1 1			1 1	1	1		1	1		1 1	1		1			46 (HE 4 Aug 5 6	3D Order
H 17	1 1			1 1	1	1		1	1		1 1	1		1			46 (HE 4 Aug 5 6	3D Order

[illegible]

† - Specifically Beryllium in addition to the full suite of metals
** - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis System — Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FITS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: *Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: *Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: *TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides
		1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1		
H-30	46 004 y	1			1	1	1		1	1	1			1	1	1	1			1		1		1←	1		1	1		1		
	46 016 d	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1	1		1		
H-32	46 004 y	1			1	1	1		1	1	1			1	1	1	1			1		1		1←	1		1	1		1		
	46 016 d	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1	1		1		

Sample Location	Master Analyses Suite	
H-30	46 004 y 46 016 d	3D Order
H-32	46 004 y 46 016 d	3D Order

† - Specifically Beryllium in addition to the full suite of metals

← - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suites
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Br)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H40	46 004 F 46 016 F	1 1			1 1	1 1	1 1		1 1	1	1 1		1 1	1 1	1 1	1 1	1 1		1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	46 004 F 46 016 F	30 Order
H41	not needed 8/18/93																															not needed 8/18/93	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
H-42	not needed ID & SN																																not needed ID & SN	ID Order
H-43	not needed ID & SN																																not needed ID & SN	ID Order

‡ = Specifically Beryllium in addition to the full suite of metals
* = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PRS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses															Master Analyses Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Exposures	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	
H44	46 004 g																							T								46 004 g	JD Order
H45	46 004 g																							T								46 004 g	JD Order

T - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	ESIS	Field Surveys			Field Screening							Field Lab				Laboratory Analyses															Master Analyses Suite	30 Order
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Utility Presence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8260)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
1146	46 004 g	✓			✓	✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓			✓			46 004 g	30 Order
1147	not needed 141																																not needed 141	30 Order

1 = Specifically Beryllium in addition to the full suite of metals

— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
H-46	46.004.c2	1			1	1	1		1	1	1			1		1	1			1		1		†	1		1			1			46.004.c2	3D Order
	46.006.a	1			1	1	1		1		1			1	1	1	1	1		1				1	1		1	1				1	46.006.a	
H-49	46.004.c2	1			1	1	1		1	1	1			1		1	1			1		1		†	1		1			1			46.004.c2	3D Order
	46.006.a	1			1	1	1		1		1			1	1	1	1	1		1				1	1		1	1				1	46.006.a	

† - Specifically Beryllium in addition to the full suite of metals
* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HSS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asbestos (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	Tritium	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
HSA	46-014-c2	↑			↑	↑	↑		↑	↑	↑			↑		↑	↑			↑		↑		↑	↑	↑	↑			↑		↑	46-014-c2	3D Order
	46-014-b	↑			↑	↑	↑		↑		↑			↑	↑	↑	↑			↑				↑	↑		↑	↑				↑	46-014-b	
HSI	46-014-m	↑			↑	↑	↑		↑	↑	↑			↑		↑	↑			↑				↑	↑		↑			↑			46-014-m	3D Order

↑ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys			Field Screening						Field Lab				Laboratory Analyses																	Master Analyses Suite	3D Order
		Land Survey	Geophysics	Radiologic	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectrometry	PCB	VOA	Gamma Spectrometry	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Acid Metals (Cd, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
[illegible]	[illegible]	✓			✓	✓	✓		✓	✓	✓			✓		✓	✓		✓					✓	✓		✓			✓			[illegible]	3D Order
[illegible]	[illegible]	✓			✓	✓	✓		✓	✓	✓		✓			✓	✓		✓					✓	✓		✓			✓			[illegible]	3D Order

[illegible] - Specifically Beryllium in addition to the full suite of metals
[illegible] - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

		Field Surveys			Field Screening						Field Lab						Laboratory Analyses																	
Sample Location	FRS	Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
1154	46 004 b2	•			•	•	•		•	•	•			•		•	•			•		•		•—	•		•			•			46 004 b2	ID Order
	46 008 b	•			•	•									•										•			•					46 008 b	
	46 007	•			•	•	•		•		•			•		•	•			•			•	•	•		•†			•			46 007	
1155	46 004 b2	•			•	•	•		•	•	•			•		•	•			•		•		•—	•		•			•			46 004 b2	ID Order

† - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suite—
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IHS	Field Surveys			Field Screening						Field Lab				Laboratory Analyses																Master Analyses Suite	
		Land Survey	Geophysics	Radiologic	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Filter Paperwork	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
1156	66 004 b2																																66 004 b2	30 Order
1157	66 004 b2																																66 004 b2	30 Order

1 - Specifically Required in addition to the full suite of metals
— - VOA only on specimens from sample sites on upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IRS	Field Surveys			Field Screening						Field Lab						Laboratory Analyses																Master Analysis Suite	ID Order
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Cd, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
[illegible]	not needed outfall W not IRS																															not needed outfall W IRS	ID Order
[illegible]	not needed outfall W not IRS																															not needed outfall W IRS	ID Order

[illegible] - Specifically Beryllium in addition to the full suite of metals

[illegible] - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: Sr-90	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anions/Metals (Cl, S)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
1160	46 004 a 46 007	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 a 46 007	3D Order
1163	46 004 a 46 007	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 a 46 007	3D Order

1 = Specifically Required in addition to the full suite of metals

— = VOA only on specimens from sample taken in upper two-feet of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: UHD Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Ionizing Americium	Total Uranium	Ionizing Uranium	Ionizing Plutonium	Ionizing Thorium	Assay Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
H62	46 004 a 46 007	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1			1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 a 46 007	30 Order
H63	46 004 g 46 006 d	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1		1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 g 46 006 d	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRIS	Field Surveys: UPD Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	x-Ray Fluorescence	Lithologic Logging	First Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cd, Ni)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
H64	46 004 z 46 006 d	1 1			1 1	1 1	1 1		1 1	1 1	1 1				1 1	1 1	1 1			1 1	1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 z 46 006 d	ID Order
H65	46 004 z 46 006 d	1 1			1 1	1 1	1 1		1 1	1 1	1 1				1 1	1 1	1 1			1 1	1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1			46 004 z 46 006 d	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alpha Physics	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
1116	46 004 a	1			1	1	1		1	1	1			1	1	1	1			1			1	1		1	1		1			46 004 a	3D Order
	46 006 d	1			1	1	1		1		1			1	1	1	1			1	1		1	1		1	1		1			46 006 d	
1117	46 004 a	1			1	1	1		1	1	1			1	1	1	1			1			1	1		1	1		1			46 004 a	3D Order
	46 006 d	1			1	1	1		1		1			1	1	1	1			1	1		1	1		1	1		1			46 006 d	

1 = Spec Analy Plutonium in addition to the full suite of metals
* = VOA only on spec need from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PRS	Field Surveys			Field Screening						Field Lab						Laboratory Analyses															
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Ca, ...)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides
		1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1		
11-68	46-004(e)	1			1	1	1		1	1	1			1	1	1	1			1		1		1—	1		1	1		1		
	46-006(d)	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1	1		1		
11-69	46-004(e)	1			1	1	1		1	1	1			1	1	1	1			1		1		1—	1		1	1		1		
	46-006(d)	1			1	1	1		1		1			1	1	1	1			1	1			1	1		1	1		1		

	Master Analyses Suite	
[illegible]	46-004(e) 46-006(d)	ID Order
[illegible]	46-004(e) 46-006(d)	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suite — Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EDS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Lithium Assessment	Field Screening: Uranyl Acetate	Fixed Lab: Gross Alpha	Fixed Lab: Tritium	Fixed Lab: Soil Moisture	Fixed Lab: Gamma Spectroscopy	Fixed Lab: PCB	Fixed Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Acute Metals (Cd, Ni)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
1170	46 004 a	1			1	1	1		1		1			1	1	1	1		1	1	1	1		1	1		1	1		1			46 004 a	30 Order
	46 006 d	1			1	1	1		1		1			1	1	1	1		1	1	1			1	1		1	1		1			46 006 d	
1171	46 004 a	1			1	1	1		1	1	1			1	1	1	1		1	1	1	1		1	1		1	1		1			46 004 a	30 Order
	46 006 d	1			1	1	1		1		1			1	1	1	1		1	1	1			1	1		1	1		1			46 006 d	

1 - Specifically Beryllium in addition to the full suite of metals
* - VOA only at specified from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Exposures	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H72	46 004 h	■			■	■	■		■	■	■			■		■	■			■		■		■	■		■						■	30 Order
	46 004 q	■			■	■	■		■	■	■			■		■	■			■				■	■		■						■	
	Aug 5 8	■			■	■								■			■			■		■					■							
H73	46 004 h	■			■	■	■		■	■	■			■		■	■			■		■		■	■		■						■	30 Order
	46 004 q	■			■	■	■		■	■	■			■		■	■			■				■	■		■						■	
	Aug 5 8	■			■	■								■			■			■		■					■							

■ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

ORIGINAL DOCUMENT

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
H74	46 004 a2	1			1	1	1			1	1	1		1	1	1	1		1		1			1	1		1	1		1			46 004 a2	ID Order
	46 016 d	1			1	1	1			1	1			1	1	1	1		1	1		1		1	1			1		1			46 016 d	
	Agg 5 ft	1			1	1								1			1		1		1						1					Agg 5 ft	
	46 004 w	1			1	1	1			1	1					1								1	1								46 004 w	
	46 004 v	1			1	1				1															1								46 004 v	
H75	46 004 a2	1			1	1	1			1	1	1		1	1	1	1		1		1			1	1		1	1		1			46 004 a2	ID Order
	46 016 d	1			1	1	1			1	1			1	1	1	1		1	1		1		1	1			1		1			46 016 d	
	Agg 5 ft	1			1	1								1			1		1		1						1					Agg 5 ft	
	46 004 w	1			1	1	1			1	1					1								1	1								46 004 w	
	46 004 v	1			1	1				1															1								46 004 v	

1 = Specifically Beryllium in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asgar Metals (Cs Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
H76	46 004 a2	1			1	1	1		1	1	1			1	1	1	1			1		1		1	1		1	1		1			46 004 a2	10 Order
	46 016 d	1			1	1	1		1					1	1	1	1			1	1			1	1		1	1		1			46 016 d	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
	46 004 w	1			1	1	1		1	1						1								1	1		1						46 004 w	
	46 004 v	1			1	1				1															1								46 004 v	
H77	46 004 a2	1			1	1	1		1	1	1			1	1	1	1			1		1		1	1		1	1		1			46 004 a2	10 Order
	46 016 d	1			1	1	1		1					1	1	1	1			1	1			1	1		1	1		1			46 016 d	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
	46 004 w	1			1	1	1		1	1						1								1	1		1						46 004 w	
	46 004 v	1			1	1				1															1								46 004 v	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Uranyl Urinalysis	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Acid Metals (Ca, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H-79	46 004 a2	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1	1	1	1		1		1	46 004 a2	TD Order
	46 004 d	1			1	1	1		1		1			1	1	1	1			1		1		1	1		1	1		1			46 004 d	
	Aug 5 6	1			1	1								1			1			1			1				1	1					Aug 5 6	
	46 004 e	1			1	1	1		1	1						1								1	1		1						46 004 e	
	46 004 f	1			1	1				1															1								46 004 f	
H-79	46 004 a2	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1	1	1	1		1		1	46 004 a2	TD Order
	46 004 d	1			1	1	1		1		1			1	1	1	1			1		1		1	1		1	1		1			46 004 d	
	Aug 5 6	1			1	1								1			1			1			1				1	1					Aug 5 6	
	46 004 e	1			1	1	1		1	1						1								1	1		1						46 004 e	
	46 004 f	1			1	1				1															1								46 004 f	

1 - Specifically Fluorium in addition to the full suite of metals

- - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	1515	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Valley Penetrometer	Lithologic Logging	Field Lab: Gross Alpha	TPLP	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8240)	Semivolatiles (SW8270C)	TPLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
1100	46 004 v Agg 5 6	1			1	1			1	1				1		1	1		1		1			1		1	1						46 004 v Agg 5 6	30 Order
1101	46 004 v Agg 5 6	1			1	1				1				1			1		1		1			1		1							46 004 v Agg 5 6	30 Order

1 - Specifically Beryllium in addition to the full suite of metals

- - VOA only on specimens from sample sites in upper reaches of drainage channels only

1100 Sampling Sites—
1.JZ 1 4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																Master Analyses Suite	
		Land Survey	Geophysics	Radiation	Gross alpha	Gross Gamma Beta	Organic Vapor	Explosives	x-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
[illegible]	46.004 a2	¶			¶	¶	¶		¶	¶	¶		¶	¶	¶	¶	¶		¶	¶		¶		¶	¶	¶	¶	¶	¶	¶			46.004 a2	30 Order
[illegible]	46.004 a2	¶			¶	¶	¶		¶	¶	¶			¶	¶	¶	¶		¶	¶		¶		¶	¶	¶	¶	¶	¶	¶			46.004 a2	30 Order

¶ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in riparian reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	[illegible]	Field Surveys			Field Screening						Field Lab					Laboratory Analyses													Master Analyses Suite	
		UXO Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Rubby Appearance	Unknown Liquids	Gross Alpha	Tritium	Soil Moisture	Gamma Spectrometry	RTP	VOA	Gamma Spectrometry	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cr, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
[illegible]	46 [illegible]	✓			✓	✓	✓				✓				✓	✓	✓			✓		✓		✓	✓		✓	✓		✓			46 [illegible]	10 Order
[illegible]	46 [illegible] Aug 56 46 [illegible]	✓ ✓ ✓			✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓		✓ ✓ ✓		✓ ✓ ✓			✓ ✓ ✓		✓ ✓ ✓	✓ ✓ ✓			✓ ✓ ✓		✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓		✓ ✓ ✓	✓ ✓ ✓					46 [illegible] Aug 56 46 [illegible]	10 Order

1 Specifically Europium in addition to the full suite of metals

— = VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Rate	Organic Vapor	Explosives	Kelley Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cr, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Metals Analyses Suite	
[illegible]	46 014 e	1			1	1	1			1		1			1	1	1			1				1	1		1	1					46 014 e	3D Order
	Agg 5 6	1			1	1									1		1			1	1						1						Agg 5 6	
	46 014 f	1			1		1			1		1			1	1	1			1				1	1		1						46 014 f	
[illegible]	46 014 h	1			1	1	1			1	1	1			1	1	1			1		1		1	1		1						46 014 h	3D Order
	46 014 g	1			1	1	1			1	1	1			1	1	1			1				1	1		1						46 014 g	
	Agg 5 6	1			1	1									1		1			1	1						1						Agg 5 6	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic vapor	Field Screening: Explosives	Field Screening: Alkalinity/Acidity	Field Screening: Chlorides (Cl-)	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: pH	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, I)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	46 0[illegible] h 46 0[illegible] g Agu 5 6	1 1 1			1 1 1	1 1 1	1 1		1 1	1 1	1 1			1 1 1		1 1	1 1 1			1 1 1		1 1	1- 1-	1 1	1 1 1						46 0[illegible] h 46 0[illegible] g Agu 5 6	30 Order
[illegible]	46 0[illegible] h Agu 5 6	1 1			1 1	1 1	1		1	1	1 1			1 1		1 1	1 1			1 1		1 1	1-	1	1 1						46 0[illegible] h Agu 5 6	30 Order

1 - Spec Acaly Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Tritium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW6010)	Laboratory Analyses: PCB (SW8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
1150	46 014 g Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1		1	1 1			1 1		1		1—	1		1 1						46 014 g Aug 5 6	ID Order
1151	46 014 h Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1		1	1 1			1 1		1 1		1—	1		1 1						46 014 h Aug 5 6	ID Order

‡ - Specifically Beryllium in addition to the full suite of metals

* - VOA only in specimens from sample sites in upper reaches of drainage channels only

1140 Sample Suite—Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FMS	Field Surveys: Gamma Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Asian Metals (Ca, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
[illegible]	46 [illegible] Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1		1	1 1			1 1	1 1		1	1	1		1 1						46 [illegible] Aug 5 6	0D Order
[illegible]	46 [illegible] Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1		1	1 1			1 1	1 1		1	1	1		1 1						46 [illegible] Aug 5 6	0D Order

1 - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens in sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assign Metals (Ca, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		Master Analytes Suite	
[illegible]	46 004 b Aug 5 6	1			1	1	1			1	1			1		1	1			1		1		1	1		1							46 004 b Aug 5 6	30 Order
[illegible]	46 [illegible] a	1			1	1	1			1	1			1	1	1	1			1	1	1		1	1		1	1						46 [illegible] a	30 Order

1 Specifically Beryllium in addition to the full suite of metals

← VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Endosulfan	Field Screening: Kelley Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	46 [illegible] g 46 [illegible] 01	1			1	1	1								1	1								1	1				1				46 [illegible] g 46 [illegible] 01	3D Order
[illegible]	46 [illegible] g 46 [illegible] 01	1			1	1	1								1	1								1	1				1				46 [illegible] g 46 [illegible] 01	3D Order

1 - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens from sample sites on upper reaches of the drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alkaly Metals/Cs	Field Screening: Lithologic Logging	Fixed Lab: Gross Alpha	Fixed Lab: Tritium	Fixed Lab: Soil Moisture	Fixed Lab: Gamma Spectroscopy	Fixed Lab: PCB	Fixed Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Acute Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	ID Order
[illegible]	[illegible]	1			1	1	1								1	1								1	1							[illegible]	
[illegible]	[illegible]	1 1			1 1	1 1			1		1			1	1	1 1	1		1	1	1	1		1	1		1					[illegible]	

1 - Specifically Beryllium problem in the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PTIS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																Master Analyses Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Kelly Hydrocarbons	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Anion Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Isotopic Radon	Pesticides		
[11100]	46 016 b Aug 5 6	‡			‡	‡			‡		‡			‡	‡		‡		‡		‡			‡		‡	‡					46 016 b Aug 5 6	ID Order
[11101]	46 014 a Aug 5 6	‡			‡	‡								‡			‡		‡		‡					‡						46 014 a Aug 5 6	ID Order

‡ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anions (Cl, Br)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
H107	46 014 a Aug 5 6	●			●	●								●			●			●		●					●						46 014 a Aug 5 6	ID Order
H103	46 007 a 46 009 a	● ●			● ●	● ●	● ●			● ●	● ●			● ●	● ●	● ●	● ●			● ●	● ●	● ●		● ●	● ●		● ●	● ●	●		●		46 013 a 46 009 a	ID Order

[illegible]

[illegible]

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EIS	Field Surveys: Gamma Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Uncorrected Uranium	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
11104	66.003 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1			66.703 a	3D Order
	66.009 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1			66.709 a	
11105	66.003 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1			66.703 a	3D Order
	66.009 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1		1			66.709 a	

1 = Specifically Per Plan in addition to the full suite of metals
* = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	DHS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Rad	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Safety Reconnaissance	Field Screening: Lithologic Logging	Fixed Lab: Gross Alpha	Fixed Lab: Tritium	Fixed Lab: Soil Moisture	Fixed Lab: Gamma Spectroscopy	Fixed Lab: PCB	Fixed Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Co, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
11106	46 003 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1		1	1	1				46 003 a	JD Order
	46 009 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1		1	1	1				46 009 a	
11107	46 003 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1		1	1	1				46 003 a	JD Order
	46 009 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1	1	1	1		1	1	1				46 009 a	

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FHS	Field Surveys			Field Screening							Field Lab					Laboratory Analyses																			Master Analysis Suite	
		UXO Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Uncorrected LVOC/PC	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	*Isotopic Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, SO4)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides			
[illegible]	46.003 a 46.009 a	↑ ↑			↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑			↑ ↑	↑ ↑	↑ ↑	↑ ↑			↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑		↑ ↑				46.003 a 46.009 a	3D Order
[illegible]	46.003 a 46.009 a	↑ ↑			↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑			↑ ↑	↑ ↑	↑ ↑	↑ ↑			↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑		↑ ↑				46.003 a 46.009 a	3D Order

↑ - Specifically Beryllium in addition to the full suite of metals

→ - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
H110	not needed not 1105																																not needed not 1105	30 Order
H111	46 004 f 46 004 r 46 004 w 46 004 d 46 acc 01 Agu 5 6	1 1 1 1 1			1 1 1 1 1	1 1 1 1 1	1 1 1 1			1 1 1 1		1 1 1 1			1 1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1 1		1 1 1 1		1			1 1 1 1	1 1 1 1		1 1 1 1 1	1 1 1 1		1 1 1 1			46 004 f 46 004 r 46 004 w 46 004 d 46 acc 01 Agu 5 6	30 Order

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— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alpha Spectrometry	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: HexPOCONS	Laboratory Analyses: Pesticides	Master Analysis Suite	ID Order
[illegible]	46 004 [illegible]	1			1	1	1		1		1			1	1	1	1			1				1	1		1	1		1			46 004 [illegible]	
	46 004 [illegible]	1			1	1	1		1		1			1	1	1			1					1	1		1	1		1			46 004 [illegible]	
	46 004 [illegible]	1			1	1	1								1	1								1	1			1					46 004 [illegible]	
	46 008 [illegible]	1			1	1	1		1		1			1	1	1	1			1				1	1		1	1		1			46 008 [illegible]	
	46 [illegible] 01																																46 [illegible] 01	
	Aug 5 6	1			1	1								1			1			1		1					1						Aug 5 6	
[illegible]	46 004 [illegible]	1			1	1	1		1		1			1	1	1	1			1				1	1		1	1		1			46 004 [illegible]	
	46 004 [illegible]	1			1	1	1		1		1			1	1	1			1					1	1		1	1		1			46 004 [illegible]	
	46 004 [illegible]	1			1	1	1								1	1								1	1			1					46 004 [illegible]	
	46 008 [illegible]	1			1	1	1		1		1			1	1	1	1			1				1	1		1	1		1			46 008 [illegible]	
	46 [illegible] 01																																46 [illegible] 01	
	Aug 5 6	1			1	1								1			1			1		1					1						Aug 5 6	

1 = Specifically Beryllium in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	RTLS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytical Suite	
H114	46 004 f	1			1	1	1		1		1			1	1	1	1			1			1	1	1	1	1	1		1			46 004 f	3D Order
	46 004 r	1			1	1	1		1		1				1	1			1				1	1		1	1			1			46 004 r	
	46 004 w	1			1	1	1								1	1							1	1			1						46 004 w	
	46 018 d	1			1	1	1		1		1			1	1	1	1			1			1	1			1	1		1			46 018 d	
	46 anc 01																																46 anc 01	
	46 004 t	1			1	1	1			1				1		1	1						1										46 004 t	
	46 018 g	1			1	1	1								1	1							1	1			1						46 018 g	
	46 010 b																																46 010 b	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
H115	46 004 f	1			1	1	1		1		1			1	1	1	1			1			1	1			1	1		1			46 004 f	3D Order
	46 004 r	1			1	1	1		1		1				1	1			1				1	1			1	1		1			46 004 r	
	46 004 w	1			1	1	1								1	1							1	1			1						46 004 w	
	46 018 d	1			1	1	1		1		1			1	1	1	1			1			1	1			1	1		1			46 018 d	
	46 anc 01																																46 anc 01	
	46 004 t	1			1	1	1			1				1		1	1						1										46 004 t	
	46 018 g	1			1	1	1								1	1							1	1			1						46 018 g	
	46 010 b																																46 010 b	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	

1 - Specifically Beryllium in addition to the full suite of metals
* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Kelley Resistance	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	BTS	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, I)	VOA (SW8240)	Semivolatiles (SW8270)	TPH	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
H116	46 0041 46 xx 01	1			1	1	1			1				1		1	1							1									46 0041 46 xx 01	30 Order
H117	46 0031 46 018 g 46 018 g	1 1 1			1 1 1	1 1 1	1		1	1	1			1	1 1 1	1 1 1	1			1				1 1 1	1 1	1 1	1 1		1				46 0031 46 018 g 46 018 g	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HSS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alpha Radiometry	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	66 0031	1			1	1	1		1	1	1			1	1	1	1			1				1	1		1		1				66 0031	ID Order
	66 0[illegible] a	1			1	1			1															1			1						66 0[illegible] a	
	66 0[illegible] g	1			1	1	1								1	1								1				1					66 0[illegible] g	
[illegible]	66 0031	1			1	1	1		1	1	1			1	1	1	1			1				1	1		1		1				66 0031	ID Order
	66 0[illegible] a	1			1	1			1															1			1						66 0[illegible] a	
	66 0[illegible] g	1			1	1	1								1	1								1				1					66 0[illegible] g	

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Acid Metals (Cd, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
[illegible]	46 0011	1			1	1	1		1	1	1			1	1	1	1			1				1	1		1	1		1			46 0011	80 Order
	46 0118 g	1			1	1			1															1	1		1						46 0118 g	
	46 0118 g	1			1	1	1								1	1								1	1			1					46 0118 g	
[illegible]	46 0011	1			1	1	1		1	1	1			1	1	1	1			1				1	1		1	1		1			46 0011	80 Order
	46 0118 g	1			1	1			1															1	1		1						46 0118 g	
	46 0118 g	1			1	1	1								1	1								1	1			1					46 0118 g	

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alkali Phosphorus	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[0122]	46 0031	1			1	1	1			1	1			1	1	1	1			1				1	1		1	1		1			46 0031	JD Order
	46 0118 a	1			1	1				1																	1						46 0118 a	
	46 0118 g	1			1	1	1								1	1								1	1			1					46 0118 g	
[0123]	46 0118 a	1			1	1				1															1		1						46 0118 a	JD Order
	46 0118 g	1			1	1	1								1	1								1	1			1					46 0118 g	

1 = Specifically Requested in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EFIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alpha Pyrophoric	Lithologic Logging	Fixed Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cr, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
[illegible]	46 [illegible] a	1			0	1			1																0		1						46 [illegible] a	ID Order
	46 [illegible] g	1			0	1	1								1	1								1	1			1					46 [illegible] g	
[illegible]	46 [illegible] a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1	1				46 [illegible] a	ID Order

1 = Specifically flagged in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible] Suite — Table [illegible]

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	ETIS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Alpha Spectrometry	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectrometry	PCB	VOA	Laboratory Analyses: Gamma Spectrometry	Isotopic Americium	Total Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Radiochem	Metals Analysis Suite	
[illegible]	66 [illegible]																															66 [illegible]	30 Order
[illegible]	66 [illegible]																															66 [illegible]	30 Order

1 - Specifically Beryllium in addition to the full suite of metals.
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only.

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	ITIS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses															Master Analyses Suite	
		Surf. Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Alpha Prospecting	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Cs 137)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
[illegible]	46 [illegible]	●			●	●	●			●	●			●	●	●	●			●	●	●		●	●		●	●	●				46 [illegible]	ID Order
[illegible]	not needed not broken																																not needed not broken	ID Order

[illegible] - Specifically Beryllium in addition to the full suite of metals
[illegible] - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTRS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Confirmatory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, [illegible])	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
[illegible]	not needed not tested																																not needed not tested	ID Order
[illegible]	[illegible] Aug 5 6 [illegible]	1 1 1			1 1 1	1 1 1	1		1		1		1 1 1	1	1 1	1 1 1		1	1	1		1	1	1	1	1 1 1	1					[illegible] Aug 5 6 [illegible]	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	RTS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiologic	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Lithologic Description	Field Screening: Lithologic Logging	Fixed Lab: Gross Alpha	Fixed Lab: Tritium	Fixed Lab: Soil Moisture	Fixed Lab: Gamma Spectroscopy	Fixed Lab: BTEX	Fixed Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, F, SO4)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH-D	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
[illegible]	46 [illegible]	●			●	●	●		●		●			●		●	●		●		●		●	●	●		●	●					46 [illegible]	30 Order
	Agg 5 6	●			●	●								●			●		●			●					●						Agg 5 6	
	46 [illegible]	●			●	●	●		●		●			●		●	●		●					●	●		●						46 [illegible]	
[illegible]	46 [illegible]	●			●	●	●		●		●			●	●	●	●		●	●	●		●		●		●	●		●			46 [illegible]	30 Order

[illegible] - Specifically Designated in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alloy Fingerprinting	Field Screening: Lithologic Logging	Fixed Lab: Gross Alpha	Fixed Lab: Tritium	Fixed Lab: Soil Moisture	Fixed Lab: Gamma Spectroscopy	Fixed Lab: PCB	Fixed Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Cd, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8082)	Laboratory Analyses: Asbestos	Laboratory Analyses: Isotopic Sr	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	46 002 46 009 b	1 1			1 1	1 1	1 1			1 1	1 1			1 1	1 1	1 1	1 1			1 1	1 1	1 1	1 1	1- 1	1 1		1 1	1 1	1		1		46 002 46 009 b	ID Order
[illegible]	46 002 46 009 b	1 1			1 1	1 1	1 1			1 1	1 1			1 1	1 1	1 1	1 1			1 1	1 1	1 1	1 1	1- 1	1 1		1 1	1 1	1		1		46 002 46 009 b	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IHS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Cd, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
[illegible]	46 002 46 009 b	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1	1 1	1 1		1- 1	1 1		1 1	1 1	1 1				46 002 46 009 b	3D Order
[illegible]	46 002 46 009 b	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1		1 1	1 1	1 1		1- 1	1 1		1 1	1 1	1 1				46 002 46 009 b	3D Order

1 - Specifically Beryllium in addition to the full suite of metals
– - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IHSS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	[illegible]	Master Analyses Suite	
		•			•	•	•		•	•	•			•	•	•	•			•	•	•		•	•		•	•	•	•					
[illegible]	46.002	•			•	•	•		•	•	•			•	•	•	•			•	•	•		—	•		•	•		•			[illegible]	46.002	ID Order
	46.009b	•			•	•	•		•	•	•			•	•	•	•			•	•	•		•	•		•	•	•				[illegible]	46.009b	
[illegible]	46.002	•			•	•	•		•	•	•			•	•	•	•			•	•	•		—	•		•	•		•			[illegible]	46.002	ID Order
	46.009b	•			•	•	•		•	•	•			•	•	•	•			•	•	•		•	•		•	•	•				[illegible]	46.009b	

† - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, I)	VOA (SW8240C)	Semivolatiles (SW8270C)	TPH	Metals (SW 6010C)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
H140	46.002 46.009 b	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1			1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1				46.002 46.009 b	ID Order
H141	46.002 46.009 b	1 1			1 1	1 1	1 1		1 1	1 1	1 1			1 1	1 1	1 1	1 1			1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1				46.002 46.009 b	ID Order

1 - Specifically Beryllium in addition to the full suite of metals

+ - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys			Field Screening						Field Lab				Laboratory Analyses																	Master Analyses Suite	
		Land Survey	Geophysics	Radiologic	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8240)	Semivolatiles (SW8270)	TPH	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
H142	46 002 46 009 b	●			●	●	●			●	●			●	●	●	●			●	●	●		T	●		●	●	●				46 002 46 009 b	3D Order
H143	not needed not fracked																																not needed not fracked	3D Order

● - Specifically Beryllium in addition to the full suite of metals
T - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys			Field Screening					Field Lab						Laboratory Analyses																		Master Analytical Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma Beta	Organic vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cs, I)	VOA (SW8240)	Semivolatiles (SW8270)	Pesticides	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Hexavalent Cr	Radionuclides		
H144	not needed not broken																																not needed not broken	ID Order
H145	not needed not broken																																not needed not broken	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Data	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Valley Prescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Spectrometry	Field Lab: Gamma Spectrometry	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectrometry	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: *238 Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[01106]	66 DEC c Aug 56	1 1			1 1	1 1				1				1	1		1			1		1			1		1 1	1					66 DEC c Aug 56	1	30 Order
[01107]	66 DEC c Aug 56	1 1			1 1	1 1				1				1	1		1			1		1			1		1 1	1					66 DEC c Aug 56	1	30 Order

1 - Specifically Designed in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alloy Presence	Field Screening: Lithologic Logging	Field Fab: Gross Alpha	Field Fab: Tritium	Field Fab: Soil Moisture	Field Fab: Gamma Spectroscopy	Field Fab: Beta	Field Fab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW6010)	Laboratory Analyses: PCB (SW8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H149	46 003 g Agg 5 6	↑ ↑			↑ ↑	↑ ↑	↑			↑	↑	↑		↑ ↑	↑	↑	↑ ↑		↑		↑		↑	↑—	↑	↑ ↑	↑					46 003 g Agg 5 6	ID Order
H149	46 003 g Agg 5 6	↑ ↑			↑ ↑	↑ ↑	↑			↑	↑	↑		↑ ↑	↑	↑	↑ ↑		↑		↑		↑	↑—	↑	↑ ↑	↑					46 003 g Agg 5 6	ID Order

↑ = Specifically Designed in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Cd, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8082)	Laboratory Analyses: Asbestos	Laboratory Analyses: Asphalt	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	46.003 g Ag 5 6	1 1			1 1	1 1	1			1	1	1			1 1	1	1 1			1		1		1	1	1	1 1	1					46.003 g Ag 5 6	30 Order
[illegible]	46.003 g Ag 5 6	1 1			1 1	1 1	1			1	1	1			1 1	1	1 1			1		1		1	1	1	1 1	1					46.003 g Ag 5 6	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on spec metals in sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FIDS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
[illegible]	46 003 g Agg 5 6	1 1			1 1	1 1	1		1	1	1			1 1	1	1	1 1			1		1		←	1		1 1	1					46 003 g Agg 5 6	ID Order
[illegible]	46 003 g Agg 5 6	1 1			1 1	1 1	1		1	1	1			1 1	1	1	1 1			1		1		←	1		1 1	1					46 003 g Agg 5 6	ID Order

1 - Specifically Beryllium in addition to the full suite of metals

← - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alpha Spectrometry	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW6010)	Laboratory Analyses: PCB (SW8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
H154	46 003 g Agg 5 6	1			1	1	1			1	1			1	1	1	1			1		1	1	1		1	1					46 003 g Agg 5 6	30 Order
H155	46 003 g Agg 5 6	1			1	1	1			1	1			1	1	1	1			1		1	1	1		1	1					46 003 g Agg 5 6	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
1 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Ca - U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270C)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
[illegible]	46 003 g Aug 5 6	■			■	■	■			■	■			■	■	■	■			■		■			■		■	■					46 003 g Aug 5 6	3D Order
[illegible]	46 005 Aug 5 6	■			■	■	■			■	■			■	■	■	■			■		■			■		■	■					46 005 Aug 5 6	3D Order

■ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Contract: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asbestos	VOA (SW8240)	Semivolatiles (SW8270)	Metals	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
H158	46 105 Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1	1	1	1 1		1	1		1		1–	1	1 1	1	1					46 105 Aug 5 6	10 Order
H159	46 105 Aug 5 6	1 1			1 1	1 1	1		1	1	1			1 1	1	1	1 1		1	1		1		1–	1	1 1	1	1					46 105 Aug 5 6	10 Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alloy Analyzer	Field Screening: Chlorophyll Lysimeter	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Spectrometry	Field Lab: Gamma Spectroscopy	Field Lab: BTEX	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Tritium	Laboratory Analyses: Anions/Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
H160	46 015 Aug 5 6	1 1			1 1	1 1	1			1 1	1			1 1	1	1	1 1		1		1		1-1	1		1 1	1					46 015 Aug 5 6	ID Order
H161	46 015 Aug 5 6	1 1			1 1	1 1	1			1 1	1			1 1	1	1	1 1		1		1		1-1	1		1 1	1					46 015 Aug 5 6	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
- VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	DTS	Field Surveys: UPV Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma, Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: BTEX	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Cd, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytical Suite	
[illegible]	Aug 96		1			1	1							1			1		1		1						1						Aug 96	ID Order
[illegible]	Aug 96		1			1	1							1			1		1		1						1						Aug 96	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: x-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Nitrate (SW 300.0)	Laboratory Analyses: VOA (SW8240C)	Laboratory Analyses: Semivolatiles (SW8270C)	Laboratory Analyses: Pesticide	Laboratory Analyses: Metals (SW 6010C)	Laboratory Analyses: PCB (SW 8082)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Explosives	Master Analyses Suite	
[illegible]	[illegible]	✓			✓	✓	✓				✓			✓	✓	✓	✓			✓				✓	✓								[illegible]	ID Order
[illegible]	[illegible]	✓			✓	✓	✓				✓			✓	✓	✓	✓			✓				✓	✓								[illegible]	ID Order

✓ - Specifically Per Plan in addition to the full suite of metals
• - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
NS-3	46 016 0	✓			✓	✓			✓		✓			✓	✓		✓			✓					✓		✓	✓					46 016 0	3D Order
S-4	46 016 1	✓			✓	✓	✓		✓		✓			✓	✓	✓	✓			✓				✓	✓		✓	✓	✓	✓			46 016 1	3D Order

1 - Specifically Beryllium in addition to the full suite of metals
* - VOA only in specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suites
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FSIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	SCLP	Metals (SW 6010)	PCS (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
SS	46 DKE1																																46 DKE1	30 Order
SS	46 DKE1																																46 DKE1	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on open waters from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Lidar Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Br)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
S-7	46 (1)[illegible] b 46 (1)[illegible] 7 46 (1)[illegible] b2	1 1 1			1 1 1	1 1 1	1 1		1 1	1 1	1 1		1 1	1 1	1 1	1 1	1 1		1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	46 (1)[illegible] b 46 (1)[illegible] 7 46 (1)[illegible] b2	ID Order
S-8	46 (1)[illegible] b	1			1	1									1										1			1					46 (1)[illegible] b	ID Order

† = Specifically Beryllium in addition to the full suite of metals
** = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FHS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses															Master Analysis Suite	
		Land Survey	Geophysics	Biological	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cr, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	
S 9	not needed overlap w																														not needed overlap w	3D Order
S 10	46 OU w	↑			↑	↑	↑		↑		↑				↑		↑		↑			↑	↑		↑	↑					46 OU w	3D Order

↑ - Specifically Beryllium in addition to the full suite of metals
← - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FIMS	Field Surveys			Field Screening						Field Lab						Laboratory Analyses																Master Analyses Suite	JD Order
		Land Survey	Geophysics	Remarks	Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Alpha Radiation	Lithologic Logging	Gross Alpha	Radium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
S11	46 0 0 0	1			1	1	1		1		1					1	1		1				1	1	1		1	1					46 0 0 0	JD Order
S12	46 0 0 0	1			1	1	1		1		1					1	1		1				1	1	1		1	1					46 0 0 0	JD Order

† - Specifically thorium in addition to the full suite of metals
* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EFIS	Field Surveys			Field Screening						Field Lab					Exploratory Analyses																	Master Analyses Suite	
		Surf. Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
S 13	46 008 e	¶			¶	¶	¶		¶		¶					¶	¶			¶					¶		¶	¶					46 008 e	To Order
S 14	46 007 46 004 s	¶ ¶			¶ ¶	¶ ¶	¶ ¶		¶ ¶	¶	¶ ¶			¶ ¶	¶	¶ ¶	¶ ¶			¶			¶	¶ —	¶		¶ ¶	¶		¶			46 007 46 004 s	To Order

¶ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Photo/Video Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Br)	Laboratory Analyses: VOA (SW8260)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
S 15	66 007 66 014 s	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑		↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑ ↑	66 007 66 014 s	JD Order
S 18	Agg 5 8	↑			↑	↑								↑			↑		↑		↑					↑							Agg 5 8	JD Order

↑ - Specifically Beryllium in addition to the full suite of metals
→ - VOA only on specimens in sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: Sped Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Safety Inorganics	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Inorganic Americium	Total Uranium	Inorganic Uranium	Inorganic Plutonium	Inorganic Thorium	Assay Metals (Cs, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Marsh Analysis Suite	ID Order
S17	Aug 56		¶		¶	¶								¶			¶			¶		¶					¶						Aug 56	
S18	06 00 1 d					¶	¶	¶		¶							¶		¶							¶		¶					06 00 1 d	

¶ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FSS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alpha Metals (Cs, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	ID Order
S-19	46.003.4				‡	‡	‡		‡								‡		‡							‡			‡				46.003.4	ID Order
S-20	46.003.4				‡	‡	‡		‡								‡		‡							‡			‡				46.003.4	ID Order

‡ - Specifically Beryllium in addition to the full suite of metals

** - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asian Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
S21	66.003 d				‡	‡	‡			‡							‡		‡							‡			‡				66.003 d	JD Order
S22	66.003 d				‡	‡	‡			‡							‡		‡							‡			‡				66.003 d	JD Order

‡ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites on upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alkaline Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, U)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: Metals (SW6010)	Laboratory Analyses: Metals (SW6020)	Laboratory Analyses: PCB (SW8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	
S 23	46 003 d				✓	✓	✓			✓							✓	✓															46 003 d	30 Order
S 24	46 003 d				✓	✓	✓			✓							✓	✓															46 003 d	30 Order

✓ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HHS	Field Surveys			Field Screening					Field Lab					Laboratory Analyses																	Master Analyses Suite	ID Order
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma Rate	Organic Vapor	Explosives	X-Ray Fluorescence	Uranyl Acetate	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Major Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
5.25	46.004 p				‡	‡	‡		‡									‡		‡									‡				46.004 p	ID Order
5.25	46.004 p					‡	‡	‡		‡								‡		‡							‡		‡				46.004 p	ID Order

‡ - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

1

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IRS	Field Surveys: GPR Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Fuming Potassium	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
[illegible]	[illegible]																																[illegible]	[illegible]
[illegible]	[illegible]																																[illegible]	[illegible]

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys			Field Screening							Field Lab						Laboratory Analyses																Matrix Analysis Suite		
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, I)	VOA (SW8240)	Semivolatiles (SW8270)	Metals	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides			
[illegible]	46 003 h	1			1	1	1		1							1								1	1		1						46 003 h		ID Order
[illegible]	Ag 5 6	1			1	1								1			1		1		1						1						Ag 5 6		ID Order

1 - Specifically Beryllium in addition to the full suite of metals

← - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTES	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alloy Presence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite		
S 31	Aug 56	1			1	1								1			1			1		1					1						Aug 56		JD Order
S 34	[illegible]				1	1	1			1							1	1	1	1	1				1		1		1				[illegible]		JD Order

1 = [illegible] Analy Perchlorate in addition to the full suite of metals
— = VOA only on samples from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	UTM	Field Survey: Land Survey	Field Survey: Geophysics	Field Survey: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, S)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Media Analysis Scale	Order
[illegible]	46 004 e				1	1	1		1								1		1	1	1	1	1	1	1	1	1	1				46 004 e	30 Order
[illegible]	46 004 e		1	1		1	1	1		1	1			1		1	1			1	1		1	1		1	1	1		1		46 004 e	30 Order

1 - Specifically the [illegible] in addition to the full suite of metals

— - VOA only on [illegible] sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EDIS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																Master Analytes Suite	
		Spill Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
S37	46 014 e																																46 014 e	3D Order
S38	46 010 e																																46 010 e	3D Order

1 - Specifically Beryllium in addition to the full suite of metals

2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectrometry	PCB	VOA	Laboratory Analyses: Gamma Spectrometry	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	Strontium	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
S 39	46 010 0	1			1	1	1		1						1	1								1	1		1	1	1				46 010 0	ID Order
S 40	46 018 0	1			1	1			1																1		1						46 018 0	ID Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys			Field Screening						Field Lab					Exploratory Analyses															Master Analyses Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	
S 01	46 (not a	✓			✓	✓				✓															✓		✓						46 (not a	30 Order
S 02	not needed replace by and SS 17																																not needed replace by and SS 17	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	*Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anions Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	ID Order
S51	66105	↑			↑	↑	↑			↑	↑			↑	↑	↑	↑							↑	↑		↑	↑					66105	
S52	Ag056	↑			↑	↑								↑			↑			↑		↑					↑						Ag056	

↑ = Specifically Designated in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IHSS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Safety Resistance	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium*	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA
S 67	46 016 c	1			1	1			1						1	
S 68	46 016 c	1			1	1			1						1	

Sample Location	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium*	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	QC Order
S 67									1		1	1					46 016 c	
S 68									1		1	1					46 016 c	

† Specifically Beryllium in addition to the full suite of metals

* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Sulfur Hexafluoride	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Assay Metals (Co, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytical Suite	
S 69	46 [illegible]	↑			↑	↑	↑			↑	↑			↑	↑	↑	↑		↑			↑	↑		↑	↑	↑		↑			46 [illegible]	30 Order
S 70	46 [illegible]	↑			↑	↑	↑			↑	↑			↑	↑	↑	↑		↑			↑	↑		↑	↑	↑		↑			46 [illegible]	30 Order

↑ - Specifically Beryllium in addition to the full suite of metals
→ - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Uranyl Acetate (UA)	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Acetate Metals (Cd, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH-D	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Pesticides	Laboratory Analyses: Perchlorate	Master Analysis Suite	
[illegible]	[illegible]	1			1	1	1			1	1			1	1	1	1			1	1	1		1	1		1	1		1			[illegible]	30 Order
SS1	Aug 16	1			1	1								1			1			1		1					1						Aug 16	30 Order

1 - Specifically for plum in addition to the full suite of metals
— - VOA only in specimens from sample sites in upper reaches of drainage channels only

[illegible]
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	BTEX	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Plutonium	Isotopic Thorium	Metals (CS, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Metals Analysis Suite	
SS 2	Agg 5 6	1			1	1								1			1		1		1					1						Agg 5 6	30 Order
SS 3	46 003 e	1			1	1	1		1	1	1			1		1	1		1		1		1	1		1		1				46 003 e	30 Order

1 = Specifically Beryllium in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EFIS	Field Surveys: UXO Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Pulley Penetrometer	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TPH-P	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
[illegible]	46 0059																																46 0059	30 Order
[illegible]	46 0041																																46 0041	30 Order

† - Specifically Beryllium in addition to the full suite of metals
** - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Alpha Resonance	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8260)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Inorganics	Pesticides	Master Analysis Suite	
SS 16	46 004 s 46 004 w 46 sw 01	1 1			1 1	1 1	1 1			1	1				1 1	1 1			1					1 1	1 1		1	1 1		1			46 004 s 46 004 w 46 sw 01	3D Order
S 71	46 0011	1			1	1	1			1	1	1			1	1	1	1		1				1	1		1	1		1			46 0011	3D Order

1 = Specifically flagged in addition to the full suite of metals
← = VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Sampling Summary
Page 1 of 1

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PHS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Br)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
S-22	46 0031		1			1	1	1			1	1			1	1	1	1			1				1	1	1	1	1	1			46 0031	30 Order
S-23	46 0031		1			1	1	1			1	1			1	1	1	1			1				1	1	1	1	1	1			46 0031	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PHS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																		Master Analyses Suite	
		Land Survey	Geophysics	Biological	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Alpha Permeable	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, I)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
S 74	46.001k	↑			↑	↑	↑			↑						↑								↑	↑		↑						46.001k	3D Order
S 75	46.004c					↑	↑			↑							↑	↑								↑		↑					46.004c	3D Order

↑ - Specifically Percylium in addition to the full suite of metals
— - VOA only on spec more than sample sites in upper reaches of Drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	ETIS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses															Master Analysis Suite	ID Order
		Lang Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	x-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	Tritium	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
SS 76	46 [illegible]				1	1	1		1								1		1														46 [illegible]	ID Order
SS 77	46 [illegible] 46 [illegible]	1	1		1	1	1		1		1		1	1	1	1	1		1					1	1		1	1		1			46 [illegible] 46 [illegible]	ID Order

1 - Specifically Beryllium in addition to the full suite of metals

— - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Analysis: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Water (CB 1)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analysis Suite	
[illegible]	66 (004 m)	1			1	1	1			1	1	1		1		1	1			1				1	1		1			1			66 (004 m)	30 Order
	66 (004 s)	1			1	1	1			1	1	1		1	1	1	1			1				1	1		1	1		1			66 (004 s)	
	66 (004 b2)	1			1	1	1			1	1	1		1		1	1			1		1		1	1		1			1			66 (004 b2)	
	66 (006 f)	1			1	1	1			1	1	1		1	1	1	1			1				1	1		1	1	1	1			66 (006 f)	
	66 (007)	1			1	1	1			1	1	1		1		1	1			1			1	1	1		11			1			66 (007)	
	66 (008 b)	1			1	1									1										1			1					66 (008 b)	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
[illegible]	SAR 1 (Grandfather)																																SAR 1 (Grandfather)	30 Order

1 = Specifically Beryllium in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTLS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma, Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Unknown Vapors	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asian Metals (CS, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
S 79	46 002	1			1	1	1			1	1	1			1	1	1	1			1	1	1	1	1	1	1	1		1			46 002	30 Order
H 165	46 009 a	1			1	1	1			1	1	1			1	1	1	1			1	1	1	1	1	1	1	1	1				46 009 a	30 Order
	46 003 f	1			1	1	1			1	1	1			1	1	1	1			1			1	1		1	1		1			46 003 f	
	46 008 a	1			1	1				1														1	1		1						46 008 a	
	46 016 g	1			1	1	1								1	1								1	1			1					46 016 g	
	46 014 f	1			1	1	1				1				1		1	1						1									46 014 f	
	46 010 b																																46 010 b	
	46 [illegible] 01																																46 [illegible] 01	
	46 004 f	1			1	1	1			1		1			1	1	1	1			1			1	1		1	1		1			46 004 f	
	46 004 c	1			1	1	1			1		1				1	1			1				1	1		1	1		1			46 004 c	
	46 004 e	1			1	1	1									1	1							1	1			1					46 004 e	
	46 008 d	1			1		1			1		1			1	1	1	1			1			1	1		1	1		1			46 008 d	
	46 004 n																																46 004 n	
	46 006 b	1			1	1				1		1			1	1		1			1				1		1	1					46 006 b	
	Agg 5 6	1			1	1									1		1				1		1				1						Agg 5 6	

1 = Specifically Beryllium in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening:	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Metals (Ca, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	ID Order
H167	not needed overlap w																																	not needed overlap w	ID Order
H168	66 DIR a 6F DIR b Aug 5 6	• • •			• • •	• • •	•			• •	•	• •			• • •	• •	•	• • •			• • •	•	• •		•	• •		• • •	• •	•				66 DIR a 6F DIR b Aug 5 6	ID Order

† - Specifically Beryllium in addition to the full suite of metals

* - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Table—
Table E-4

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EPIS	Field Surveys: UXO Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma Beta	Organic Vapor	Explosives	Alpha Phosphorus	Uncoded Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Asbestos Metals (Ca, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
[illegible]	46 009 a	1			1	1	1		1	1	1			1	1	1	1			1	1	1		1	1		1	1					46 009 a	1
	46 003 f	1			1	1	1		1	1	1			1	1	1	1			1				1	1		1	1		1			46 003 f	
	46 008 a	1			1	1			1															1	1		1						46 008 a	
	46 008 g	1			1	1	1							1	1	1								1	1			1					46 008 g	
	46 004 f	1			1	1	1			1				1		1	1							1									46 004 f	
	46 010 b																																46 010 b	
	46 sec 01																																46 sec 01	
	46 004 f	1			1	1	1		1		1			1	1	1	1			1				1	1		1	1		1			46 004 f	
	46 004 r	1			1	1	1		1		1				1	1			1					1	1		1	1		1			46 004 r	
	46 004 m	1			1	1	1								1	1								1	1			1					46 004 m	
	46 008 d	1			1		1		1		1			1	1	1	1			1				1	1		1	1		1			46 008 d	
	46 004 n																																46 004 n	
	46 046 b	1			1	1			1		1			1	1		1			1					1		1	1					46 046 b	
	Agg 5 6	1			1	1								1			1			1		1					1						Agg 5 6	
S 80	46 003 d					1	1	1		1							1		1							1				1			46 003 d	

1 - Specifically Beryllium in addition to the full suite of metals

— - VOA only on spreadsheet for sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	EHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Elevation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Anion Metals (Cl, I)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
SS 19	46 004 c				1	1	1		1								1		1														46 004 c	30 Order
SS 20	46 004 d				1	1	1		1								1		1	1	1	1	1			1		1					46 004 d	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	HHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Video Reconnaissance	Field Screening: Underwater Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Anion Metals (Cl, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analyses Suite	
[illegible]	[illegible]	✓			✓	✓			✓		✓			✓	✓		✓		✓				✓		✓	✓					[illegible]	[illegible]	ID Order
[illegible]	[illegible]	✓			✓	✓			✓		✓			✓	✓		✓		✓				✓		✓	✓					[illegible]	[illegible]	ID Order

✓ = Specifically for plutonium in addition to the full suite of metals
* = VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FSIS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: Alloy Screening	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectrometry	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectrometry	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Metals (Ca, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analytes Suite	
S 92	46 [illegible]	1			1	1			1								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	46 [illegible]	30 Order
S 91	46 [illegible]	1			1	1	1		1		1			1	1	1	1		1	1		1	1	1	1	1	1	1	1	1	1	1	46 [illegible]	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
2 - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PHS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alpha Metals (Ga, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides	Master Analysis Suite	ID Order
S-04	[illegible]	•			•	•	•		•		•			•	•	•	•			•	•			•	•		•	•		•			[illegible]	[illegible]
S-05	[illegible]	•			•	•	•		•		•			•	•	•	•			•	•			•	•		•	•		•			[illegible]	[illegible]

† - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW6010)	PCB (SW8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
11170	46 006 4	✓			✓	✓	✓		✓		✓			✓	✓	✓	✓			✓	✓			✓	✓		✓	✓		✓			[illegible]	ID Order
11171	46 006 4	✓			✓	✓	✓		✓		✓			✓	✓	✓	✓			✓	✓			✓	✓		✓	✓		✓			[illegible]	ID Order

† = Specifically Beryllium in addition to the full suite of metals
** = VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suite—
Table E-4

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTIS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	*Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cr, U)	*VOA (SW8240)	Semivolatiles (SW8270)	*PCB	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytes Suite	
H172	46 [illegible]																																46 [illegible]	30 Order
H173	46 [illegible]																																46 [illegible]	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FTS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	Master Analyses Suite	
H174	46 016 d	*			*	*	*		*		*			*	*	*	*			*	*			*	*		*	*		*			46 016 d	ID Order
H175	46 003 k	*			*	*	*		*							*								*	*		*						46 003 k	ID Order

‡ - Specifically Beryllium in addition to the full suite of metals

* - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FFIS	Field Surveys			Field Screening							Field Lab						Laboratory Analyses																Master Analyses Suite	
		UXO Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Lead Screening	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Nonpoc Americium	Total Uranium	Nonpoc Uranium	Nonpoc Plutonium	Nonpoc Thorium	Anions Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
H169	46-004 m	1			1	1	1		1	1	1		1		1	1	1		1				1	1	1		1			1			46-004 m	3D Order
	46-004 s	1			1	1	1		1	1	1		1	1	1	1	1		1				1	1	1		1	1		1			46-004 s	
	46-004 b2	1			1	1	1		1	1	1		1		1	1	1		1		1		1	1	1		1			1			46-004 b2	
	46-006 1	1			1	1	1		1		1		1	1	1	1	1		1				1	1	1		1	1	1	1			46-006 1	
	46-007	1			1	1	1		1		1		1		1	1	1		1			1	1	1	1		1			1			46-007	
	46-008 b	1			1	1									1										1			1					46-008 b	
	Aug 5 6	1			1	1								1			1			1		1					1						Aug 5 6	
S1	not needed replaced																																not needed replaced	3D Order

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

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Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	[illegible]	Field Surveys			Field Screening							Field Lab					Laboratory Analyses																Master Analyses Suite	
		UXO Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	*Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Assay Metals (Ca, U)	VOA (SW8240)	Semivolatiles (SW8270)	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides		
S27	not needed / replaced																															not needed / replaced	30 Order
[illegible]	46 [illegible]																															46 [illegible]	30 Order

[illegible] - Specifically Beryllium in addition to the full suite of metals
[illegible] - VOA only on specimens from sample sites in upper reaches of drainage channels only

[illegible]

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	FRS	Field Surveys: Land Survey	Geophysics	Radiation	Field Screening: Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	Sulfur Fluorescence	Lithologic Logging	Field Lab: Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Laboratory Analyses: Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8082)	Asbestos	Mercury	Herbicides	Pesticides	Master Analytical Suite	
[illegible]	46 (03) h	1			1	1	1		1							1								1	1		1						46 (03) h	30 Order
[illegible]	46 (04) g 46 (04) 01	1			1	1	1								1	1								1	1		1						46 (04) g 46 (04) 01	30 Order

1 - Specifically Beryllium in addition to the full suite of metals
-- - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PRS	Field Surveys: Land Survey	Field Surveys: Geophysics	Field Surveys: Radiation	Field Screening: Gross Alpha	Field Screening: Gross Gamma/Beta	Field Screening: Organic Vapor	Field Screening: Explosives	Field Screening: X-Ray Fluorescence	Field Screening: Lithologic Logging	Field Lab: Gross Alpha	Field Lab: Tritium	Field Lab: Soil Moisture	Field Lab: Gamma Spectroscopy	Field Lab: PCB	Field Lab: VOA	Laboratory Analyses: Gamma Spectroscopy	Laboratory Analyses: Isotopic Americium	Laboratory Analyses: Total Uranium	Laboratory Analyses: Isotopic Uranium	Laboratory Analyses: Isotopic Plutonium	Laboratory Analyses: Isotopic Thorium	Laboratory Analyses: Alkali Metals (Cs, Li)	Laboratory Analyses: VOA (SW8240)	Laboratory Analyses: Semivolatiles (SW8270)	Laboratory Analyses: TCLP	Laboratory Analyses: Metals (SW 6010)	Laboratory Analyses: PCB (SW 8080)	Laboratory Analyses: Asbestos	Laboratory Analyses: Mercury	Laboratory Analyses: Herbicides	Laboratory Analyses: Pesticides
5-06	46-007	•			•	•	•		•		•			•		•	•			•			•	•	•		••			•		
	46-004 s	•			•	•	•		•	•	•			•	•	•	•			•				•—	•		•	•		•		
11-179		•			•	•	•		•		•			•	•	•	•			•		•		•	•		•	•		•		
	46-004 I	•			•	•	•		•		•			•	•	•	•			•				•	•		•	•		•		

Master Analyses Suite: 46-007, 46-004 s; 46-004 I

JO Order

[illegible] – Specifically Beryllium in addition to the full suite of metals

* – VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	IFHS	Field Surveys			Field Screening						Field Lab					Laboratory Analyses																Master Analysis Suite	
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides		
H180		1			1	1	1		1		1			1	1	1	1		1	1				1	1		1	1		1					XD Order
		1			1	1	1				1			1		1	1		1	1				1	1		1								
		1			1	1					1			1			1		1		1						1								
	46 0041	1			1	1	1		1		1			1	1	1	1		1					1	1		1	1		1				46 0041	
H181		1			1	1	1		1		1			1	1	1	1		1	1				1	1		1	1		1					XD Order
		1			1	1					1			1			1		1		1						1								
		1			1	1	1				1			1			1		1								1								
	46 0041	1			1	1	1		1		1			1	1	1	1		1					1	1		1	1		1				46 0041	

1 - Specifically Beryllium in addition to the full suite of metals
— - VOA only on specimens from sample sites in upper reaches of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PHS	Field Surveys			Field Screening						Field Lab				Laboratory Analyses													Master Analyses Suite	
		UXO Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor	Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Inorganic Americium	Total Uranium	Inorganic Uranium	Inorganic Plutonium	Inorganic Thorium	Anion Metals (Cl, U)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW 6010)	PCB (SW 8080)	Asbestos	Mercury	Herbicides	Pesticides	
S 9	not needed overlap a	✓			✓	✓	✓		✓	✓	✓			✓		✓	✓			✓	✓		✓	✓	✓		✓			✓				not needed overlap a	3D Order
S 10	46 (01) b	✓			✓	✓	✓			✓						✓								✓	✓		✓							46 (01) b	3D Order

✓ = Specifically Required in addition to the full suite of metals
— = VOA only on specimens from sample sites in upper most foot of drainage channels only

Table E-4

OU-1140 Sample Locations, Surveys, and Analyses

Sample Location	PTIS	Field Surveys			Field Screening							Field Lab						Laboratory Analyses															
		Land Survey	Geophysics	Radiation	Gross Alpha	Gross Gamma/Beta	Organic Vapor		Explosives	X-Ray Fluorescence	Lithologic Logging	Gross Alpha	Tritium	Soil Moisture	Gamma Spectroscopy	PCB	VOA	Gamma Spectroscopy	Isotopic Americium	Total Uranium	Isotopic Uranium	Isotopic Plutonium	Isotopic Thorium	Alkali Metals (Cs, Li)	VOA (SW8240)	Semivolatiles (SW8270)	TCLP	Metals (SW6010)	PCB (SW8080)	Asbestos	Mercury	Herbicides	Pesticides
		1			1	1	1			1							1								1	1		1					
SM		1			1	1	1			1							1								1	1		1					

Master Analyses Suite

QD Order

‡ - Specifically Beryllium in addition to the full suite of metals

** - VOA only on specimens from sample sites in upper reaches of drainage channels only

1140 Analysis Suite—
Table E-4

Appendix 2

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ICF KAISER ENGINEERS

ICF KAISER ENGINEERS INC
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS, NM 87544
505 662-9747
FAX 505 662-2940

MEMORANDUM

Date: October 28, 1993

From: R.L. Kidman, ICF Kaiser (M703)

To: Distribution

Subject: Daily Activity at TA-46

10-18-93 Land survey crew met with Lynn Kidman about main grid points.

10-19-93 / 10-25-93 Outside the security fence area, land survey crew set main grid points along the top bank, paved roads and around the buildings.

10-28-93 Land survey crew met with Lynn Kidman about RAD survey points and started placing the points accordingly.

RLK:kh

xc: Roy Michelotti, CLS-1 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

ICF KAISER ENGINEERS

ICF KAISER ENGINEERS INC
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS NM 87544
505 662 9747
FAX 505 662 2940

MEMORANDUM

Date: October 29, 1993

From: R.L. Kidman, ICF Kaiser (M703) RLK

To: Distribution

Subject: Daily Activity at TA-46

10-28-93 Land survey crew finished placing the RAD survey grid over the sand filters(46-002) on the east side.

RLK:kh

xc: Roy Michelotti, CLS-1 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

ICF KAISER ENGINEERS

ICF KAISER ENGINEERS INC
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS, NM 87544
505 662 9747
FAX 505 662-2940

MEMORANDUM

Date: November 1, 1993

From: R.L. Kidman, ICF Kaiser (M703) RLK

To: Distribution

Subject: Daily Activity at TA-46

10-29-93 Land survey crew started placing the RAD survey grid over the sand filters at 46-003 (f) on the south side.

RLK:kh

xc: Roy Michelotti, CLS-1 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

ICF KAISER ENGINEERS

ICF KAISER ENGINEERS INC
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS, NM 87544
505 662 9747
FAX 505 662-2940

MEMORANDUM

Date: November 5, 1993

From: R.L. Kidman, ICF Kaiser (M703) RLK

To: Distribution

Subject: Daily Activity at TA-46

11-03-93 Land survey finished placing the RAD survey grid on the south side.

11-04-93 Sample locations were marked for outfalls: TT, P, AL, N, AN, M, L and AL. Land survey started placing the main grid inside the security fence.

RLK:kh

xc: Roy Michelotti, CLS-1 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

ICF KAISER ENGINEERS

ICF KAISER ENGINEERS INC
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS, NM 87544
505 662-9747
FAX 505 662-2940

MEMORANDUM

Date: November 9, 1993

From: R.L. Kidman, ICF Kaiser (M703) RLK

To: Distribution

Subject: Daily Activity at TA-46

11-05-93 & 11-08-93 Sample locations were marked for the following outfalls:

AI, AH, AG, K, J, I, G, F, E, D, C, A, B, AF.

The land surveyors are in the process of siting in these sample locations.

RLK:kh

xc: Roy Michelotti, CLS-1 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

Appendix 3

TA-46 Survey Summery "Sand Filters"
11-16-93 & 11-17-93. A survey was performed on the sand filters at TA-46. One located above the water treatment plant. The other located north of bldg WA-#195. Both approximately 50' by 100' in size. Readings were made every 10' at both sites. Predetermined survey locations were marked out by ICF Kaiser, useing stakes with location numbers. No elevated readings were detected at either site, useing the Fidler on the 4d-8.

11-9-93 052

0830 Arrive at ICF Kaiser, start to set up to do boneyard survey TA-36.

0900 Call Rick Harker in regards to SPA-3 set up. He tells me that the win should be set at 100 and the thr set at 40. Then adjust the HV to provide a max response to the Cs-137 source. So win-100 Thr-40, window in, HV set at 1600, 2221-71235, SPA-000155

0900 Arrive at burn pits TA-36. The area will be surveyed on a 10' Grid.

1105 Called up by clearance office and told them to have the area.

1130 leave TA-36

1200-1400 Help Lynn with est of work at TA-33. MP

Inst used	SN
2221	71235
SPA-3	000155
2221	105134
444-9	PR08

MP

053

11-10-93

0300 Arrive at ICF Kaiser. Source check Inst. unit for John Langer.

0305 leave ICF

1011 Arrive at TA-36. learn a CA shot that will happen at 1300. return to ICF. Do paperwork.

1205 Arrive back at TA-36, worked until 1600.

1625 Arrive back at ICF.

11-11-93

Worked on job summary TA-33 and paperwork TA-36.

11-12-93

Work at TA-36 until noon with John Langer. Return with Ken Lowery continued until 1600, day ended 1630.

11-15-93

Arrive at ICF Kaiser 0700. Source check Inst. Go out with Ken Lowery TA-36, attempt to get in with no success. Return to ICF Kaiser do paperwork. MP

054

11-16-93

0700 Arrive at ICF Kaiser source check. Escort John Langer is ~~[illegible]~~ notices. We call TA-36, there will be a shot and we will be unable to go in today. 0935 head to TA-46 to work on sand filters. Performed a survey ~~[illegible]~~ using the 44-9 & Fidler. The survey was conducted on a 10' grid. Non water tract least plant. Nothing was seen with 44-9 or Fidler above background.

0730 Arrive at 11-17-93
~~[illegible]~~ ICF Kaiser source check. Was not able to get in to TA-36 today. Went to TA-46 and conducted a survey w/ 44-9 & Fidler. Sand filter near bldg -115, Nothing was detected w 44-9 / Fidler.

11-18-93

0730-1300 Not able to get into 36 today, do paperwork on TA-36 & 46 MP

055

11-22-93

Continue with rad survey TA-36.
TA-36 Burn Pits. Fishman.
Ludlum 2221 - 71235
SPA-3 - 00155
Ludlum 4-19 - PR08
Ludlum 2221 - 105934

11-23-93

Continue with rad survey TA-36 Burn Pits.
Ludlum 2221 - 71235
SPA-3 - 00155
Ludlum 2221 - 105934
Ludlum 4-19 - PR08

11-24-93

Conduct rad survey TA-36 Burn Pits.
Ludlum 2221 - 71235
SPA-3 - 00155
Ludlum 2221 - 105934
Ludlum 4-19 - PR08

MP

056

11-29-93

0730 Arrive at ICF Kaiser, source check is performed, wait for escort. (John Logan)

0830 Arrive at TA-36 Burnpit.

1130 Asked to leave, due to a shot.

1200-1400 Conduct survey at TA-33 South Site

1615 Return to ICF Kaiser.

1730 Out for the day.

11-30-93

0700-0815 Burn Pitter SN-00155 is changed to Ludlum-2221 SN. 71235. After speaking to Rick Ha The is set 100, Z win is set to 40. As before. Voltage is reset data below & voltage.

MP

420	7	480	630	750
420	30	520	610	700
430	32	520	610	
440	53	540	630	
450	63	500	700	
460	54	560	700	MP 11-30-93
470	101	510	750	
480	105	600	710	

11-30-93

0900-1115

HV	CPM
400	7
420	20
440	32
460	53
480	63
500	54
520	101

HV	CPM
540	105
560	112
580	115
600	93
620	113
640	272
660	930

HV	CPM
680	730
700	1334
720	1844
740	3736
760	24950
780	77012
800	50853

HV	CPM
770	66048
780	30600
790	77334
800	9158

Th-100

Uran-40 (Iw)

Cesium 2221-11355

Fiber - 00754

Lab. Ser-241

1000 Survey is conducted at TA-33 South Site 100'-50'. Survey is completed. Will start 50' survey 12-1-93

12-1-93

0830 Source check of Fiber is performed at EOC office.

0900 Start survey south of Barber #25. Survey is conducted over 50' grid, South Site TA-33.

AP

12-1-93

1200 Survey east south of Barber #25 is completed. Several areas are found to be elevated above of Fiber. Will be back 12-2-93 to mark out.

1350 Move on to survey rock of the central channel (Waterway South) Find every blue stake and centers between. One spot 10x10' is found and marked out

1500 Move to Gang range start survey west of large ant.

1700 Survey west of ant is completed, nothing is detected.

Cesium 2221 11355

Fiber 00754

Cesium 2221 105701

Cesium 449 7003 AP

059 12-2-93

0720 Same check, ICF office.

0800-1200 Time at TA-33 continue with Gang range, closest to the ant. Male survey of central channel one elevated reading is detected. A detailed walk over survey is conducted south of bunker #25 locating several elevated areas. Ten spots were marked out. The highest reading detected with the Fidler and the 4-4-9 was 82070 and 48392 cpm.
Bill Summers at HS-1 was contacted and informed. He said that ICF Kaiser should back off from the area and not perform any work in that area until contacted by HS-1. Move on to NKAO site completed completing the 50' grid point survey nothing was detected above background on Fidler or 4-4-9.
Not spot survey data south of bunker #25 on next page. MP

	N	E	cpm 4-4-9	cpm Fidler
1	27.5	2.0	2731	14017
2	31.0	6.0	5069	46834
3	33.0	12.0	301	41249
4	37.5	5.0	1156	27091
5	46.0	14.0	48392	70311
6	53.5	23.0	1453	50517
7	45.0	28.0	340	48749
8	51.0	32.0	1947	50033
9	54.5	42.0	38132	27042
10	55.5	50	10638	82070

Ludlum 3221 - 71235
Fidler - 000150
Ludlum 3221 - 105954
Ludlum 4-4-9 - PROTRACK MP

12-3-93

0730-1100 Start survey at East site TA-33. All grid points layed out by surveyors are scaled. Work is not completed. R

000 12-2-93

Locations are north & East of grid point 5071

001

12-6-93

Continue with survey work TA-36 Boreyard. MP

12-7-93

Work on pipes TA-33 & TA-36, was not able to get out to boreyard today. MP

12-8-93

Continue with survey work TA-36 Boreyard. MP

12-9-93

Continue with survey work TA-36 Boreyard. MP

12-10-93

Continue with survey work TA-36 Boreyard. MP

002

12-13-93

No escort today, that are getting approval for Filter since no SOP. Really could the day we used it. Go to TA-33 stand by MP while ECF personnel enter area south of bunker H25 to locate sample points; personnel wear gloves and booties while in area. Also personnel are scanned upon at time of ent. MP

12-14-93

Work at TA-36 boreyard until noon. then go to TA-33 East side and make a survey of central channel marking out survey locations. MP

12-15-93

Was not able to get out to TA-36 today. Go over to TA-33 continue with central channel survey. MP

12-16-93

Continue with TA-36 Boreyard survey. Entire day is spent at boreyard. MP

12-17-93
No TA-36 today. Work continues at TA-33 East side. No yard survey is completed. MP

12-20-93
Work continues at TA-36 site. Boneyard survey MP

12-21-93
Can't get in to TA-36 today. Do paperwork TA-36, TA-33. MP

12-22-93
Work continues at TA-36 site boneyard survey. MP

12-23-93
Work continues at TA-36 site boneyard survey. MP About 80% of the survey has been completed, this will be my last day in LA. I still have 2 or 3 day of paperwork to complete the job. MP

12-28-93
Work in Alby EDI office, survey paperwork control charts. MP

12-29-93
Continue with survey paperwork TA-36 & 33, 4 and control charts along w/ summarys from those MP

12-30-93
All survey paperwork from TA-33, 36, 46 is completed. Looks like Bob Ray will still have control charts to work on monday MP

Date 11-16-93

ENVIRONMENTAL DIMENSIONS, INC.
OPERATIONAL CHECK DATA SHEET FOR LUDLUM MODEL 2221

ATTACHMENTS:
Make: Ludlum Readout Model: 2221 SN: 105931
Make: Ludlum Probe Model: 44-9 SN: PR 027463

DATE	TIME	BATT. OK?	H.V. OK?	AUDIO OK?	OK TO USE?	SIGNATURE	REVIEWED BY
11-16-93	0730	OK	OK	OK	OK	M Paul	

LANL CHECK SOURCE: (Alpha)	SN: Nist 9071470, 4627	LANL CHECK SOURCE JIG: (Beta)	SN:
Th-230	SOURCE: 96,368 dpm 10-2190		SOURCE:

INSTRUMENT SCALE	ACTIVITY	INSTRUMENT SCALE	ACTIVITY
X1 SCALE	10897	X1 SCALE	
X10 SCALE	10911	X10 SCALE	
X100 SCALE	10947	X100 SCALE	
X1K SCALE	10962	X1K SCALE	
LOG SCALE	11059	LOG SCALE	
Background 1 minute count: 53, 61, 57		Background 1 minute count:	

NOTE: If any item on this data sheet is marked "NO", do not use the instrument. Tag it with an "OUT OF SERVICE" tag

Acceptable Response to LANL Alpha Check Source		
		Acceptable Reading
X1 Scale		
X10 Scale		
X100 Scale		
X1K Scale		
Log Scale		

Acceptable Response Range to LANL Check Source Jig		
	Jig Filter Wheel Setting	Acceptable Reading
5 mR/hr	1/4	
50 mR/hr	3/16	
500 mR/hr	Open	

Daily readings must be within 20% of the acceptable reading

Date: 11-17-93

ENVIRONMENTAL DIMENSIONS, INC.
OPERATIONAL CHECK DATA SHEET FOR LUDLUM MODEL 2221

ATTACHMENTS:

Make: Ludlum Model: 2221 SN: 105934
Make: Ludlum Model: 44-9 SN: PR087463

DATE	TIME	BATT. OK?	H.V. OK?	AUDIO OK?	OK TO USE?	SIGNATURE	REVIEWED BY
11-17-93	0730	OK	OK	OK	OK	MBall	

LANL CHECK SOURCE: (Alpha)	SN: 9074470 4627 SOURCE: Th-230 96,368dpm 8-31-90	LANL CHECK SOURCE JIG: (Beta)	SN: SOURCE:
INSTRUMENT SCALE	**ACTIVITY**	**INSTRUMENT SCALE**	**ACTIVITY**
X1 SCALE	10764	X1 SCALE	
X10 SCALE	10809	X10 SCALE	
X100 SCALE	10741	X100 SCALE	
X1K SCALE	10789	X1K SCALE	
LOG SCALE	10782	LOG SCALE	
Background 1 minute count: 56, 59, 52		Background 1 minute count:	

NOTE: If any item on this data sheet is marked "NO", do not use the instrument. Tag it with an "OUT OF SERVICE" tag.

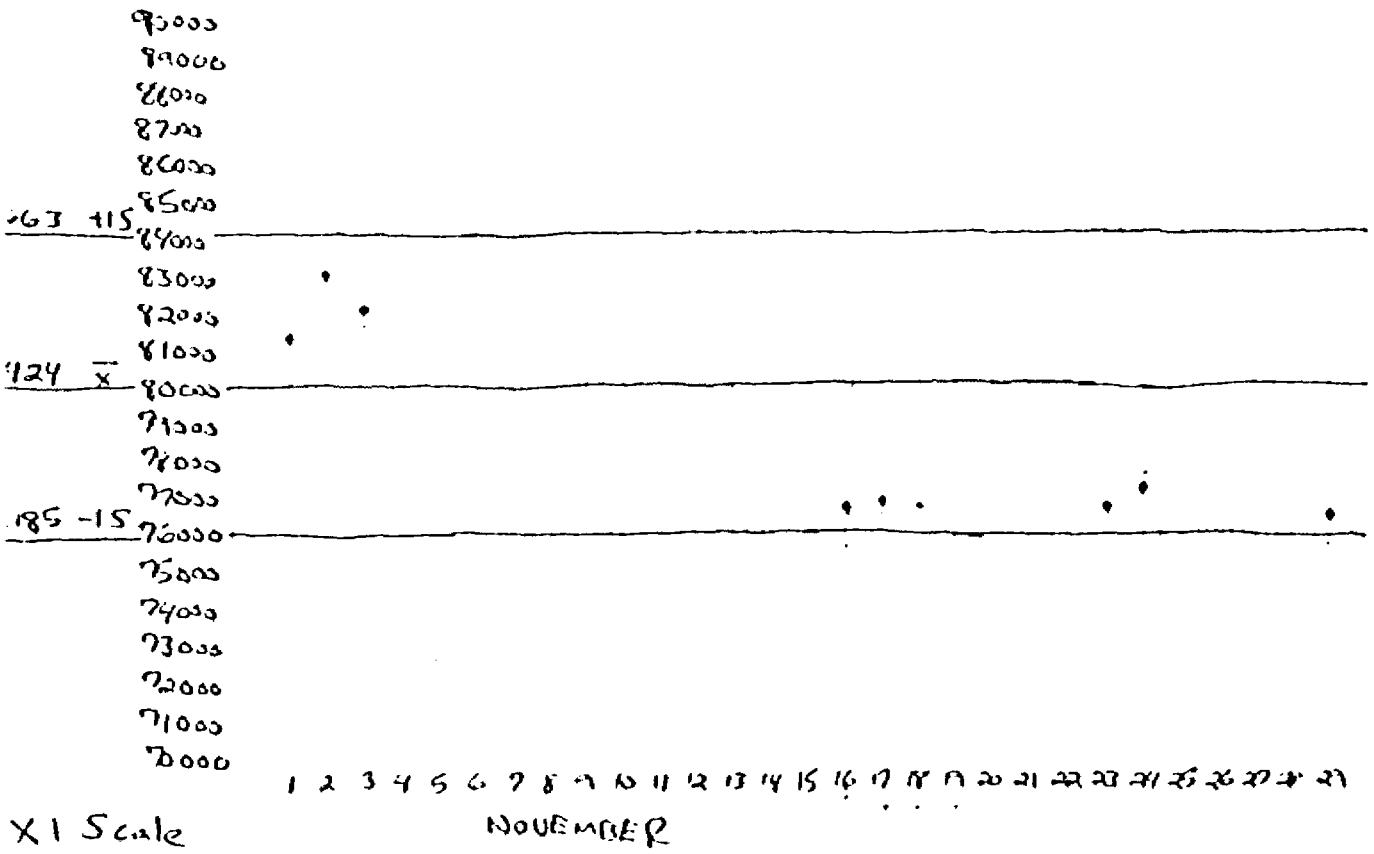
Acceptable Response to LANL Alpha Check Source		
		Acceptable Reading
X1 Scale		
X10 Scale		
X100 Scale		
X1K Scale		
Log Scale		

Acceptable Response Range to LANL Check Source Jig		
	Jig Filter Wheel Setting	Acceptable Reading
5 mR/hr	1/4	
50 mR/hr	3/16	
500 mR/hr	Open	

Daily readings must be within 20% of the acceptable reading.

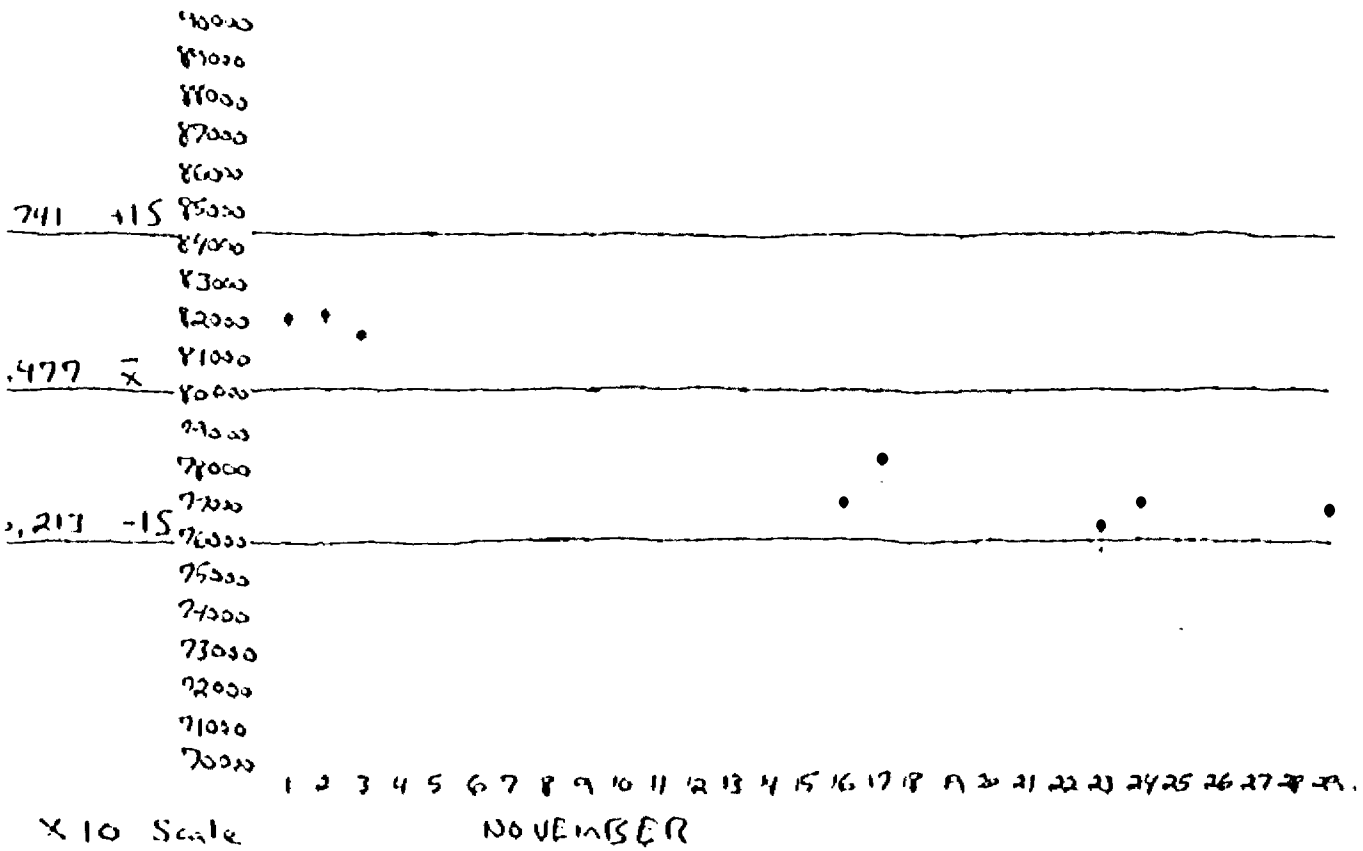
ORIGINAL DOCUMENT LOCATED

FIDLER
SN: 000156
Using LSalum meter 2221
SN: 86306

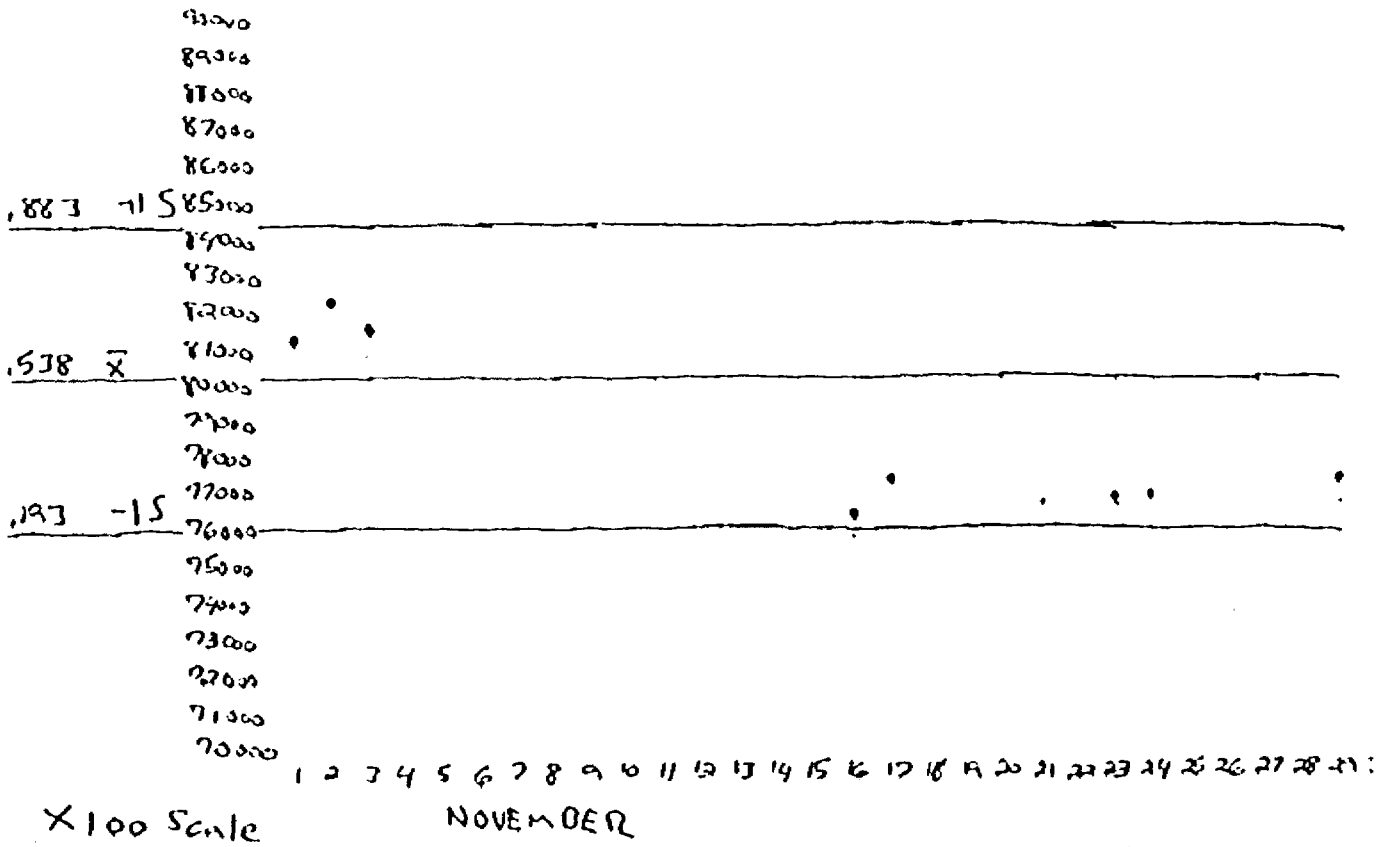


X1 Scale

SDLER
D: 000156
ing Lublum Meter 2221
D: 86306

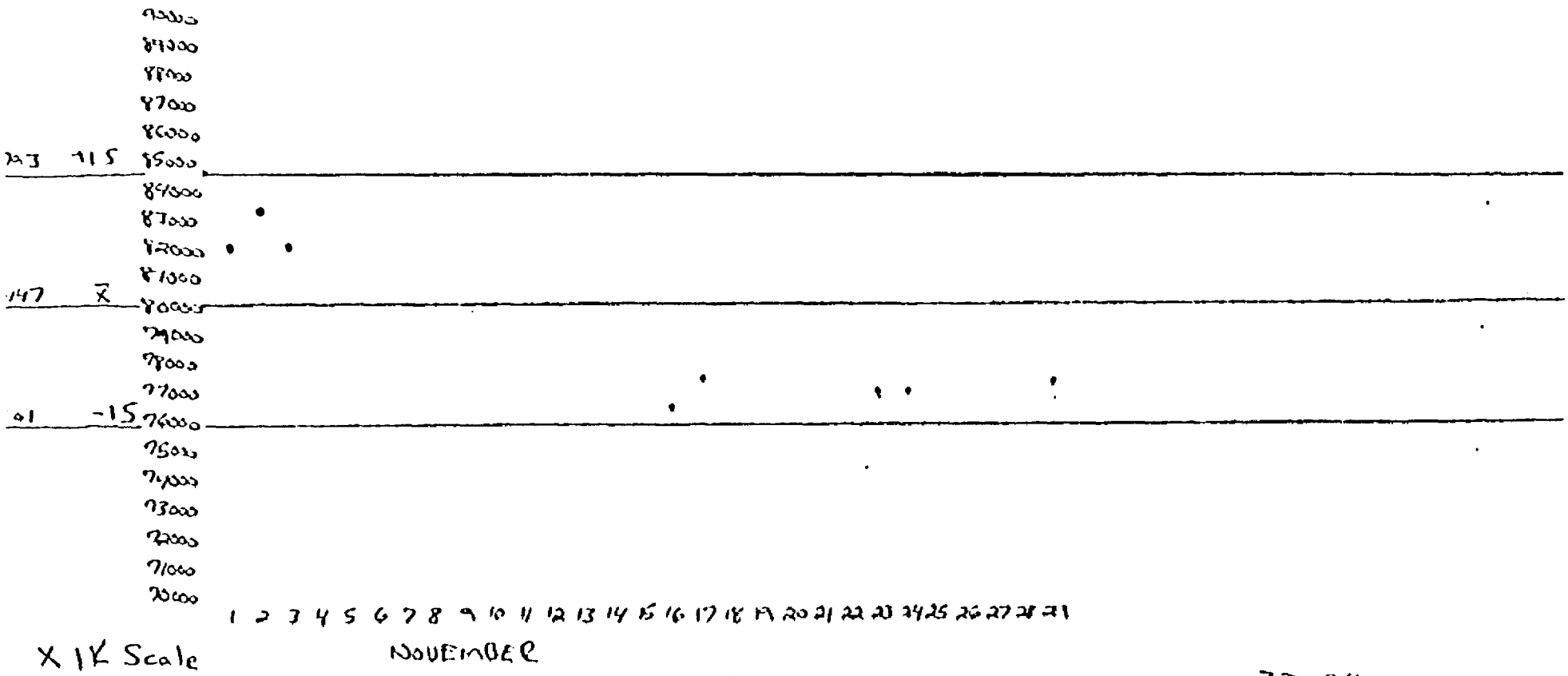


FEDLER
SN: 000156
Using Lublin meter 2221
SN: 86306



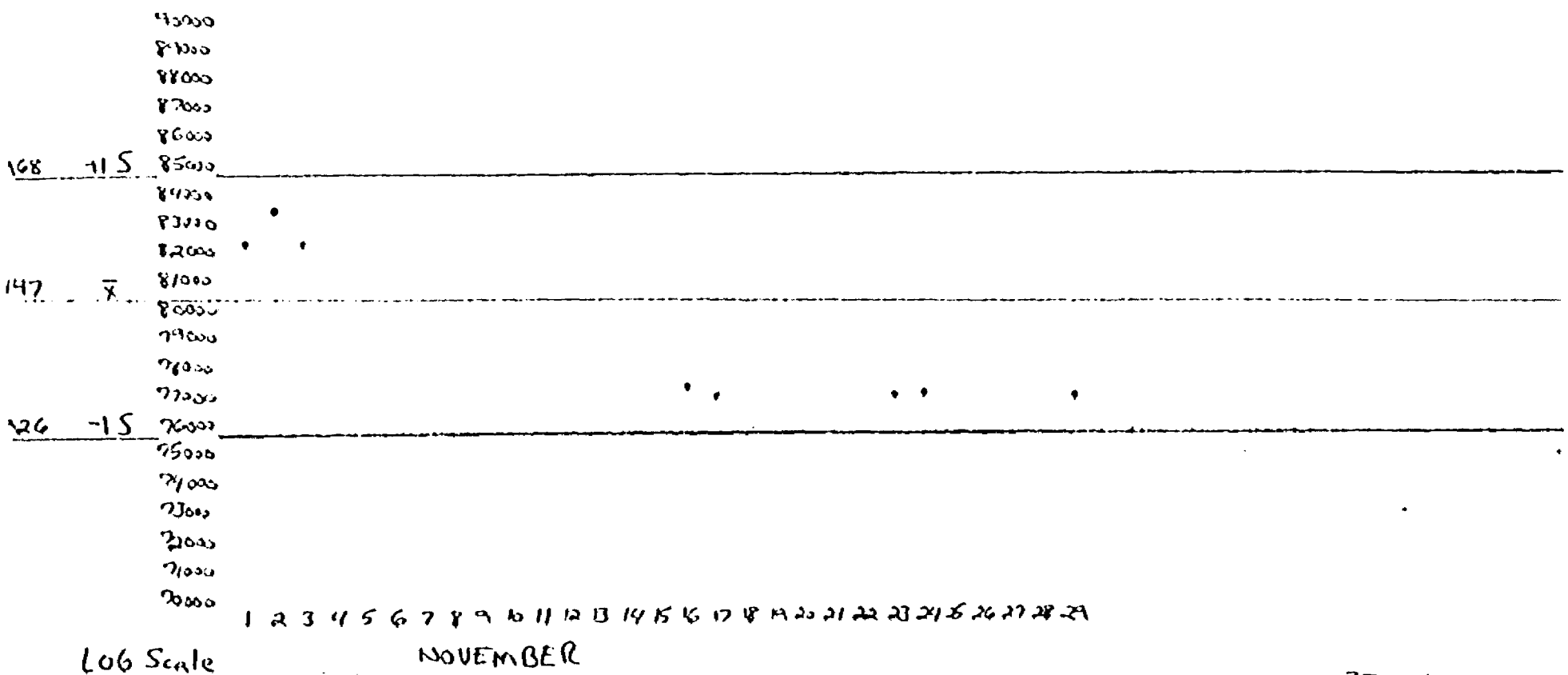
X100 Scale

FIDLER
SN: 000156
Using Ludlum Meter 2221
SN: 86306



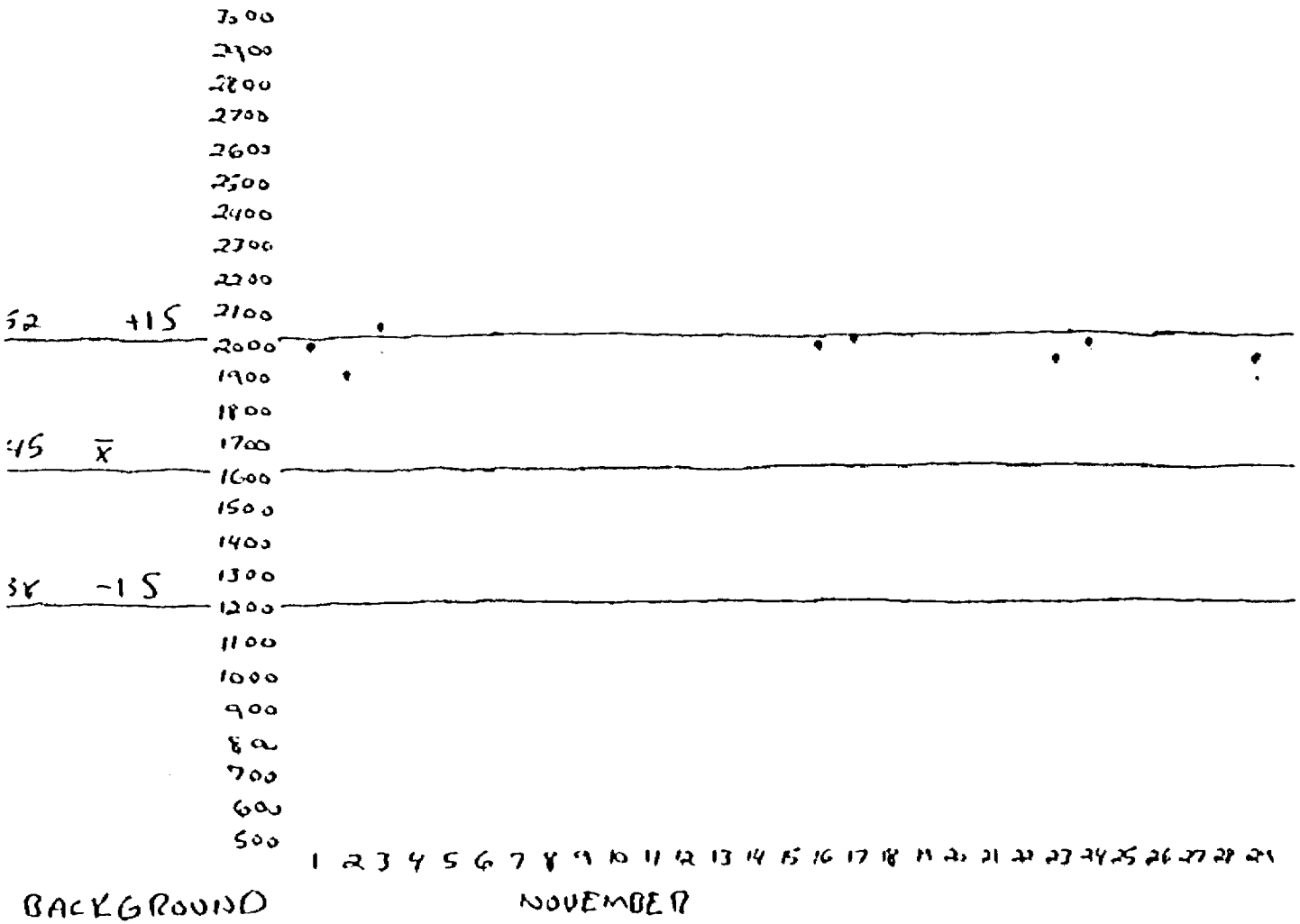
X 1K Scale

FEDLER
SN: 000156
Using Lsolum Meter 2221
SN: 86306

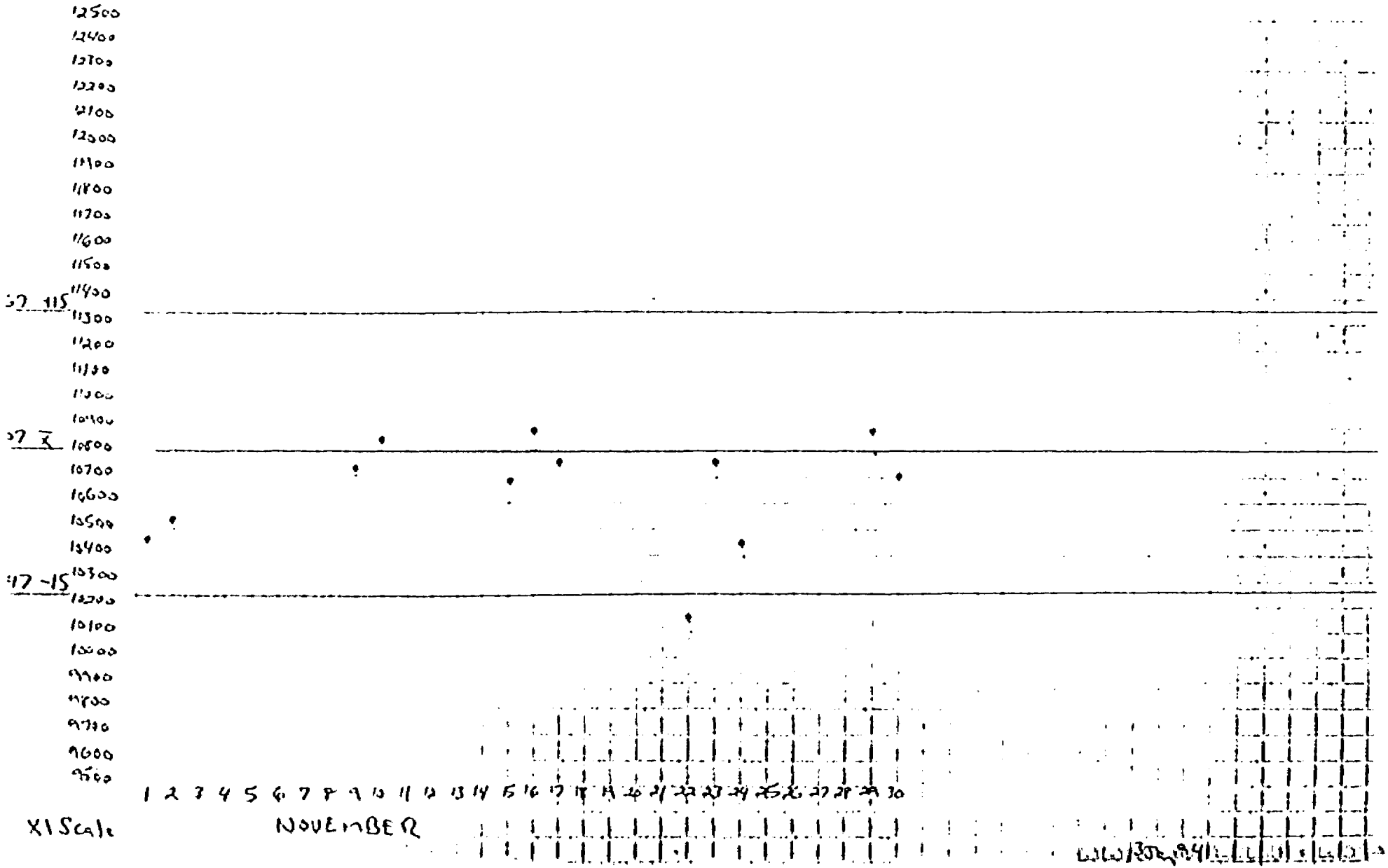


LOG Scale

FIDLER
SN: 000156
Using Ludlum Meter 2221
SN: 86306



LUDLUM 2221
SN: 105934
Using Ludlum Probe 44-9
SN: PR087463



LUDLUM 2221
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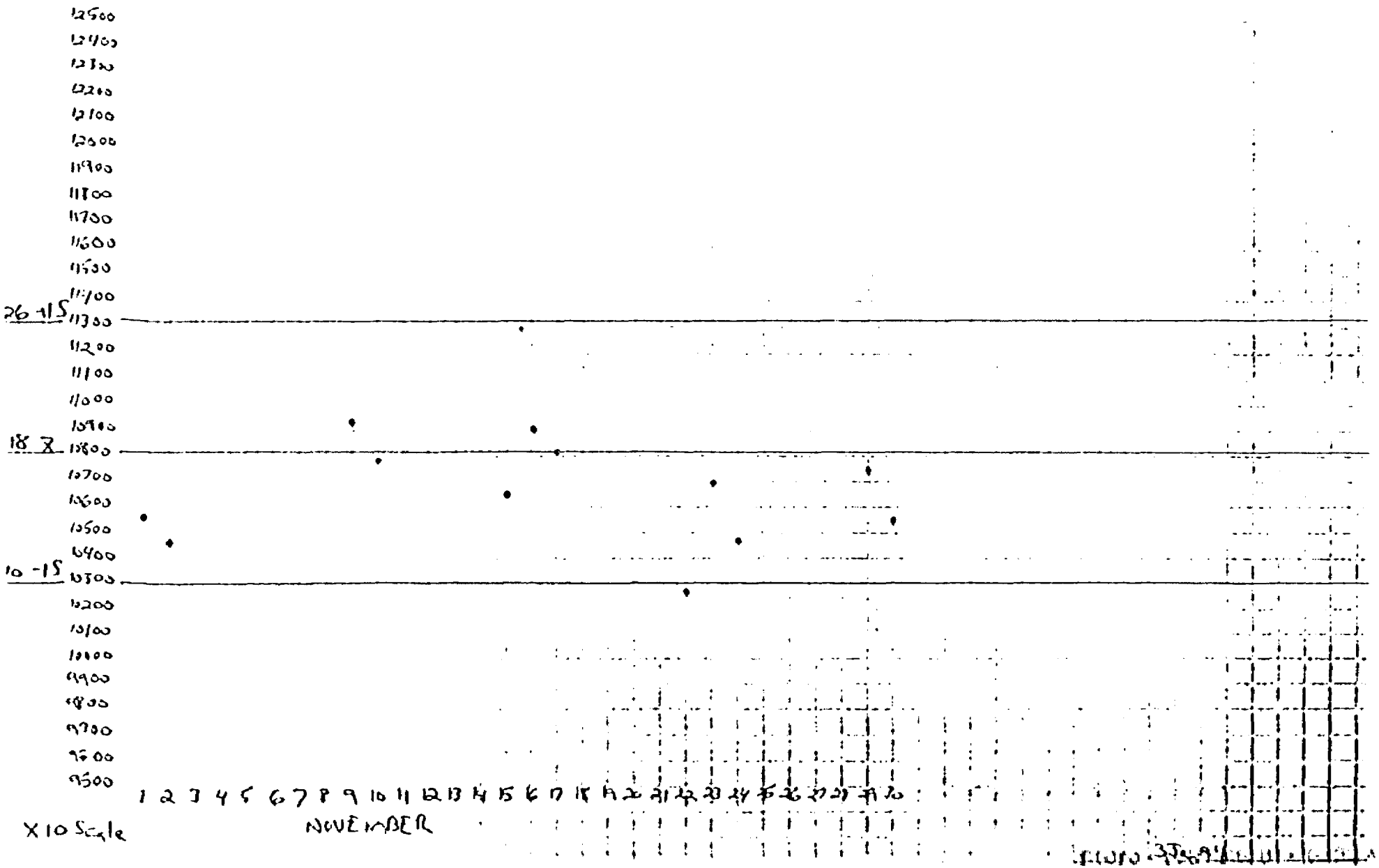
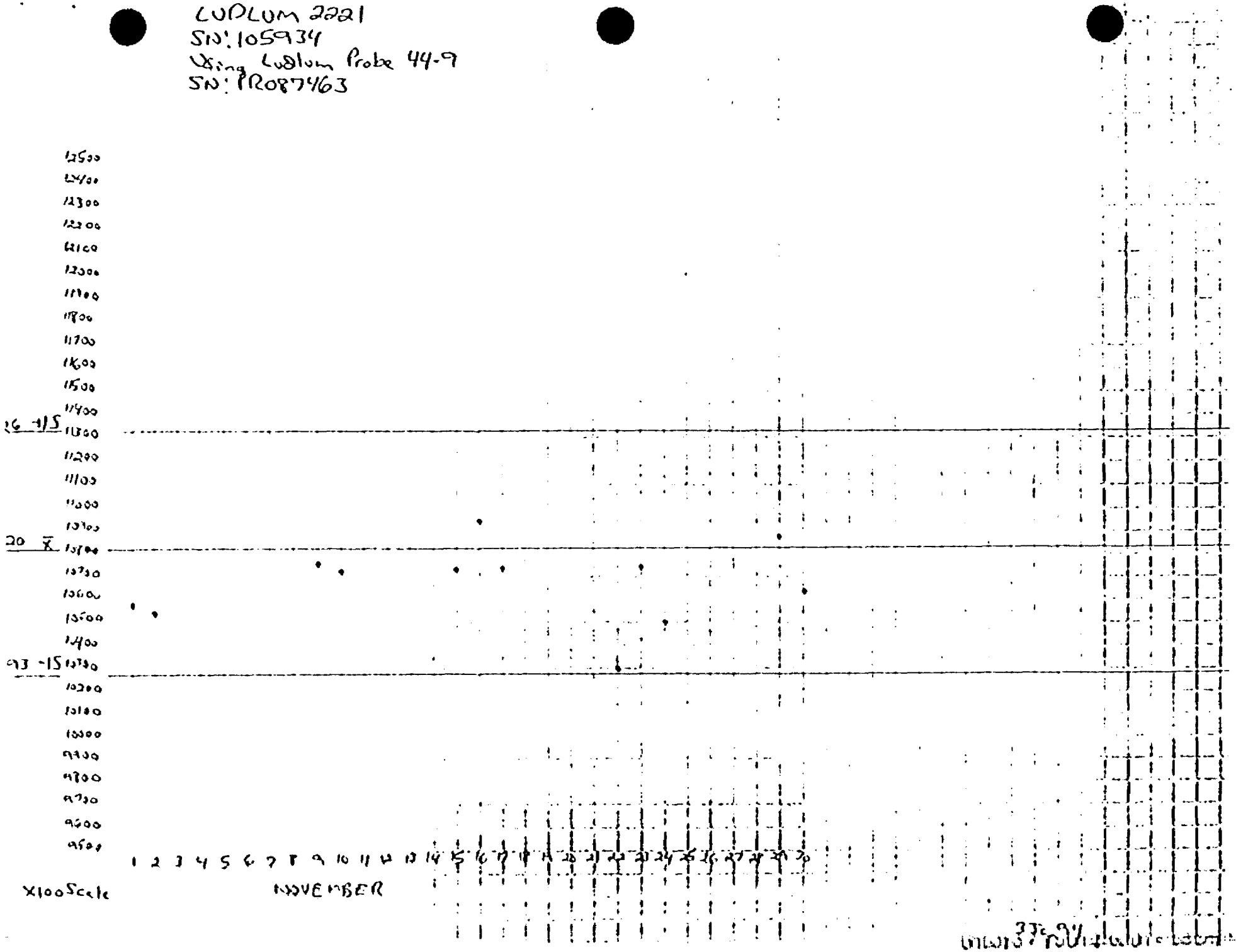
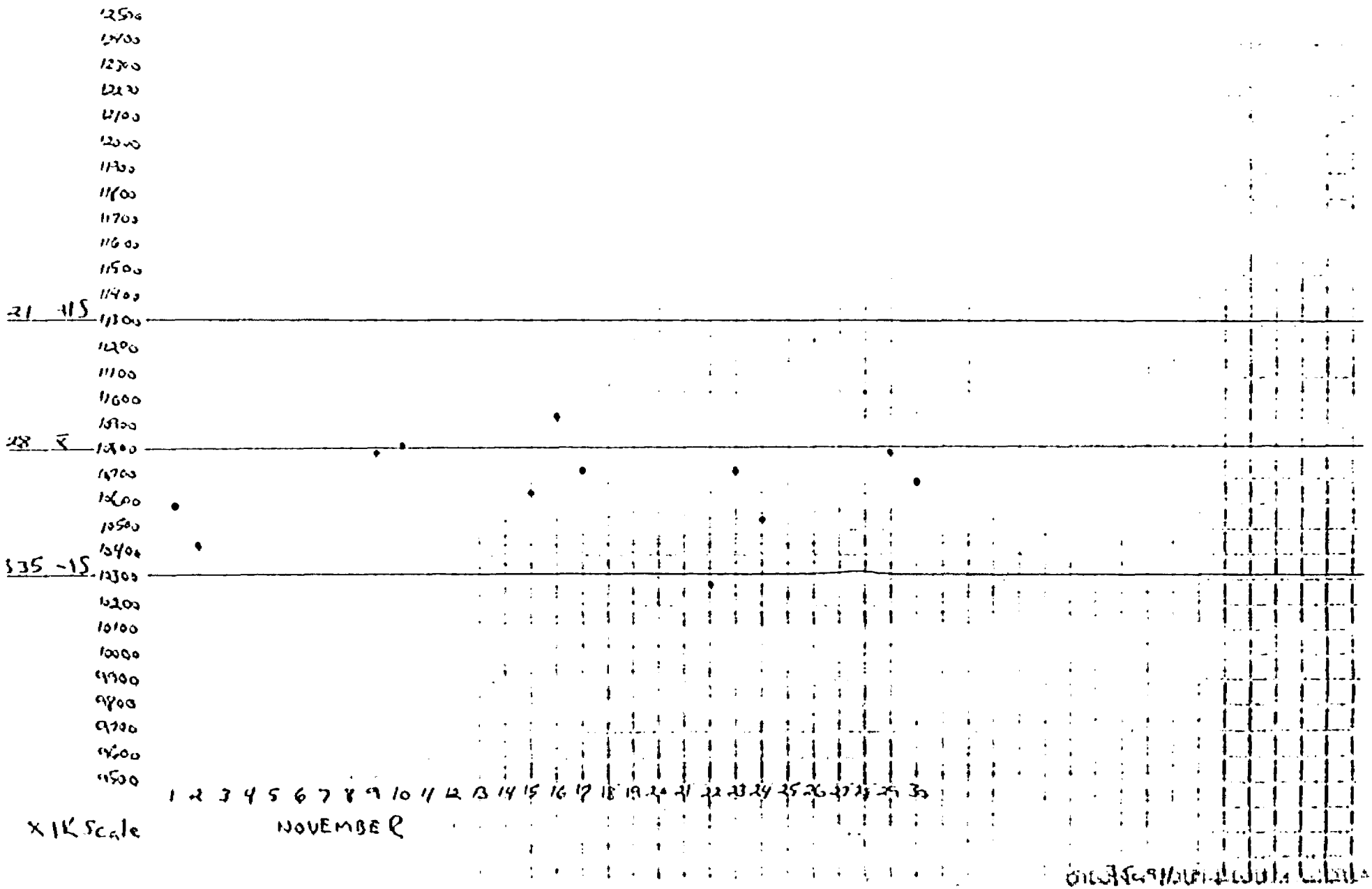
Using Ludlum Probe 44-9
SN: PR087463



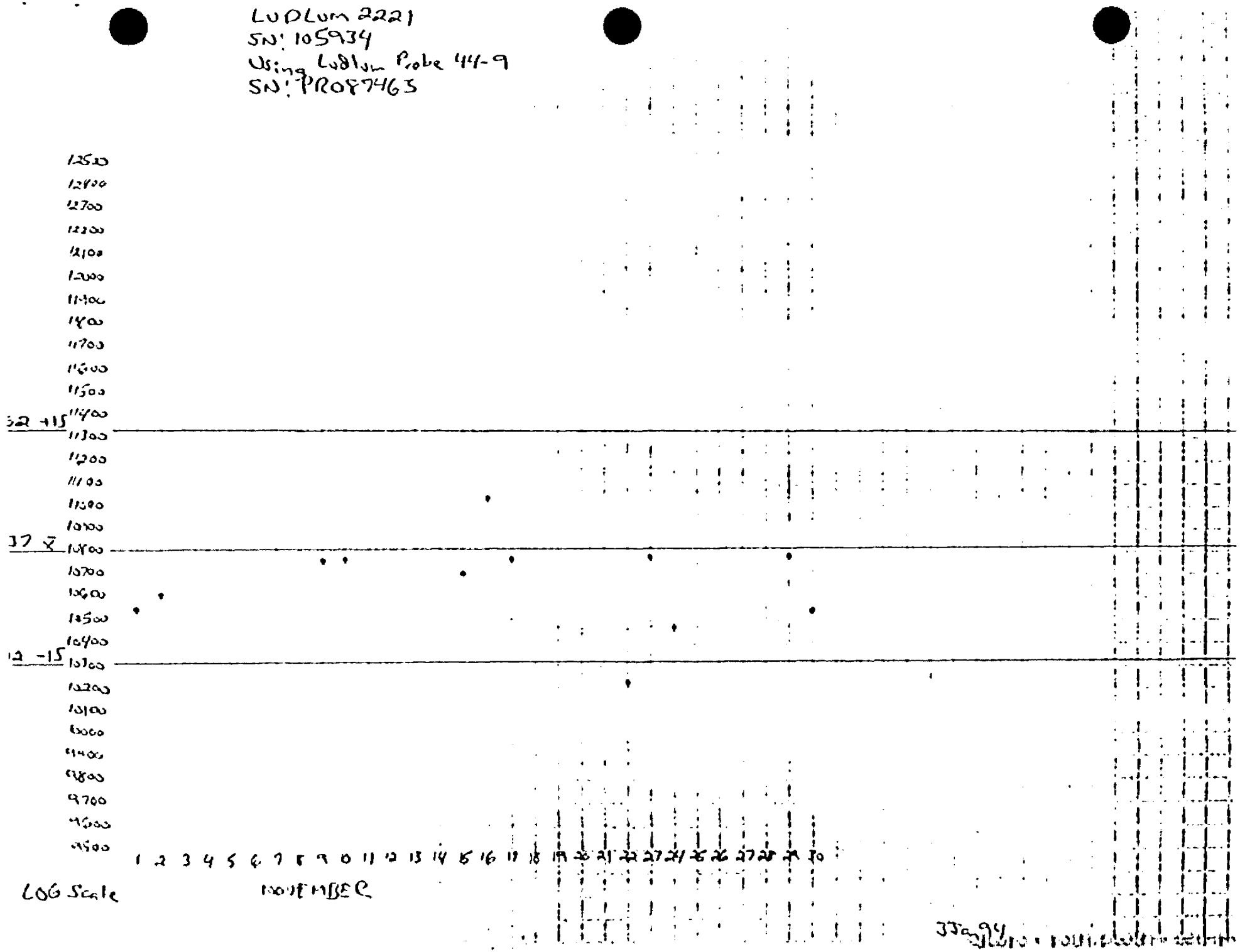
LUDLUM 2221
SN: 105934
Using Ludlum Probe 44-9
SN: PR087463



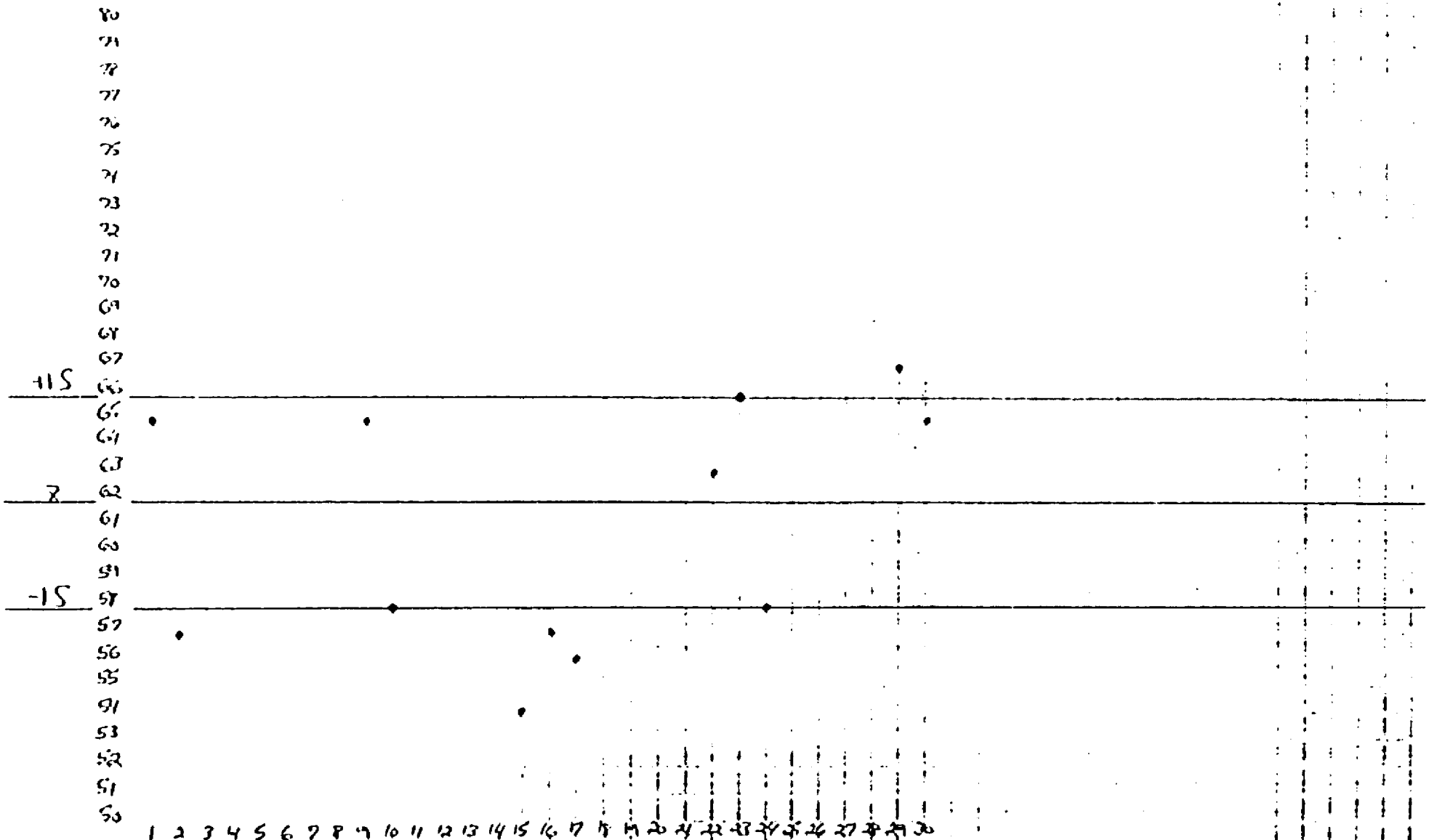
LUDLUM 2221
SN: 105934
Using Ludlum Probe 44-9
SN: PR087463



LUDLUM 2221
SN: 105934
Using Ludlum Probe 44-9
SN: PR087463



LUDLUM 2221
SN: 105934
Using Ludlum Probe 44-9
SN: PR087463



Background

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-46 Sand Filter Mem bldg WA-195
Date: 11-17-92
Time: 1000
Technician: [illegible]

Operable Unit: 1140
RWP or Work Plan:
Area Size: 100x50
Grid Size: 10'
Purpose of Survey:
Instrument: Ludlum 2221 / Ludlum 2221
Serial Number: 125934 / 86206

Detector: 44-9 Eberline
Serial Number: PR057463 / 000150
Background: [illegible]
Response Check: Should read: [illegible] ±20%
Did read: [illegible]

Count Rate (CPM)

Coordinates North	Coordinates East 0	10	20	30	40
50	92 537 / 4141	87 537 / 3861	93 539 / 4156	107 540 / 4393	77 541 / 4074
40	96 548 / 3143	75 549 / 3650	75 550 / 3359	75 551 / 3809	77 552 / 3351
30	92 559 / 3938	77 560 / 3869	94 561 / 3720	74 562 / 3880	78 563 / 3800
20	98 570 / 3949	85 571 / 3590	73 572 / 3723	87 573 / 4054	75 574 / 4016
10	101 581 / 3870	60 582 / 3946	97 583 / 3952	107 584 / 4069	91 585 / 4092
0	111 591 / 3925	107 592 / 4192	79 593 / 4093	104 594 / 4205	87 595 / 4294

Remarks: Readings taken every 10' on contact w/surface [illegible]

Signature: [illegible]
Reviewed by:

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-49 Sand Filter Mesa Site WA-195
Date: 11-17-93
Time: 1000
Technician: [illegible]

Operable Unit: 1140
RWP or Work Plan:
Area Size: 100 X 50
Grid Size: 10'
Purpose of Survey:
Instrument: Ludlum 2221 / Ludlum 2221
Serial Number: 125931 / 80300

Detector: 44-9 Filter
Serial Number: PR097463 / 000156
Background: [illegible]
Response Check: Should read: 10195
Did read: [illegible]

Count Rate (CPM)

Coordinates North	Coordinates East 50	60	70	80	90
50	126 542 4534	100 543 4134	90 544 3957	113 545 3776	110 546 3925
40	75 553 3804	87 554 4130	75 555 4095	80 556 3649	120 557 3904
30	75 564 3921	76 565 4199	64 566 4104	111 567 3977	75 568 3951
20	84 575 3960	85 576 4140	82 577 3833	75 578 3943	77 579 4031
10	59 586 4035	87 587 4152	73 588 3930	105 589 4051	100 590 4303
0	94 596 4358	69 597 4149	111 598 4152	109 599 4086	94 600 4029

Remarks: Readings taken on contact w/surface, every 10'. Filter
Location 362 is survey's grid stake M-9.

Signature: [illegible]
Reviewed by:

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-16 Sand Filter Near Bldg WA-195
Date: 11-17-93
Time: 1000
Technician: M Bell

Operable Unit: 1140
RWP or Work Plan:
Area Size: 100 x 50
Grid Size: 10'
Purpose of Survey:
Instrument: Ludlum 2221 / Ludlum 2221
Serial Number: 059641 / 36506
Detector: 44-9 Eldon
Serial Number: PR 037463 / 000156
Background: [illegible]
Response Check: Should read: 1000 / 30 AS
Did read: [illegible] / 7025

Count Rate (CPM)

Coordinates North	Coordinates East: 100				
50	43 / 3255	317			
40	59 / 3440	358			
30	99 / 3926	367			
20	80 / 4254	380			
10	101 / 4365	390			
0	100 / 4340	601			

Remarks: Readings taken every 10' on contact w/surface Sand Filter

Signature: M Bell
Reviewed by:

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-46 Spud Field Above wastewater treatment plant.
Date: 11/16/93
Time: 1045
Technician: [illegible]

Operable Unit: _____
RWP or Work Plan: _____
Area Size: 100' by 50'
Grid Size: 10'
Purpose of Survey: _____
Instrument: Ludlum 3221 / Ludlum 3951
Serial Number: 125934 / 36306
Detector: 44-9 Field
Serial Number: P5072463 / 100156
Background: [illegible]
Response Check: Should read: 10507 / 7615
Did read: 10597 / 7553

Count Rate (CPM)

Coordinates North	Coordinates East 0	10	20	30	40
50	Rock/Clay				
40	Rock/Clay	64 474 3303	91 475 3036	79 476 2966	77 477 3035
30	57 496 3548	91 497 3993	83 498 2961	77 499 2959	91 490 3090
20	97 497 4937	99 500 3930	83 501 3950	85 502 3084	76 503 2948
10	100 502 4349	94 503 3473	90 504 3049	95 505 3952	77 506 3039
0	86 507 3769	90 508 4340	89 509 3926	83 510 3091	93 511 4445

Remarks: Readings taken every 10' on contact w/ surface. 44-9 Field

Signature: [illegible]
Reviewed by: _____

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-46 Sand Filter Above water treatment plant
Date: 11-4-93
Time: 1045
Technician: [illegible]

Operable Unit: _____
RWP or Work Plan: _____
Area Size: 100' x 50'
Grid Size: 10'
Purpose of Survey: _____
Instrument: Ludlum 2221 / Ludlum 2221
Serial Number: 105934 / 36306
Detector: 44-9 Ludlum / E-4132 Micron
Serial Number: PR037463 / 000150
Background: [illegible]
Response Check: Should read: 10307 / 10195 ±10%
Did read: 10597 / 77553

Count Rate (CPM)

Coordinates North	Coordinates East 50	60	70	80	90
50	Rocky (1.5)	→	→	87 4107 488	93 3999 469
40	90 3009 475	89 3954 474	85 3933 480	89 3993 481	77 3056 482
30	69 3026 471	67 3951 472	79 3961 483	74 3978 484	56 3041 485
20	87 3096 504	103 3054 505	73 3018 506	87 3107 507	69 3077 508
10	97 3276 517	105 3256 518	92 3436 519	101 3112 J-19 312	85 3107 520
0	93 3099 524	77 4001 530	45 4006 531	108 4069 532	77 3245 533

Remarks: Readings taken every 10' on contact w/ surface 44-9 Ludlum Filter
J-19 is surveyors grid stake.

Signature: [illegible]
Reviewed by: _____

Job Number: [illegible]

AREA SURVEY SHEET

Site: TA-46 Sand Filter
Above water treatment plant.

Date: 11/16/93
Time: 1245

Technician: M. Pa[illegible]

Operable Unit: 1140
Area Size: 100' x 50'

RWP or Work Plan:
Grid Size: 10'

Purpose of Survey:

Instrument: Ludlum 2221
Ludlum 3331

Serial Number: 125934
46306

Detector: 44-7 Filter

Serial Number: PR037463
000156

Background: [illegible]

Response Check: Should read: 10580 [illegible] 20185

Did read: 10297
77555

Count Rate (CPM)

Coordinates North	Coordinates East: 100	110	120		
50	91 / 3701 / 410	105 / 3729 / 471	97 / 4029 / 472		
40	97 / 3993 / 483	97 / 3100 / 484	104 / 3364 / 485		
30	97 / 3049 / 496	101 / 3009 / 497	93 / 3090 / 498		
20	75 / 3992 / 507	93 / 3749 / 510	97 / 3042 / 511		
10	106 / 3400 / 521	91 / 3655 / 522	106 / 4051 / 523		→ J-30
0	104 / 3636 / 534	105 / 3511 / 536	95 / 3722 / 536		

Remarks: Read taken every 10' on contact w/surface [449 Loc# Filter]
Surveyor said stake is 10' away from Loc# 523 (J-30)
Loc# 1536 was used twice.

Signature: M. P[illegible]

Reviewed by:

ICF KAISER

ICF KAISER ENGINEERS, INC.
1900 DIAMOND DRIVE
P.O. BOX 1228
LOS ALAMOS, NM 87544
505/661-5200
FAX: 505/661-5222

MEMORANDUM

To: Roy Michelotti, CST-6 (E525)

Date: January 27, 1994

From: R.L. Kidman (M703) RLK

Subject: RAD Survey behind TA-46-31

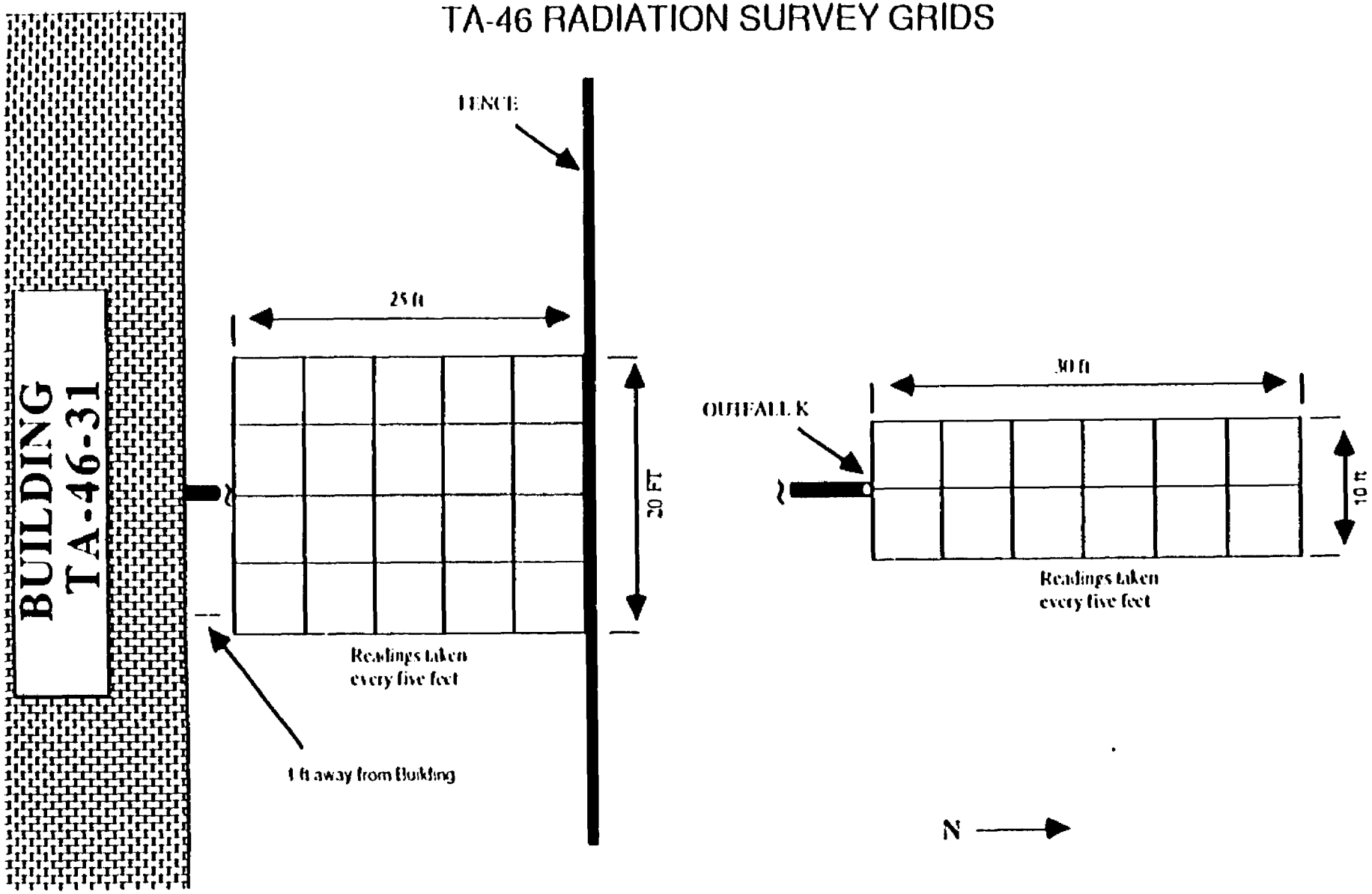
ICF Kaiser Engineers has resolved the issue regarding HS-1's radiation "readings" at outfall K behind TA-46-31. This issue was raised in the January 3 memo to Gerry Kelly from Ivan Wachler regarding field screening at the new lift station site. HS-1 was unable to locate the logbook entry that contained the "readings." Therefore, at your request, ICF Kaiser Engineers performed a RAD Survey to verify these "readings." Our findings indicate that the radiation levels inside outfall K are within normal background levels (110 counts per minute). The EDI Radiation Survey report is attached.

The RAD Survey conducted at outfall K(behind Building TA-46-31) consisted of taking radiation readings at five foot intervals within two grids. (See attached figure.) The RAD Survey was completed by Bob Dray and Kenny Hansel on January 20.

RLK/kh

cy: Roy Michelotti, CST-6 (E525)
Dave McInroy, EM-13 (M992)
Roy Bohn, EM-13 (M992)
RPF, (M707)
Project File 93069-011-01

TA-46 RADIATION SURVEY GRIDS



ENVIRONMENTAL DIMENSIONS, inc.
4206 Louisiana Blvd. NE, Suite B
Albuquerque, NM 87109
Phone (505)881-9427

Subject: TA-46, OU1140 Radiation Survey Results Jan 20, 1994

To: ICF Kaiser
Attn, Lynn Kidman

1. Environmental Dimensions inc employee, Robert J. Dray conducted radiation screening surveys of TA-46-31, OU1140, north side of building number 31 on January 18, 1994. A Ludlum 2221 meter, serial number 105934 with a Ludlum 44-9 Probe, serial number PR084357 was used to conduct point surveys at 5' intervals. All readings were one minute counts on the Ludlum scaler ratemeter using the digital readout. The instrument was field calibrated with a radiation check source prior to being used. Attachments 1 and 2 gives the survey location points.

2. Readings ranged from 65 counts per minute (cpm) to 154 cpm.

ROBERT J DRAY

2 Atch
1- TA-46-31 Inside
2- TA-46-31 Outside

TA-46-31 inside fence 20' X 25' grid
Readings taken at 5' intervals for one minute counts
Background readings 103;83;110 cpm

106 cpm	110 cpm	132; 116 cpm	107 cpm	120 cpm
123;106 cpm	154;133;145 cpm	103 cpm	102 cpm	85 cpm
93 cpm	117 cpm	125;138; 124 cpm	104 cpm	138;131; 135 cpm
91 cpm	130;130; 117 cpm	121;110 cpm	144;116 cpm	101 cpm
87 cpm	118 cpm	105 cpm	104 cpm	105 cpm
103 cpm	110 cpm	114 cpm	127;110 cpm	101 cpm

Attachment 1

TA-46-31 (EPA03A043) Outside of fence on slope next to outfall
10-15% gradiant on the side of the hill
10' X 30' grid
Readings taken at 5' intervals. Center of grid was at the outfall pipe

114 cpm	110 cpm;65 cpm (inside pipe)	127 cpm
116 cpm	109 cpm (Tuft rock)	96 cpm
108 cpm	119 cpm (Tuft rock)	103 cpm
95 cpm	120 cpm	94 cpm
105 cpm	115 cpm	95 cpm
101 cpm	115;130 cpm (readings taken 8" from stake)	78 cpm
101 cpm	96 cpm	98 cpm

Attachment 2

Appendix 4

ICF KAISER ENGINEERS

MEMORANDUM

DATE: August 1, 1994

TO: Gerry Kelly

FROM: Martin Miele

SUBJECT: TA-46 GPR Survey

This letter presents the results of a ground penetrating radar (GPR) survey performed by ICF Kaiser at Technical Area 46 (TA-46) of the Los Alamos National Laboratory, New Mexico. The GPR survey was perfromed on July 14, 1994, by Martin Miele (ICF Kaiser).

1.0 PURPOSE

The purpose of the GPR survey was to assess the location of one outfall pipe behind Building 31 and one outfall pipe behind Building 87 at TA-46. GPR traverses were performed near the buildings to assess the location where the outfall pipes extend from Building 31 and Building 87. The outfalls are reported to extend from these buildings into Canada del Buey to the north.

2.0 FIELD SURVEY

The area behind Building 31 is paved with asphalt. Two GPR traverses were performed parallel to the wall of the Building 31. Three reflection patterns typical of buried utilities were present in the GPR records. The locations of all three reflectors were marked on the asphalt with paint in the field. One of the reflection patterns is located very close to the suspected location of the outfall pipe. That reflection pattern is assumed to represent the outfall and is the westernmost of the three reflection patterns marked. The reflection pattern in the middle of the three marked locations is very shallow (less than 1.5 feet deep) and has a small diameter (less than 8 inches). Therefore, it is assumed that the middle reflector does not represent the outfall pipe. The easternmost marked reflection pattern is deeper and has a larger diameter. However, it is not located as close to the suspected location of the outfall as the westernmost reflection pattern.

The area behind Building 87 was very narrow. Therefore, one GPR traverse was performed at that location. One GPR reflection typical of a buried utility was present in the data. Its location was marked in the field with paint at the bottom of the Building 87 wall.

3.0 GROUND PENETRATING RADAR METHODOLOGY

Ground penetrating radar is a method that provides a continuous, high resolution cross-section depicting variations in the electrical properties of the shallow subsurface materials. The method is particularly sensitive to subsurface variations in the electrical conductivity and electrical permittivity (the ability of a material to hold a charge when an electric field is applied). Conductivity effects the investigation depth of the GPR system. Highly conductive materials, such as shallow clay or shallow ground water, limit the depth of penetration. Detection of buried objects or materials is dependent upon subsurface electrical permittivity (dielectric constant) contrasts. Sufficient contrasts must exist to produce reflections on GPR records.

The GPR system operates by continuously radiating an electromagnetic pulse into the ground from a transducer (antenna) as it is moved along a traverse. Most earth materials are transparent to electromagnetic energy. Only a portion of the radar signal is reflected back to the surface from interfaces representing relatively small variations in electrical properties. However, when the signal encounters an interface with a significant contrast in electric permittivity (such as a buried a metal object) a good portion of the incident energy is reflected back to the surface. The reflected signals are received by the same transducer and are printed in cross-section from a graphical recorder or on a video display unit. The resulting records can provide information regarding: the location of buried objects, possible geologic stratification, the thickness and lateral extent of fill material, and changes in material conditions such as saturation, and possibly subsurface chemical differences.

Each radar antenna consists of a single frequency. The higher the antenna frequency, the better the subsurface resolution. However, the higher the antenna frequency, the shallower the depth of penetration. The lower antenna frequencies provide better penetration depths, however, the subsurface resolution is limited at lower frequencies.

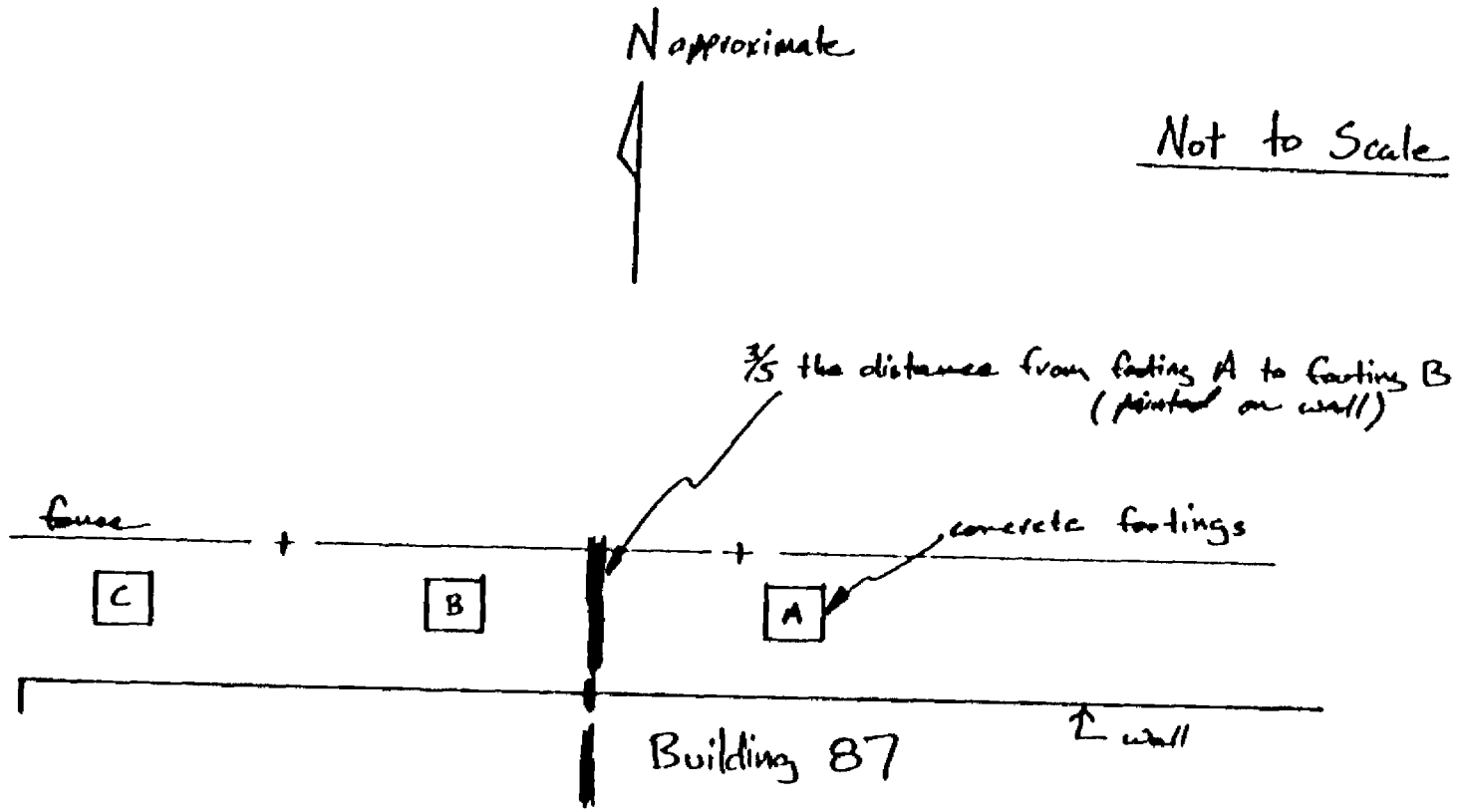
The GPR system that we utilized for this survey is a Geophysical Survey Systems Incorporated (GSSI) SIR-3 system. The system is well adapted to surveys similar to this one. We utilized a 500 Megahertz antenna.

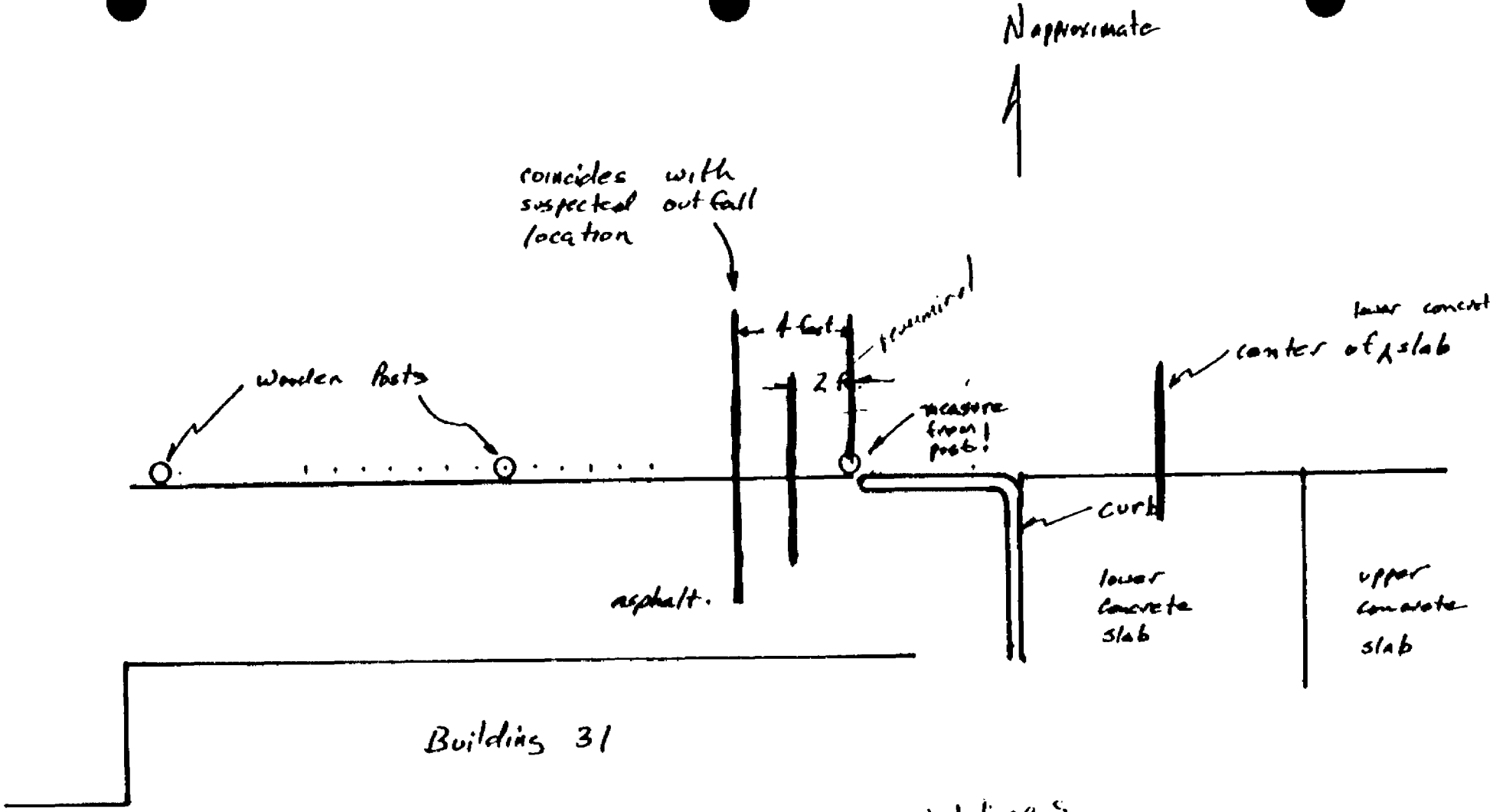
The scope of ICF Kaiser's services for this project consisted of using ground penetrating radar (GPR) to characterize subsurface conditions and explore for buried utilities. The accuracy of our findings are subject to specific site conditions and limitations inherent to the GPR technique. We performed our services in a manner consistent with the level of skill ordinarily exercised by members of the profession currently employing similar methods.

If there are any questions regarding this GPR survey or any other geophysical survey please call me at (916) 852-3718.

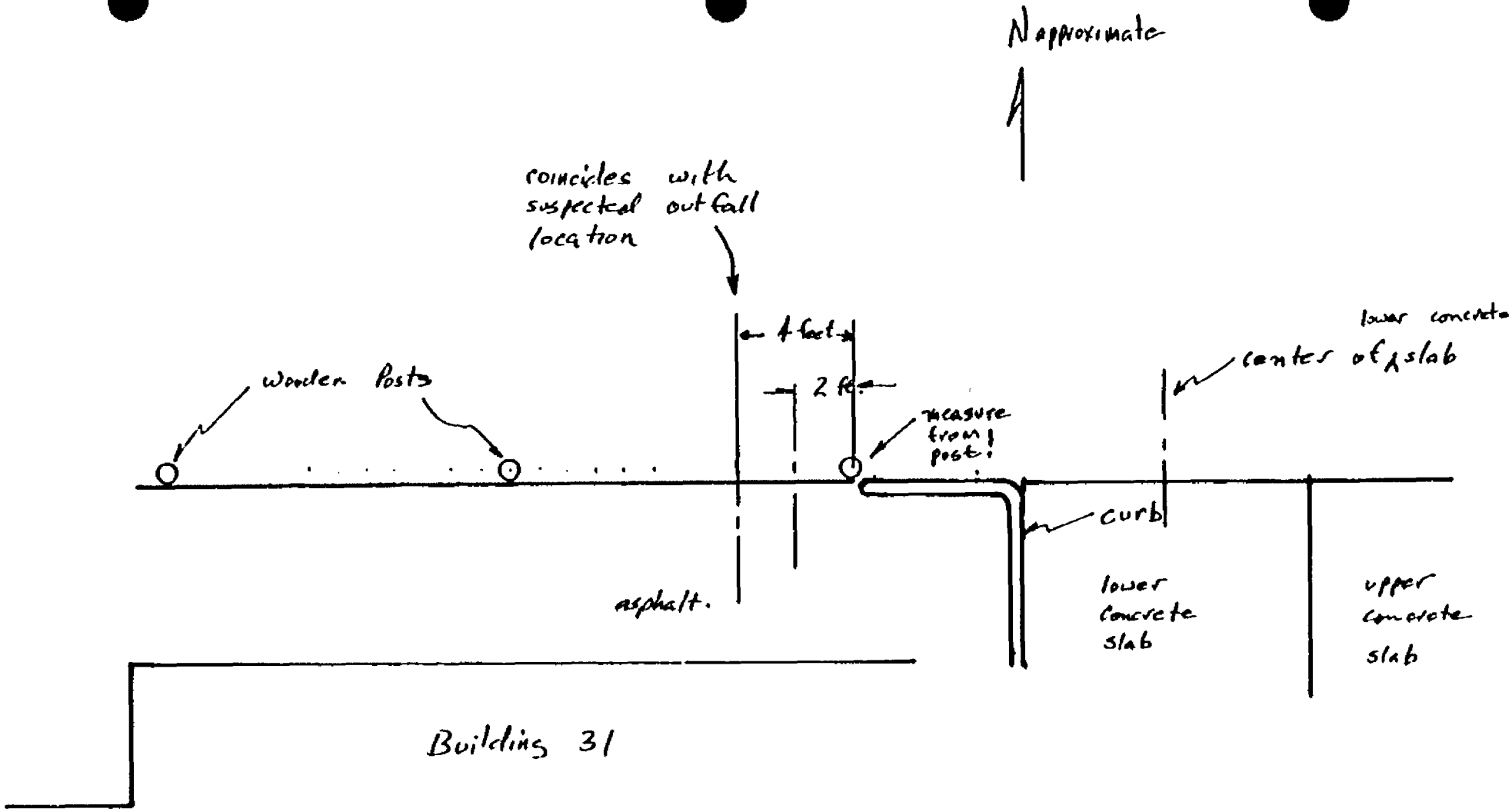
Sincerely,

Martin Miele, R.Gp.-941
Registered Geophysicist

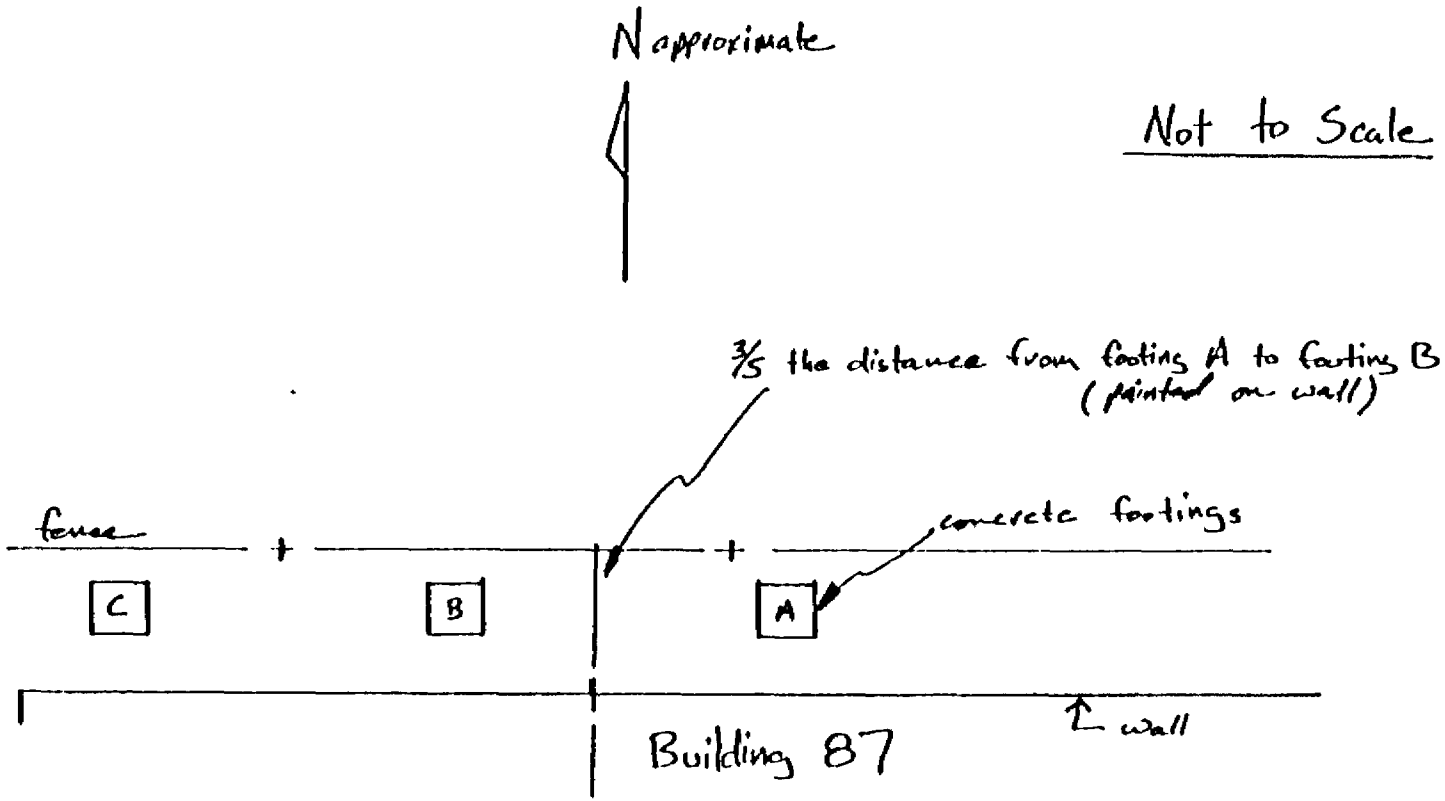

N approximate
Not to Scale
3/5 the distance from footing A to footing B (painted on wall)
fence
concrete footings
C
B
A
Building 87
wall



bolded lines
red - location of GPR reflections typical of buried utilities.



red - location of G.P.R. reflections typical of buried utilities.


N approximate
Not to Scale
3/5 the distance from footing A to footing B
(painted on wall)
fence
concrete footings
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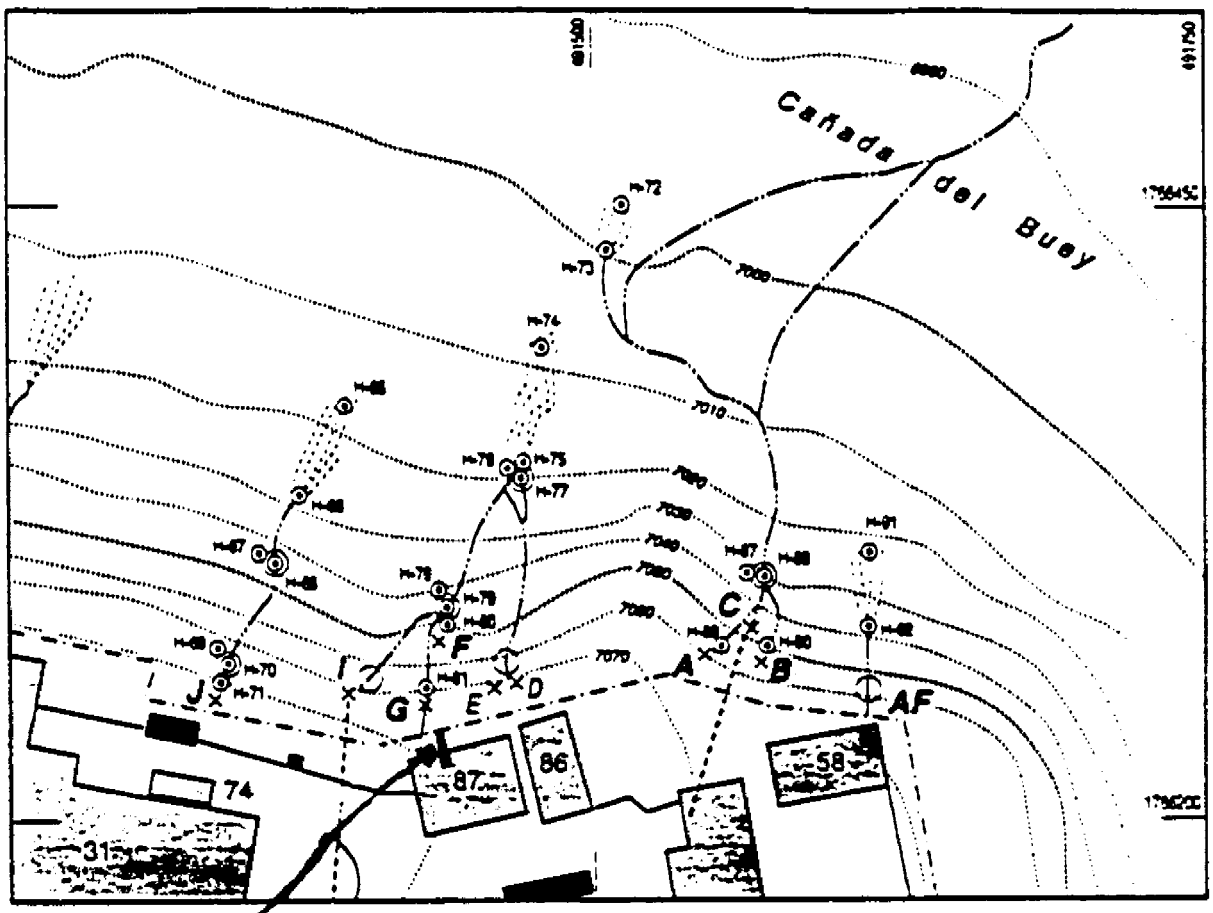
wall
Building 87



Location of GPR reflections is ~ 14 ft east of the north west corner of 46-57. If followed out past the fence, it looks to end up in obvious outfall 16.

0 50 100 ft

cARTography by A. Kron 5/7/93

- Permanent structure
- Temporary structure
- Paved road
- Unimproved road
- Fence
- Drainage pathway
- Storm drain
- Storm grate
- Diffuse outfall drainage
- ×A Sampled outfall
- ×B Outfall not sampled
- 10-ft contour line
- Sedimentation trap
- Hand auger sample

Fig. 5-4-10. Sampling locations at northeast TA-46: Outfalls A, B, C, F, G, I, J, and AF.

Appendix 5

OU 1140 FIELD IMPLEMENTATION PLAN

for

The Phase I RFI at Technical Area 46 During the 1994 Sampling Season

CORRECTION

START

Appendix 5

OU 1140 FIELD IMPLEMENTATION PLAN

for

The Phase I RFI at Technical Area 46 During the 1994 Sampling Season

ICF Kaiser Engineers, Inc.

Los Alamos, New Mexico

FOR INTERNAL PURPOSES ONLY

August 17, 1994

CORRECTION

END

TABLE OF CONTENTS

1.0 Introduction ____ 3
2.0 Field Organization and Roles ____ 3
2.1 Field Team Manager ____ 4
2.2 Field Team Leader ____ 4
2.3 Health Physics Technician ____ 4
2.4 Site Safety Officer ____ 5
2.5 Sampler ____ 5
3.0 Identification, Description, and Schedule of Samples ____ 5
3.1 The Surface Release Aggregate ____ 6
3.2 Outfall Aggregate ____ 6
3.3 Stack Emission Aggregate ____ 6
4.0 Basic Instructions For Field Workers ____ 7
4.1 Sampling Procedures ____ 7
4.2 Sampling Equipment ____ 8
4.3 Sample Handling ____ 10
4.4 Movement of Personnel and Equipment Between the Exclusion Zone and the Contamination Reduction Zone ____ 12
4.5 Quality Assurance and Quality Control (QA/QC) Samples ____ 12
4.6 Documentation ____ 13
4.7 Health and Safety ____ 14
4.8 Decontamination Procedures ____ 15
4.9 Waste Management ____ 17
Appendix A ____ 18
Sample Schedule ____ 18
Appendix B ____ 19
Maps of Sampling Locations and Support Zones ____ 19

1.0 Introduction

A Phase I investigation will be conducted at various solid waste management units (SWMU) throughout Technical Area (TA) 46 during the 1994 sampling season. Field activities will include surface soil and sediment sampling; and subsurface soil and sediment sampling.

The objectives of this Phase I investigation are to determine what (if any) contaminants of concern (COC) are present and to identify if future investigative or corrective actions are necessary.

This field implementation plan will serve as a guide for planning and carrying out field activities. This plan consists of two fundamental parts:

- identification, description, and schedule of samples to be taken
- basic instructions for field workers

2.0 Field Organization and Roles

All field sampling operations at TA-46 will be conducted at or near the SWMUs being sampled. The site will be divided into three operational areas: the exclusion zone (EZ), (defined in Section 4.6) where samples are collected; the contamination reduction zone (CRZ), (also defined in Section 4.6) where removal of contamination from the exclusion zone is controlled; and the support zone (SZ) where site control and records are maintained. The field sampling trailer will be located in the SZ, and will contain site-specific, ER, and LANL plans and procedures as well as support equipment such as the computer, printer, and fax machine. The daily status board will be posted in the support zone and contain information on site activities for visitors and occasional workers. The bulletin board will also be located in the SZ and contain emergency and administrative information for site workers.

Tailgate safety meetings for field team members entering the exclusion zone will be conducted each day (explained in Section 4.6). The Field Team Manager will report the weekly progress and status of sampling activities to the rest of the OU 1140 RFI team during field operations. The Field Team Leader will submit a daily report (fax) of the progress and status of sampling activities to the OUPL, Deputy OUPL, PPL, and ER Program Coordinator.

Personnel have been assigned the following roles and responsibilities but may be assigned alternate roles, provided the necessary training requirements and qualifications are met.

Field Team Member	Role(s)	Organization
Roy Michelotti	OU Project Leader	LANL CST-6
Lynn Kidman	Field Team Manager	ICF KE
Linda Fluk	Field Team Leader	ICF KE
Jim Roberts	Field Coordinator	LANL CST-6
Mike Powell	Health Physics Technician	EDI Inc.
Cornelius Flynn	Site Safety Officer	MK
Kristi Aamodt	Sampler	ICF KE
Ken Hansel	Sampler	ICF KE
Others	**Role(s)**	**Organization**
Dave McInroy	Programmatic Project Leader	LANL EM/ER
Roy Bohn	ER Program Coordinator	LANL EM/ER

2.1 Field Team Manager

The field team manager (FTM) has overall responsibility for the field operations, including assembling the field team and assigning responsibilities, assuring that training and health requirements are met, scheduling, and sampling according to the requirements in the RFI Work Plan. The field team manager interfaces with the Operable Unit Project Leader, Project Safety Officer, Project Health Physicist, and other members of the Environmental Restoration Project Office, as may be necessary.

2.2 Field Team Leader

The field team leader (FTL) is responsible for implementing the RFI Work Plan in the field, and directs and oversees all field work operations and field personnel. Sampling locations, types, numbers, labels, and holding times are implemented by the FTL, according to the RFI Work Plan and other requirements. The FTL also ensures that all safety and health, sampling, decontamination, and disposal procedures are followed, and implements the emergency response procedures. In addition, the FTL is responsible for implementing the guidance and direction provided by the field team manager.

The FTL defines the exclusion and decontamination zone locations, and directs the setup and cleanup of the decontamination zone; arranges for all required equipment to be available on site; sets the daily schedule and optimizes the use of the field team members; oversees the sampling; and directs the preparation of labels and Chain-of-Custody forms.

After sampling, and the completion of appropriate paperwork, the FTL oversees the packaging of samples in coolers with packing material and ice. The Chain-of-Custody forms with the corresponding samples are placed in the coolers and transported to the mobile radiation laboratory or CST-9. After the CST-9 representative accepts the samples, custody of the samples is transferred to the CST-9 representative, as directed by the FTL.

The FTL must ensure that all records are completed for the Records Processing Facility. Necessary records include the Daily Activity Logs, Sample Collection Logs, Chain-of-Custody forms, and any other records that are identified in the SOPs, and are used in the sampling activities. Discrepancies from documents and procedures are documented in the Daily Activity Log by the FTL. After the records are completed, the FTL ensures that the proper format for submitting the records to the Records Processing Facility is followed and that the records are formally submitted to the Facility.

2.3 Health Physics Technician

The health physics technician (HPT) monitors the area, the equipment and personnel that come within radiation or suspect radiation area. The monitoring ensures that personnel are not exposed to radiation levels that are above the limits set in the Site-Specific Health and Safety Plan (SSHASP), and also ensures that if contamination is present, the contamination is not spread outside the contaminated area.

The HPT conducts a field survey of the area before sample markers are set. During sampling the HPT monitors each sample location before samples are collected. All screening results are recorded, either in the Daily Activity Log or in the Sample Collection Log.

When the sample team returns to the SZ from a suspect radiation area, the HPT monitors each team member, each sample, and each piece of equipment used in the field. This monitoring is performed after decontamination. The monitoring results can assist the FTL to make decisions regarding the safety of the site, the health of the workers, the decontamination of equipment and personnel, and handling of the waste.

2.4 Site Safety Officer

The site safety officer (SSO) is responsible for the health and safety of field team members during sampling activities. He or she prepares the SSHASP, or otherwise becomes familiar with the contents. The SSHASP provides safety measures for handling the potential contaminants that could be a threat to personnel, and for the physical conditions and activities of field work. Personal protective equipment (PPE) is established in the health and safety plan, and if the SSO has reason to change the established PPE, he or she initiates a Change Order Control.

On site, the SSO provides a health and safety oversight for the field team members, and ensures that all present are following safety procedures. The SSO inspects the area and all equipment. The SSO also maintains the list of telephone numbers to be used in emergencies, and provides safety requirements and briefing for visitors to the site.

The SSO presents a "Tailgate" safety meeting daily. The safety meeting familiarizes the team with conditions of the area, possible contaminants encountered, and weather conditions. The meeting serves as a reminder of inherent safety problems, and how to conduct activities safely. The meeting is documented and each field team member must sign the attendance sheet. The SSO also briefs visitors on health and safety issues and ensures their compliance with the SSHASP.

2.5 Sampler

Samplers are responsible for donning required personal protective clothing, entering the EZ, and collecting the samples as directed by the FTL and according to applicable procedures. Samplers are responsible for following directives given by the FTL and the SSO.

Activities conducted by the samplers include: collecting the samples, monitoring the area for non-radiological hazards, recording all the information required in the dedicated field notebook and/or the sample collection log forms. After returning to the SZ, the samplers must strictly follow decontamination procedures, including field monitoring before and after the decontamination process, if required.

3.0 Identification, Description, and Schedule of Samples

Sampling will be conducted at TA-46 from August 1 through October 30, 1994, for the SWMUs mentioned below, and will conform to the RFI Work Plan. These sampling activities will complete Phase I sampling at TA-46.

Sampling activities will be conducted at SWMUs within the following sites at TA-46:

- Surface Release Aggregate
- Outfalls Aggregate
- Stack Emissions Aggregate

Daily sample schedules presented in Appendix A includes SWMU numbers, sample number, site identification number, sample identification numbers (AAA #s), analyte suites, sample matrices, and container types for each sampling day and sampling technique. Appendix B contains a map which locates all sample locations, the exclusion zone (EZ), the contamination reduction zone (CRZ), and support zones (SZ) associated with each area to be sampled. Approximately 10-20 samples will be collected per day. Samples will be analyzed for various parameters and will be placed in specified containers. All necessary containers will be pre-arranged for the field samplers.

Each site will be discussed below in terms of a brief background, potential contaminants of concern (PCOC), and a description of the SWMUs to be investigated. Detailed descriptions of each SWMU are presented in the RFI Work Plan which will be available at the field site SZ if more information is needed.

3.1 The Surface Release Aggregate

The surface release aggregate includes surface areas that may have received hazardous waste, either as programmatic disposal or spills and leakage from storage containers. The amount and extent of contamination, and the history of exposure to waste streams at each site is unknown.

PCOC's at the surface release aggregate include metals, mercury, radionuclides, VOCs, SVOCs, PCBs, pesticides, and asbestos.

SWMUs within the surface release aggregate include:

- sand filter: 46-003(f)
- sink drain: 46-003(h)
- drum storage: 46-006(a), (b), (c), 46-008(a), (b), (d), (e), (f), (g), (d)
- surface disposal: 46-006(d), 46-007
- storage shed: 46-006(f), (g)

Type of sampling to be conducted: surface and hand auger sampling.

3.2 Outfall Aggregate

The outfall aggregate consists of vitrified clay and cast iron pipes as well as storm drains and storm drain points, all of which empty into the Canada del Buey or SWSC Canyon. Two types of outfalls are discussed in the RFI Work Plan. Industrial drains are characterized by intermittent, low volume flows, and storm runoff drains are characterized by short-term, high volume flows. Runoff from both types of outfalls has eroded drainage channels down the canyon sides to the canyon floor.

PCOCs for the outfall aggregate include metals, radionuclides, VOCs, SVOCs, and PCBs.

SWMUs within the outfall aggregate include:

- sanitary lagoons: 46-002, 46-005
- septic systems: 46-003(a), (f), (g),
- industrial drains: 46-004(a2), (f), (g), (h), (r), (t), (x), (y)
- floor drains: 46-004(b2), (c2), (m), (s), (z)
- sink drain: 46-004(w)
- overflow from well: 46-004(u)
- mercury spill: AOC-46-001
- unknown source: 46-004(q)

Type of sampling to be conducted: surface and hand auger sampling.

3.3 Stack Emission Aggregate

The stack emission aggregate includes historical releases from TA-46 facilities where practices may have led to airborne releases of hazardous or radioactive constituents through building stacks.

PCOCs for the stack emission aggregate include beryllium and radionuclides.

SWMUs within the stack emission aggregate include:

- 46-004(g), (h), (d2)
- AOC 46-002, 46-003

Type of sampling to be conducted: surface sampling.

4.0 Basic Instructions For Field Workers

The following sections identify and summarize key instructions for field team members. Many of these instructions were extracted from the following documents:

- RFI Work Plan for Operable Unit 1140
- OU 1140 Site-Specific Health and Safety Plan
- OU 1140 Waste Management Plan
- OU 1140 Quality Assurance Plan
- Data Quality Objectives and Sampling and Analysis Plans for Additional and/or Modified Sampling at OU 1140
- LANL ER-SOP-1.03, Handling, Packaging, and Shipping Samples
- LANL ER-SOP-1.04, Sample Control and Field Documentation
- LANL ER-SOP-1-06, Management of RFI-Generated Waste
- LANL ER-SOP-1.07, Personnel Decontamination
- LANL ER-SOP-1.08, Field Decontamination of Drilling and Sampling Equipment
- LANL ER-SOP-6.09, Spade and Scoop Method for Collection of Soil Samples
- LANL ER-SOP-6.10, Hand Auger and Thin-Wall Tube Sampler
- LANL ER-SOP-6.15, Coliwasa Sampler for Liquids and Slurries
- LANL ESH-1-02-02, Surveying for Alpha and/or Beta/Gamma Contamination
- LANL Administrative Requirement 10-1, Radioactive Liquid Waste
- LANL Administrative Requirement 10-2, Low-Level Radioactive Solid Waste
- LANL Administrative Requirement 10-3, Hazardous and Mixed Waste
- LANL Administrative Requirement 10-8, Waste Minimization
- LANL Administrative Requirement 10-9, Waste Profile Form
- LANL LM107-01, Radiological Control Manual

These field instructions are not intended to supersede or replace instructions contained in the documents listed above. Field team members are expected to be familiar with and understand the instructions given in these documents. These documents will be placed in the field sampling trailer (located in the support zone at the field site) and will be available to all team members.

4.1 Sampling Procedures

All sample locations have been identified in the field with wooden stakes and blue surveyor's tape. Each stake is marked with number identifying the SWMU and sample location. Prior to field mobilization, field team members will check each sample location in the field to assure proper placement. At that time, the team will also verify that the proper analyte suite has been selected for each sample.

The sample containers corresponding to a sample location will be placed into plastic resealable bags prior to sampling at the location. The SWMU and sample number will be clearly marked on each bag.

Before sampling begins, the HPT and a field team member will check the undisturbed sample location for the presence of above-background levels of radioactivity and VOCs. If elevated levels of radioactivity are detected, the site will be evacuated, and the sampling procedures for that site will be re-evaluated. If elevated levels of non-radiological constituents such as VOCs are detected, the SSHASP will be consulted, and recommendations will be followed before the site is sampled.

The following sections summarize sampling procedures specific to each of the sampling methods to be used at TA-46.

Surface Samples

All surface sample collection activities will conform to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples. Surface soil samples are defined as samples taken from the surface to a depth of 6 inches. Surface soil samples will be taken using this depth criteria within a diameter of

approximately 6-8 inches. Soil will be collected from each sample location using a stainless steel spoon, homogenized in a stainless steel bowl, and placed in the appropriate sample containers.

Subsurface Samples

All subsurface samples will be collected with a hand auger or a mechanical auger, and sample collection activities will conform to LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler. Subsurface soil samples can be recovered from depths to approximately 10 feet using a stainless steel hand-held auger manually driven into the soil. The soil or sediment is removed from the auger, placed into a stainless steel bowl, homogenized with a stainless steel spoon, and placed in the appropriate sample containers.

4.2 Sampling Equipment

The following checklist will be used to ensure that equipment necessary to support sampling activities at TA-46 are available:

Support Zone	Sampling
__ first aid kit	__ sample tables
__ fire extinguisher	__ clip boards
__ phone	__ crates
__ tables	__ stainless steel bowls
__ chairs	__ stainless steel spoons
__ file boxes, folders	__ 1 gallon resealable bags
__ clear paper cover	__ sample containers
__ waste forms	__ rad van resealable bags
__ health and safety plan	__ hand auger
__ material data safety sheets	__ pipettes
__ transportation forms	__ pipette bulb
__ tailgate meeting forms	__ preservatives
__ controlled area access register forms	__ pH paper
__ equipment calibration log book	__ gas containers
__ sample collection forms	__ water spray jugs
__ daily summary forms	__ PID/FID
__ daily drilling forms	__ O_2 meter
__ notebook	__ calibration gasses
__ training procedure book	__ Miniram
__ sample label book	__ personal air pumps
__ Chain-of-Custody tape	__ generator
__ pens	__ extension cords
__ sharpies	__ tyvek
__ duck tape	__ coveralls
__ cooler for drinks	__ inner gloves
__ cups for drinks	__ outer gloves
__ trash bin for clean trash	__ booties
__ heavy garbage bags	__ safety glasses
__ caution tape	__ hard hats
__ health and safety - equal opp. forms	__ respirators
__ scissors	__ weather station, anemometer
__ soap	__ sign-exclusion zone
__ paper towels	__ camera
__ 5 gallon water container	__ freezer
__ shade tent	
Decontamination Zone	**Waste Area**
__ 3 heavy tubs	__ 55-gallon drums
__ 3 wash buckets	__ plastic liner
__ 3 spray bottles	__ waste labels
__ kimwipes	__ pallets
__ long stakes	__ tarps
__ hammer	__ rope
__ heavy ml clear or black plastic	
__ sign - decontamination zone	
__ tarps for storage drums	
__ pallets	
__ blocks or PVC for berm	
__ Alconox	
__ deionized water	
__ brushes	
__ waste water jug (5 gal)	
__ 2 large trash bins	

4.3 Sample Handling

Sample handling procedures will conform to LANL-ER-SOP-1.01, General Instructions for Field Investigations, LANL-ER-SOP-1.02, Sample Containers and Preservation, LANL-ER-SOP 1.03, Handling, Packaging, and Shipping Samples, and LANL-ER-SOP 1.04, Sample Control and Field Documentation. General steps to be used in sample collection and handling include:

Support Zone

1. The sampler and documenter will refer to the daily schedule and choose appropriate sample containers with appropriate number of bowls and spoons and place them into crates in the SZ, adjacent to CRZ.
2. The FTL will review daily activities.
3. The FTL will log morning notes in the dedicated field notebook.
4. The SSO will give tailgate safety meeting, all field team members present must sign attendance sheet.
5. The samplers, HPT and SSO will don PPE. Cotton coveralls, canvas gloves (sampler will wear inner and outer disposable gloves).

Contamination Reduction Zone

6. The sampling team will walk through CRZ to the EZ, sign the controlled area access register form before collecting samples.

Exclusion Zone

7. The SSO and HPT will monitor sampling activities and take notes of sample location.
8. The sampler will collect soil samples in stainless steel bowl and homogenize well with stainless steel spoons.
9. The HPT and SSO will monitor homogenizing and take notes of soil sample in the stainless steel bowl.
10. The sampler will place soil samples in appropriate containers and place containers in plastic resealable bags, being careful to avoid contaminating exterior of containers and the resealable bag.
11. The documenter will take notes on sample collection log form: sample description, weather, type of containers used, rad and VOC readings, and other appropriate information. The documenter will take photograph of the sample location (camera stamps date and time on negative) and then logs the photo number.
12. When sample collection and documentation is completed the sampling team walks to CRZ.

Contamination Reduction Zone

13. Equipment will be deposited at the equipment drop in the CRZ. Samples will be placed in cooler next to CRZ drop.
14. The HPT will go to the dry wash tub and use a wire brush to remove dirt from boots or clothes and then frisks self.
15. The SSO, the documenter, and the sampler will proceed to the dry wash tub where a wire brush is available to remove dirt from boots or clothes.
16. The HPT will then frisk all personnel and swipe the bottom of boots. The swipe will be counted for one minute to determine whether there is radiation contamination...
17. If no radiation is detected, SSO will go through the wet potential hazardous decontamination tubs.
18. If radiation is detected, SSO must go through the wet potential mixed decontamination tubs.
19. The SSO will remove coveralls, then gloves and place them on SZ side of table for re-use.
20. The SSO will then wait for HPT to give final frisk before leaving CRZ. Results of the frisk are recorded on the equipment and materials release form. The SSO will sign out on the area access register controlled form.

21. The documenter must complete steps 16-20.
22. The sampler must complete steps 16-18.
23. Samplers will remove outer gloves and dispose of them in potential mixed, potential hazardous, or clean waste containers.
24. The health physics technician will take swipes of:
    - sample bottles (1 swipe per entire batch)
    - bowls and spoons, approximately 1 swipe per 5 sets of spoons and bowls
    - equipment (1 swipe per pieces of equipment)
    - outer gloves (if they are to be decontaminated)
    - the insides of re-sealable bags which had contained the sample bottles and will be replaced with clean bags.
    - Swiped material is placed on table and results of swipes are documented on the Equipment and Item Removal Log
    - If swipes are clean, the sampler will decontaminate sample bottles in potential hazardous bucket (spray bottles with mister and then dry with kimwipe). The used kimwipes are placed in clean waste container.
    - If swipes are rad, sampler decontaminates sample bottles in RAD bucket (spray bottles with mister and dry with kimwipe). The used kimwipes are placed in clean waste container.
25. Samplers will put sample bottles in NEW resealable plastic bags (and disposes of original bag in clean bag after decontamination). NOTE. Clean resealable plastic bags must be labeled with the appropriate sample number at this time.
26. The decontaminated sample bottles will be placed in a cooler in the support zone.
27. The samplers will decontaminate equipment (repeat step 24) and place clean equipment on the support zone side of the table.
28. The samplers will then decontaminate bowls and spoons (repeat step 24), in 2 tubs: Alconox water tub, spray water to rinse in same bucket, then rinse in 2nd bucket with deionized water). The sampler then places clean equipment on the SZ side of table. (At end of day the spoons and bowls are bagged, labeled, and stored for re-use in the future).
29. The samplers will remove inner gloves and dispose of them in a clean waste container.
30. The HPT will frisk the samplers and himself then record results on controlled area access register form. The samplers and the HPT will sign out.

Support Zone

31. NOTE. Everyone entering the SZ from the CRZ must wash their hands and face.
32. The documenter will prepare the PE blank sample.
33. The FTL or another field team member will update and maintain the chain of custody data base. Chain of Custody forms and labels will be generated on the computer.
34. Sample bottles will be brought to the trailer in the SZ. Labels will then be placed on sample bottles. Chain of Custody forms will be completed. The samples will be placed in a cooler brought to the sample coordination facility.
35. At the end of each sampling day the FTL will generate the Daily Field Activity Summary on the computer and will fax copies to appropriate LANL personnel.
36. Information in the field data base is backed up on a hard drive at the end of each field day. The hard drive is stored each evening in a location (i.e. the storage truck) away from the original data base (located in the field trailer). During the field activities, information from the backup hard drive is downloaded on the computer at the ICF Kaiser office. This backup system ensures there are a minimum of two separate copies of the field data base at the end of each day.

4.4 Movement of Personnel and Equipment between the Exclusion Zone and the Contamination Reduction Zone

A transportation cart will be used to move personnel and equipment between the EZs and the CRZs while sampling. Because it is both timely and costly to set up multiple CRZs, two CRZs will be used during the 1994 calendar year sampling: one in Canada del Buey and the other on the mesa top. Refer to Appendix B for the locations of these CRZs. The cart is crucial for transporting personnel and equipment because the CRZs will be located far distances from the sampling locations (the EZs). In addition, the use of the cart will eliminate the spread of contaminants from the EZs to clean areas as the sampling team members (dressed in PPE) will step directly from the EZ to the cart and from the cart to the CRZ (or from one EZ to another EZ).

In Canada del Buey, the cart will be driven along a dirt road and parked at the base of the canyon slope where the samples will be collected. The cart will house a secured cooler which will hold samples from a single sampling shift. Thus the sampling team can collect a large number of samples in one shift without having to walk a long distance from the EZ to the CRZ with a heavy cooler(s).

On the mesa top, there are approximately sixteen EZs, all of which are in congested areas (i.e. in parking lots or adjacent to buildings where people are working). The EZs will be small so that personnel working in the area will not be disturbed. Zones may be taken down and set up quickly, and equipment needed for working in each zone may be carried in the cart. The sampling team members need not walk in clean areas where others are working as they will be transported via the cart.

Use of the transportation cart between the CRZ and the EZ will include the following procedures:

1. the sampling team will don their PPE, enter the transportation cart, and drive from the CRZ to the EZ (which will have been set up by a field team member in advance);
2. the cart will be parked adjacent to the barricaded area around the EZ, and the sampling team will step directly from the cart into the EZ;
3. the sampling team will collect samples;
4. at the completion of sampling, the samples will be placed in a cooler (which is secured in the transportation cart), and sampling equipment will be secured in the cart;
5. the sampling team will take down the barrier tape and place it in the back of the cart;
6. the sampling team will drive directly to the CRZ or will set up a new EZ (and steps 2 through 5 will be followed);
7. refer to Section 4.7 of this plan for decontamination procedures which will be followed when the team enters the CRZ.

4.5 Quality Assurance and Quality Control (QA/QC) Samples

Field team members will collect two types of field QC samples at TA-46: performance evaluation samples and rinsate blanks. The performance evaluation samples will be collected using the techniques previously described for field samples, using material that has been supplied for this purpose.

Rinsate blank samples are collected from decontaminated, non-dedicated equipment. A sample of the rinsate water will be collected for analysis when the equipment is rinsed with deionized and distilled water.

Audits will be performed to verify that ER field activities comply with all aspects of the ER Quality Assurance Program. Qualified audit staff will conduct audits in accordance with written plans and checklists. Field team members will be expected to cooperate with auditors and be in compliance with all ER requirements.

4.6 Documentation

All pertinent information regarding field activities will be documented according to forms specified in LANL-ER-SOPs.

Documentation	Person Responsible
Sample Collection Log	Sampler
Chain-of-Custody	FTL, Sampler
Dedicated Notebook	FTL
Instrument Calibration Logs	FTL, Sampler, HPT, SSO
Daily Field Activity Summary	FTL
Tailgate Safety Meeting Form	SSO
Controlled Area Access Register Form	HPT, SSO
Visitor Log-in Form	SSO, FTL
Waste Container Label	FTL, Sampler
Waste Profile Form	FTL, Sampler
Equipment and Item Removal Log	HPT

The Sample Collection Logs are completed by the sampler for each sample. Some parts of this form may be completed prior to sampling (such as OU, TA, type of sample, weather). However, the sample location, type, depth, time of collection, and general description of the sample material must be recorded as the sample is taken. The sampler will sign each Sample Collection Log when they are completed.

The Chain-of-Custody forms will be prepared for all samples. The Chain-of-Custody forms will be filled out in advance of the sampling except for the date and time of sample collection, which is entered after the sample is collected.

The FTL will maintain a dedicated field notebook to document site activities. The dedicated notebook must be completed in dark ink and have the Operable Unit and Technical Areas as one-time entries. Mistakes must have one line through them with an initial. Erasure, obliteration, or white-out is not allowed. The FTL must date each day's entry and sign the notebook at the end of the day. Others are allowed to make entries, but they must sign the first page and then initial and date the rest of their entries. The FTL must ensure that the following information is in the notebook:

- Date
- On-site field team personnel and their responsibilities
- Weather
- Occurrence of the tailgate safety meeting
- Daily sampling events
- Location of exclusion and support zones (sketches and drawings can be used)
- Deviations from plans or SOPs and supporting reasons
- Photograph descriptions
- H&S monitoring
- A summary table including the SWMU identifier and the sample numbers, types, and locations

Instrument Calibration Logs will be completed by the team member performing calibration of the H&S equipment or the health physics equipment. The Daily Field Activity Summary will be completed each day by the FTL and submitted to the OUPL and the PPL. The Tailgate Safety Meeting Form will be signed by all team members acknowledging attendance at the meeting. The Controlled Area Access Register Form will be filled in by team members but controlled by the SSO.

4.7 Health and Safety

The SSO is responsible for enforcing all health and safety requirements as stated in the SSHASP. The SSHASP contains detailed discussions of hazards associated with sampling activities and should be used for additional information. Health and safety measures of particular importance to field workers are discussed below.

All on-site personnel will be trained in emergency procedures. In an emergency situation that necessitates evacuation of the site, a horn will be sounded, and all personnel will evacuate to the nearest muster area. The muster areas will be identified in the daily tailgate safety meeting. Emergency contacts, depending upon the type of emergency, are listed below.

Emergency Contact	Phone Numbers	
Los Alamos Hospital	662-4201	911 for Emergencies
ES&H Hotline	665-5010	911 for Emergencies
Los Alamos Police	662-8222	911 for Emergencies
Los Alamos Fire Dept.	667-4055, 672-9191	911 for Emergencies
LANL Protective Force	667-4437	911 for Emergencies
LANL Spill Coordinator	667-6211	911 for Emergencies

For any emergency, contact Lynn Kidman (Field Team Manager) at 661-5227 and Roy Michelotti (Operable Unit Project Leader) at 665-7444. Other emergency information is posted on the bulletin board located at the sampling site.

Site Coordination and Control

Site control procedures are listed in detail in the SSHASP. The SSO and FTL have the authority to allow or deny access to the field site during sampling activities. All field team members must follow the directions of the SSO or FTL when working at the site.

The site will be divided into an exclusion zone, a contamination reduction zone, and a support zone. When working in the EZ, team members will practice contamination avoidance. Stand upwind during intrusive activities, if possible and minimize dust generation. All solid and liquid samples should be collected in such a manner as to minimize contact with the material. Workers should be alert for dangerous situations, strong or irritating odors, airborne dusts or vapors, and broken containers. Report all potentially dangerous situations to the SSO or FTL. All personnel entering the EZ shall log in before each entry and log out after each exit. The SSO or designee shall ensure that all individuals are accounted for before leaving the site each day.

The CRZ includes the area(s) where decontamination of personnel and equipment occurs and will be set up next to the EZ. Team members will only be allowed to exit the EZ through the CRZ except in the case of an emergency. The SZ will only be located in uncontaminated areas. Emergency supplies and all records and documents necessary for site work will be kept in the SZ.

Safe Work Practices and Sanitation

On-site workers will follow the safe work practices listed below:

- No food, beverages, or tobacco products shall be present or consumed in the EZ and areas where potential contamination exists.
- No cosmetics or creams shall be applied in the EZ, or in a contaminated area.
- Prescription drugs should not be taken by personnel where the potential for contact with toxic substances exist, unless specifically approved by a qualified physician.

- Alcoholic beverage intake is prohibited before or during the work day.
- Horseplay, practical joking, or any other actions that jeopardize safety will not be tolerated.
- Running is not permitted.
- All activities will be performed to minimize or prevent the disbursement or release of contaminants.
- All personnel will avoid contact with potentially contaminated substances except as necessary for sampling.
- Monitoring equipment will not be placed on potentially contaminated surfaces.
- Personnel conducting ER field activities will work in groups of at least two, so that someone is always available to render assistance if there is an unplanned occurrence. They will be instructed to watch for signs and symptoms of illness or injury in their assigned buddy.

There will be water, soap, and towels available in the SZ. Personnel leaving the CRZ will wash their hands and faces. Potable and non-potable water in the SZ will be clearly marked.

Personal Protective Equipment

Field team members entering the EZ will be required to wear the following protective equipment:

- steel-toed/chemical-resistant boots
- cotton coveralls, or tyvek
- chemical-resistant gloves (for the samplers)
- leather gloves (for the non-samplers)
- safety glasses
- hard hat (when working around heavy equipment)

Health and Safety Equipment and Sample Screening

Direct-reading instruments and an explosives test kit will be used to monitor the work environment of on-site workers. Instruments will be calibrated at the beginning of each work day. The following instruments will be used by field team members in the EZ when the corresponding criteria are met:

Instrument	Monitor for	Monitoring Criteria
FID or HNu PID	organic vapors	breathing zone of the sampler, and downwind of sampling activities where VOCs are potential contaminants of concern
Oxygen/combustible gas monitor	oxygen/combustible gas	continuously during the excavation activities
Miniram aerosol dust monitor	particulates released during the excavation	downwind of the excavation activities
Explosive field spot-test kit	explosives	all sample sites where explosives are suspected

4.8 Decontamination Procedures

Decontamination of personal and non-expendable equipment will be conducted to protect the health and safety of field team members, to protect data quality, and to prevent the spread of contamination.

Specific procedures used for the decontamination of personnel, manual sampling equipment, and the drilling equipment are described in detail in ER-SOP-1.07 and ER-SOP-1.08.

Decontamination of Personnel

Decontamination of personnel will be conducted in the CRZ each time personnel exit the EZ. These steps are described in more detail in the SSHASP.

Personnel decontamination will include the following steps:

1. Dry decontamination.
2. Personnel radiation screening (including PPE). Personnel boots are swiped and swipes are counted for one minute for radioactive contamination. Personnel are screened for radioactive contamination using hand-held radiation monitors.
3. Outer boot Alconox wash.
4. Outer boot clean water rinse.
5. Outer glove removal (gloves will be disposed of or washed).
6. Inner glove removal and disposal and field coverall removal.
7. Hand, foot, and mouth radiation screening.
8. Exit exclusion zone.
9. Hand wash

Note: If radiation is detected in Step 2, a separate decontamination line will be used for steps 4 and 5, and an additional radiation screening will be conducted to verify decontamination. If coveralls cannot be decontaminated, they will be disposed of as rad-contaminated pending chemical analysis. Refer to Section 4.3 for more detail.

Decontamination of Manual Sampling Equipment

Sampling equipment such as hand augers, chisels, and non-dedicated, stainless steel spoons and bowls will be decontaminated before each reuse according to appropriate ER SOPs. Dedicated stainless steel spoons and bowls will be decontaminated after use and stored for subsequent sampling activities. Decontamination of manual sampling equipment will be conducted in the CRZ and will include the following steps:

1. Equipment Drop—used equipment is placed at entrance in CRZ.
2. Equipment Radiation Screening—equipment is screened for contamination using appropriate alpha, beta, and gamma detectors.
3. Equipment Wash—equipment will be washed in a solution of Alconox™ and water.
4. Equipment Rinse.—equipment will be rinsed in potable water.
5. Equipment Rinse—equipment will be rinsed again with deionized or distilled water.

The decontamination water will be left outside to evaporate. If, by the end of activities, the water has not completely evaporated, the remaining water will be drummed.

Decontamination of Samples

Decontamination of samples will take place in the CRZ, as specified in the SSHASP. Decontamination of samples will require the following steps:

1. Radiation Screening—sample containers will be screened for radioactive contamination.
2. Sample Container Wash—sample containers will be rinsed with water in a decontamination line for either radioactive or non radioactive contaminated equipment.

Equipment Release Procedures

Removal of equipment samples and supplies from the exclusion zone requires a release from a HPT. Release requirements will depend on the destination, the suspected radionuclides, and whether radioactive material has been detected with portable instruments while working at the site.

For unrestricted release to the public (free release), smear surveys shall be required. The on-site HPT will be equipped to evaluate these smears in the field using a laboratory-quality alpha counter. Smear surveys shall be conducted in accordance with the ESH-1 procedure ESH-1-02-02 "Surveying for Alpha and/or Beta/Gamma Contamination."

For the movement of equipment from one Controlled Area to another or to a location where positive control is maintained, smear surveys may not be required, provided that the following criteria are met:

- Positive control is maintained over the equipment (i.e., it is not being released to the public).
- No detectable activity is discovered onsite with portable field instruments during sampling activities.
- Direct surveys for beta/gamma contamination find no detectable activity above LANL RadCon Manual Table 2-2 removable values (1000 dpm/cm^2).
- In areas where transuranic contaminants are suspected, a large-area swipe (> 2000 cm^2) has no detectable activity when counted with a portable alpha instrument in scaler mode.
- In areas where uranium contamination is suspected (and transuranic are not), direct surveys for alpha contamination detect no activity above LANL RadCon Table 2-2 removable values (1000 dpm/100 cm^2).

When positive control is relinquished, a free-release survey will be required. Positive control refers to storing the equipment in a locked storage shed, a locked vehicle, etc., not necessarily within the boundary of a Controlled Area. Additionally, if detectable activity is discovered onsite during sampling activities, a full smear survey shall be required for any type of equipment/material release.

4.9 Waste Management

All wastes generated during sampling activities will be managed in accordance with the approved Site-Specific Waste Management Plan. Site workers are required to minimize the amount of waste generated at the site. Wastes that have come in contact with potentially contaminated materials will be managed separately from other wastes. All solid and liquid wastes will be stored in approved 55-gallon drums labeled with information about the sampling activities (e.g., dates and sample identification numbers) associated with the activities that generated the waste. Team members will comply with the following procedures to characterize and segregate wastes:

1. Before decontamination when exiting the EZ, wastes and PPE will be screened for gross alpha, beta, and gamma activity.
2. If radioactive contamination is detected, rad-dedicated tub and liquid will be used for decontamination and will be segregated and classified as rad-suspect material.
3. If radioactive contamination is detected on PPE and other wastes from the EZ after decontamination, they will be segregated and classified as radioactive waste.
4. If radioactive contamination is not detected after decontamination, PPE will be segregated and classified as non-radioactive PPE waste. Other wastes from the EZ will be segregated and classified as non-radioactive waste.
5. If staining or contamination is evident upon visual inspection of the PPE or other waste, the FTL will be notified, and the waste may be segregated as potentially hazardous.
6. All solid wastes removed from the EZ or CRZ will be placed in plastic bags (corresponding to the waste classification) and identified with associated sample identification numbers.
7. Personal protective clothing and sampling equipment intended for reuse will be placed in heavy-duty bags. A label describing the materials will be affixed to each bag. These are not considered to be wastes.

The RCRA hazardous or mixed wastes will be stored at a satellite accumulation area until the total accumulated volume reaches 55 gallons. At this time the wastes will be placed in the less-than-90-day storage area.

Appendix A

Sample Schedule

Exclusion Zone

Daily Sampling Schedule for 1140

Day 1

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-h	H-93 -A	46-1000	AAA9037	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-93 -A	46-1000	AAA9037	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-93 -A	46-1000	AAA9037	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-93 -A	46-1000	AAA9037	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-93 -B	46-1000	AAA9038	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-93 -B	46-1000	AAA9038	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-93 -B	46-1000	AAA9038	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-93 -B	46-1000	AAA9038	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-93 -C	46-1000	AAA9039	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-93 -C	46-1000	AAA9039	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-93 -C	46-1000	AAA9039	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-93 -C	46-1000	AAA9039	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-94 -A	46-1001	AAA9040	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-94 -A	46-1001	AAA9040	Metals	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-94 -A	46-1001	AAA9040	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-94 -A	46-1001	AAA9040	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-94 -B	46-1001	AAA9041	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-94 -B	46-1001	AAA9041	Metals	Sub Surface	125mL Plastic	Auger
46-004-h	H-94 -B	46-1001	AAA9041	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-94 -B	46-1001	AAA9041	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-94 -C	46-1001	AAA9042	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-94 -C	46-1001	AAA9042	Metals	Sub Surface	125mL Plastic	Auger
46-004-h	H-94 -C	46-1001	AAA9042	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-94 -C	46-1001	AAA9042	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-94-dup -A	46-1001	AAA9437	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-94-dup -A	46-1001	AAA9437	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-94-dup -A	46-1001	AAA9437	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-94-dup -A	46-1001	AAA9437	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	QA-PE		AAA9436	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	
46-004-h	QA-Rins		AAA9272	Cs137, Iso Th, Iso U	QA Water	2 Liter Plastic	
46-004-h	QA-Rins		AAA9272	Metals, Mercury	QA Water	250mL Plastic	
46-004-h	QA-Rins		AAA9272	Semi-VOCs	QA Water	1 Liter Amber	

Spade-spoon [illegible]

clusion Zone

Daily Sampling Schedule for 1140

Day 2

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-q	H-90	-A	46-1002	AAA9043	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-q	H-90	-A	46-1002	AAA9043	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-q	H-90	-A	46-1002	AAA9043	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-q	H-90	-A	46-1002	AAA9043	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-q	H-90	-B	46-1002	AAA9044	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-q	H-90	-B	46-1002	AAA9044	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-q	H-90	-B	46-1002	AAA9044	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-q	H-90	-B	46-1002	AAA9044	VOCs	Sub Surface	40mL Amber	Auger
46-004-q	H-90	-C	46-1002	AAA9045	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-q	H-90	-C	46-1002	AAA9045	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-q	H-90	-C	46-1002	AAA9045	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-q	H-90	-C	46-1002	AAA9045	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-91	-A	46-1006	AAA9055	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-91	-A	46-1006	AAA9055	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-91	-A	46-1006	AAA9055	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-91	-A	46-1006	AAA9055	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-91	-B	46-1006	AAA9056	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-91	-B	46-1006	AAA9056	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-91	-B	46-1006	AAA9056	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-91	-B	46-1006	AAA9056	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-91	-C	46-1006	AAA9057	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-91	-C	46-1006	AAA9057	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-91	-C	46-1006	AAA9057	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-91	-C	46-1006	AAA9057	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-92	-A	46-1007	AAA9058	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-92	-A	46-1007	AAA9058	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-92	-A	46-1007	AAA9058	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-92	-A	46-1007	AAA9058	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-92	-B	46-1007	AAA9059	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-92	-B	46-1007	AAA9059	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-92	-B	46-1007	AAA9059	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-92	-B	46-1007	AAA9059	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-92	-C	46-1007	AAA9060	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-92	-C	46-1007	AAA9060	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-92	-C	46-1007	AAA9060	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-92	-C	46-1007	AAA9060	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day :

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-h	H-87	-A	46-1005	AAA9052	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-87	-A	46-1005	AAA9052	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-87	-A	46-1005	AAA9052	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-87	-A	46-1005	AAA9052	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-87	-B	46-1005	AAA9053	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-87	-B	46-1005	AAA9053	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-87	-B	46-1005	AAA9053	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-87	-B	46-1005	AAA9053	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-87	-C	46-1005	AAA9054	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-87	-C	46-1005	AAA9054	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-87	-C	46-1005	AAA9054	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-87	-C	46-1005	AAA9054	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-88	-A	46-1004	AAA9049	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-88	-A	46-1004	AAA9049	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-88	-A	46-1004	AAA9049	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-88	-A	46-1004	AAA9049	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-88	-B	46-1004	AAA9050	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-88	-B	46-1004	AAA9050	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-88	-B	46-1004	AAA9050	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-88	-B	46-1004	AAA9050	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-88	-C	46-1004	AAA9051	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-88	-C	46-1004	AAA9051	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-88	-C	46-1004	AAA9051	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-88	-C	46-1004	AAA9051	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-89	-A	46-1003	AAA9046	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-89	-A	46-1003	AAA9046	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-89	-A	46-1003	AAA9046	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-89	-A	46-1003	AAA9046	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-89	-B	46-1003	AAA9047	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-89	-B	46-1003	AAA9047	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-89	-B	46-1003	AAA9047	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-89	-B	46-1003	AAA9047	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-89	-C	46-1003	AAA9048	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-89	-C	46-1003	AAA9048	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-89	-C	46-1003	AAA9048	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-89	-C	46-1003	AAA9048	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 4

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-h	H-72	-A	46-1008	AAA9061	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-72	-A	46-1008	AAA9061	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-72	-A	46-1008	AAA9061	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-72	-A	46-1008	AAA9061	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-72	-B	46-1008	AAA9062	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-72	-B	46-1008	AAA9062	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-72	-B	46-1008	AAA9062	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-72	-B	46-1008	AAA9062	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-72	-C	46-1008	AAA9063	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-72	-C	46-1008	AAA9063	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-72	-C	46-1008	AAA9063	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-72	-C	46-1008	AAA9063	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-73	-A	46-1009	AAA9064	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-h	H-73	-A	46-1009	AAA9064	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-h	H-73	-A	46-1009	AAA9064	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-h	H-73	-A	46-1009	AAA9064	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-h	H-73	-B	46-1009	AAA9065	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-73	-B	46-1009	AAA9065	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-73	-B	46-1009	AAA9065	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-73	-B	46-1009	AAA9065	VOCs	Sub Surface	40mL Amber	Auger
46-004-h	H-73	-C	46-1009	AAA9066	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-h	H-73	-C	46-1009	AAA9066	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-h	H-73	-C	46-1009	AAA9066	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-h	H-73	-C	46-1009	AAA9066	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-74	-A	46-1010	AAA9067	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-74	-A	46-1010	AAA9067	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-74	-A	46-1010	AAA9067	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-74	-A	46-1010	AAA9067	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-74	-B	46-1010	AAA9068	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-74	-B	46-1010	AAA9068	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-74	-B	46-1010	AAA9068	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-74	-B	46-1010	AAA9068	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-74	-C	46-1010	AAA9069	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-74	-C	46-1010	AAA9069	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-74	-C	46-1010	AAA9069	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-74	-C	46-1010	AAA9069	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-75	-A	46-1011	AAA9070	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-75	-A	46-1011	AAA9070	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-75	-A	46-1011	AAA9070	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-75	-A	46-1011	AAA9070	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-75	-B	46-1011	AAA9071	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-75	-B	46-1011	AAA9071	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-75	-B	46-1011	AAA9071	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-75	-B	46-1011	AAA9071	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-75	-C	46-1011	AAA9072	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-75	-C	46-1011	AAA9072	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-75	-C	46-1011	AAA9072	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-75	-C	46-1011	AAA9072	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	QA-PE			AAA9438	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon

Page 1

Exclusion Zone

Daily Sampling Schedule for 1140

Day 4

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-x	H-65	-A	46-1014	AAA9079	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-65	-A	46-1014	AAA9079	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-65	-A	46-1014	AAA9079	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-65	-A	46-1014	AAA9079	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-65	-B	46-1014	AAA9080	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-65	-B	46-1014	AAA9080	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-65	-B	46-1014	AAA9080	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-65	-B	46-1014	AAA9080	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-65	-C	46-1014	AAA9081	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-65	-C	46-1014	AAA9081	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-65	-C	46-1014	AAA9081	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-65	-C	46-1014	AAA9081	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-66	-A	46-1015	AAA9082	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-66	-A	46-1015	AAA9082	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-66	-A	46-1015	AAA9082	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-66	-A	46-1015	AAA9082	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-66	-B	46-1015	AAA9083	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-66	-B	46-1015	AAA9083	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-66	-B	46-1015	AAA9083	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-66	-B	46-1015	AAA9083	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-66	-C	46-1015	AAA9084	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-66	-C	46-1015	AAA9084	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-66	-C	46-1015	AAA9084	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-66	-C	46-1015	AAA9084	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-76	-A	46-1012	AAA9073	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-76	-A	46-1012	AAA9073	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-76	-A	46-1012	AAA9073	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-76	-A	46-1012	AAA9073	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-76	-B	46-1012	AAA9074	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-76	-B	46-1012	AAA9074	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-76	-B	46-1012	AAA9074	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-76	-B	46-1012	AAA9074	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-76	-C	46-1012	AAA9075	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-76	-C	46-1012	AAA9075	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-76	-C	46-1012	AAA9075	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-76	-C	46-1012	AAA9075	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-77	-A	46-1013	AAA9076	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-77	-A	46-1013	AAA9076	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-77	-A	46-1013	AAA9076	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-77	-A	46-1013	AAA9076	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-77	-B	46-1013	AAA9077	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-77	-B	46-1013	AAA9077	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-77	-B	46-1013	AAA9077	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-77	-B	46-1013	AAA9077	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-77	-C	46-1013	AAA9078	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-77	-C	46-1013	AAA9078	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-77	-C	46-1013	AAA9078	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-77	-C	46-1013	AAA9078	VOCs	Sub Surface	40mL Amber	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 6

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-x	H-67	-A	46-1016	AAA9085	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-67	-A	46-1016	AAA9085	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-67	-A	46-1016	AAA9085	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-67	-A	46-1016	AAA9085	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-67	-B	46-1016	AAA9086	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-67	-B	46-1016	AAA9086	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-67	-B	46-1016	AAA9086	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-67	-B	46-1016	AAA9086	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-67	-C	46-1016	AAA9087	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-67	-C	46-1016	AAA9087	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-67	-C	46-1016	AAA9087	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-67	-C	46-1016	AAA9087	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-68	-A	46-1017	AAA9088	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-68	-A	46-1017	AAA9088	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-68	-A	46-1017	AAA9088	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-68	-A	46-1017	AAA9088	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-68	-B	46-1017	AAA9089	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-68	-B	46-1017	AAA9089	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-68	-B	46-1017	AAA9089	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-68	-B	46-1017	AAA9089	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-68	-C	46-1017	AAA9090	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-68	-C	46-1017	AAA9090	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-68	-C	46-1017	AAA9090	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-68	-C	46-1017	AAA9090	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-69	-A	46-1018	AAA9091	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-69	-A	46-1018	AAA9091	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-69	-A	46-1018	AAA9091	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-69	-A	46-1018	AAA9091	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-69	-B	46-1018	AAA9092	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-69	-B	46-1018	AAA9092	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-69	-B	46-1018	AAA9092	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-69	-B	46-1018	AAA9092	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-69	-C	46-1018	AAA9093	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-69	-C	46-1018	AAA9093	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-69	-C	46-1018	AAA9093	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-69	-C	46-1018	AAA9093	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-70	-A	46-1019	AAA9094	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-70	-A	46-1019	AAA9094	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-70	-A	46-1019	AAA9094	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-70	-A	46-1019	AAA9094	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-70	-B	46-1019	AAA9095	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-70	-B	46-1019	AAA9095	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-70	-B	46-1019	AAA9095	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-70	-B	46-1019	AAA9095	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-70	-C	46-1019	AAA9096	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-70	-C	46-1019	AAA9096	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-70	-C	46-1019	AAA9096	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-70	-C	46-1019	AAA9096	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-70-duo	-A	46-1019	AAA9439	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-x	H-70-duo -A	46-1019	AAA9439	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-70-duo -A	46-1019	AAA9439	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-70-duo -A	46-1019	AAA9439	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-71 -A	46-1020	AAA9997	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-x	H-71 -A	46-1020	AAA9997	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-71 -A	46-1020	AAA9997	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-x	H-71 -A	46-1020	AAA9997	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-x	H-71 -B	46-1020	AAA9998	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-71 -B	46-1020	AAA9998	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-71 -B	46-1020	AAA9998	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-71 -B	46-1020	AAA9998	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	H-71 -C	46-1020	AAA9999	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-x	H-71 -C	46-1020	AAA9999	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-x	H-71 -C	46-1020	AAA9999	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-x	H-71 -C	46-1020	AAA9999	VOCs	Sub Surface	40mL Amber	Auger
46-004-x	QA-PE -C		AAA9446	Metals, Mercury	Surface Soil	125mL Glass	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day -

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-a2	H-78	-A	46-1021	AAA9100	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-78	-A	46-1021	AAA9100	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-78	-A	46-1021	AAA9100	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-78	-A	46-1021	AAA9100	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-78	-B	46-1021	AAA9101	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-78	-B	46-1021	AAA9101	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-78	-B	46-1021	AAA9101	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-78	-B	46-1021	AAA9101	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-78	-C	46-1021	AAA9102	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-78	-C	46-1021	AAA9102	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-78	-C	46-1021	AAA9102	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-78	-C	46-1021	AAA9102	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-79	-A	46-1022	AAA9103	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-79	-A	46-1022	AAA9103	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-79	-A	46-1022	AAA9103	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-79	-A	46-1022	AAA9103	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-79	-B	46-1022	AAA9104	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-79	-B	46-1022	AAA9104	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-79	-B	46-1022	AAA9104	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-79	-B	46-1022	AAA9104	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-79	-C	46-1022	AAA9105	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-a2	H-79	-C	46-1022	AAA9105	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-79	-C	46-1022	AAA9105	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-79	-C	46-1022	AAA9105	VOCs	Sub Surface	40mL Amber	Auger
46-004-u	H-80	-A	46-1022	AAA9106	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-u	H-80	-A	46-1022	AAA9106	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-u	H-80	-A	46-1022	AAA9106	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-u	H-80	-A	46-1022	AAA9106	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-u	H-80	-B	46-1022	AAA9107	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-u	H-80	-B	46-1022	AAA9107	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-u	H-80	-B	46-1022	AAA9107	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-u	H-80	-B	46-1022	AAA9107	VOCs	Sub Surface	40mL Amber	Auger
46-004-u	H-80	-C	46-1022	AAA9108	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-u	H-80	-C	46-1022	AAA9108	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-u	H-80	-C	46-1022	AAA9108	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-u	H-80	-C	46-1022	AAA9108	VOCs	Sub Surface	40mL Amber	Auger
46-004-v	H-81	-A	46-1024	AAA9109	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-v	H-81	-A	46-1024	AAA9109	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-004-v	H-81	-A	46-1024	AAA9109	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-v	H-81	-B	46-1024	AAA9110	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-v	H-81	-B	46-1024	AAA9110	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-v	H-81	-B	46-1024	AAA9110	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-v	H-81	-C	46-1024	AAA9111	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-v	H-81	-C	46-1024	AAA9111	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-v	H-81	-C	46-1024	AAA9111	Semi-VOCs	Sub Surface	125mL Glass	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-y	H-63	-A	46-1025	AAA9112	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-y	H-63	-A	46-1025	AAA9112	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-63	-A	46-1025	AAA9112	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-63	-A	46-1025	AAA9112	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-y	H-63	-B	46-1025	AAA9113	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-63	-B	46-1025	AAA9113	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-63	-B	46-1025	AAA9113	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-63	-B	46-1025	AAA9113	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-63	-C	46-1025	AAA9114	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-63	-C	46-1025	AAA9114	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-63	-C	46-1025	AAA9114	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-63	-C	46-1025	AAA9114	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-64	-A	46-1026	AAA9115	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-y	H-64	-A	46-1026	AAA9115	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-64	-A	46-1026	AAA9115	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-64	-A	46-1026	AAA9115	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-y	H-64	-B	46-1026	AAA9116	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-64	-B	46-1026	AAA9116	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-64	-B	46-1026	AAA9116	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-64	-B	46-1026	AAA9116	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-64	-C	46-1026	AAA9117	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-64	-C	46-1026	AAA9117	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-64	-C	46-1026	AAA9117	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-64	-C	46-1026	AAA9117	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	CA-PE			AAA9447	Metals, Mercury	Surface Soil	125mL Glass	Auger
Agg 5.6	S-17		46-1029	AAA9120	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	S-17		46-1029	AAA9120	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	S-32		46-1027	AAA9118	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	S-32		46-1027	AAA9118	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	S-33		46-1028	AAA9119	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	S-33		46-1028	AAA9119	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 9

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-y	H-38	-A	46-1121	AAA9336	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-y	H-38	-A	46-1121	AAA9336	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-38	-A	46-1121	AAA9336	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-38	-A	46-1121	AAA9336	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-y	H-38	-B	46-1121	AAA9337	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-38	-B	46-1121	AAA9337	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-38	-B	46-1121	AAA9337	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-38	-B	46-1121	AAA9337	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-38	-C	46-1121	AAA9338	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-38	-C	46-1121	AAA9338	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-38	-C	46-1121	AAA9338	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-38	-C	46-1121	AAA9338	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-39	-A	46-1122	AAA9339	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-y	H-39	-A	46-1122	AAA9339	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-39	-A	46-1122	AAA9339	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-39	-A	46-1122	AAA9339	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-y	H-39	-B	46-1122	AAA9340	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-39	-B	46-1122	AAA9340	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-39	-B	46-1122	AAA9340	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-39	-B	46-1122	AAA9340	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-39	-C	46-1122	AAA9341	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-39	-C	46-1122	AAA9341	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-39	-C	46-1122	AAA9341	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-39	-C	46-1122	AAA9341	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-40	-A	46-1123	AAA9342	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-y	H-40	-A	46-1123	AAA9342	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-40	-A	46-1123	AAA9342	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-y	H-40	-A	46-1123	AAA9342	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-y	H-40	-B	46-1123	AAA9343	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-40	-B	46-1123	AAA9343	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-40	-B	46-1123	AAA9343	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-40	-B	46-1123	AAA9343	VOCs	Sub Surface	40mL Amber	Auger
46-004-y	H-40	-C	46-1123	AAA9344	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-y	H-40	-C	46-1123	AAA9344	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-y	H-40	-C	46-1123	AAA9344	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-y	H-40	-C	46-1123	AAA9344	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 10

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-d	H-33	-A	46-1033	AAA9130	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-33	-A	46-1033	AAA9130	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-33	-A	46-1033	AAA9130	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-33	-A	46-1033	AAA9130	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-33	-B	46-1033	AAA9131	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-33	-B	46-1033	AAA9131	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-33	-B	46-1033	AAA9131	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-33	-B	46-1033	AAA9131	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-33	-C	46-1033	AAA9132	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-33	-C	46-1033	AAA9132	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-33	-C	46-1033	AAA9132	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-33	-C	46-1033	AAA9132	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-35	-A	46-1030	AAA9121	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-35	-A	46-1030	AAA9121	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-35	-A	46-1030	AAA9121	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-35	-A	46-1030	AAA9121	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-35	-B	46-1030	AAA9122	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-35	-B	46-1030	AAA9122	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-35	-B	46-1030	AAA9122	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-35	-B	46-1030	AAA9122	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-35	-C	46-1030	AAA9123	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-35	-C	46-1030	AAA9123	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-35	-C	46-1030	AAA9123	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-35	-C	46-1030	AAA9123	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-36	-A	46-1031	AAA9124	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-36	-A	46-1031	AAA9124	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-36	-A	46-1031	AAA9124	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-36	-A	46-1031	AAA9124	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-36	-B	46-1031	AAA9125	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-36	-B	46-1031	AAA9125	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-36	-B	46-1031	AAA9125	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-36	-B	46-1031	AAA9125	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-36	-C	46-1031	AAA9126	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-36	-C	46-1031	AAA9126	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-36	-C	46-1031	AAA9126	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-36	-C	46-1031	AAA9126	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-37	-A	46-1032	AAA9127	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-37	-A	46-1032	AAA9127	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-37	-A	46-1032	AAA9127	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-37	-A	46-1032	AAA9127	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-37	-B	46-1032	AAA9128	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-37	-B	46-1032	AAA9128	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-37	-B	46-1032	AAA9128	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-37	-B	46-1032	AAA9128	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-37	-C	46-1032	AAA9129	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-37	-C	46-1032	AAA9129	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-37	-C	46-1032	AAA9129	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-37	-C	46-1032	AAA9129	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 11

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-z	H-30	-A	46-1034	AAA9133	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-z	H-30	-A	46-1034	AAA9133	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-z	H-30	-A	46-1034	AAA9133	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-z	H-30	-A	46-1034	AAA9133	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-z	H-30	-B	46-1034	AAA9134	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-z	H-30	-B	46-1034	AAA9134	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-z	H-30	-B	46-1034	AAA9134	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-z	H-30	-B	46-1034	AAA9134	VOCs	Sub Surface	40mL Amber	Auger
46-004-z	H-30	-C	46-1034	AAA9135	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-z	H-30	-C	46-1034	AAA9135	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-z	H-30	-C	46-1034	AAA9135	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-z	H-30	-C	46-1034	AAA9135	VOCs	Sub Surface	40mL Amber	Auger
46-004-z	H-31	-A	46-1035	AAA9136	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-z	H-31	-A	46-1035	AAA9136	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-z	H-31	-A	46-1035	AAA9136	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-z	H-31	-A	46-1035	AAA9136	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-z	H-31	-B	46-1035	AAA9137	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-z	H-31	-B	46-1035	AAA9137	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-z	H-31	-B	46-1035	AAA9137	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-z	H-31	-B	46-1035	AAA9137	VOCs	Sub Surface	40mL Amber	Auger
46-004-z	H-31	-C	46-1035	AAA9138	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-z	H-31	-C	46-1035	AAA9138	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-z	H-31	-C	46-1035	AAA9138	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-z	H-31	-C	46-1035	AAA9138	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-32	-A	46-1036	AAA9139	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-32	-A	46-1036	AAA9139	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-32	-A	46-1036	AAA9139	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-32	-A	46-1036	AAA9139	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-32	-B	46-1036	AAA9140	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-32	-B	46-1036	AAA9140	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-32	-B	46-1036	AAA9140	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-32	-B	46-1036	AAA9140	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-32	-C	46-1036	AAA9141	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-32	-C	46-1036	AAA9141	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-32	-C	46-1036	AAA9141	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-32	-C	46-1036	AAA9141	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-32-dup	-A	46-1036	AAA9440	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-32-dup	-A	46-1036	AAA9440	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-32-dup	-A	46-1036	AAA9440	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-32-dup	-A	46-1036	AAA9440	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-34	-A	46-1037	AAA9142	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-34	-A	46-1037	AAA9142	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-34	-A	46-1037	AAA9142	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-34	-A	46-1037	AAA9142	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-34	-B	46-1037	AAA9143	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-d	H-34	-B	46-1037	AAA9143	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-34	-B	46-1037	AAA9143	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-34	-B	46-1037	AAA9143	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-34	-C	46-1037	AAA9144	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 11

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-d	H-34	.0'	46-1037	AAA9144	Metals, Mercury	Sub Surface	125ml Glass	Auger
46-006-d	H-34	.0'	46-1037	AAA9144	Semi-VOCs, PCBs	Sub Surface	125ml Glass	Auger
46-006-d	H-34	.0'	46-1037	AAA9144	VOCs	Sub Surface	40ml Amber	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 12

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-2	H-26 -A	46-1038	AAA9145	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-26 -A	46-1038	AAA9145	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-26 -A	46-1038	AAA9145	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-26 -A	46-1038	AAA9145	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-26 -B	46-1038	AAA9146	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-26 -B	46-1038	AAA9146	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-26 -B	46-1038	AAA9146	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-26 -B	46-1038	AAA9146	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-26 -C	46-1038	AAA9147	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-26 -C	46-1038	AAA9147	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-26 -C	46-1038	AAA9147	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-26 -C	46-1038	AAA9147	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-27 -A	46-1039	AAA9148	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-27 -A	46-1039	AAA9148	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-27 -A	46-1039	AAA9148	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-27 -A	46-1039	AAA9148	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-27 -B	46-1039	AAA9149	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-27 -B	46-1039	AAA9149	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-27 -B	46-1039	AAA9149	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-27 -B	46-1039	AAA9149	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-27 -C	46-1039	AAA9150	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-27 -C	46-1039	AAA9150	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-27 -C	46-1039	AAA9150	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-27 -C	46-1039	AAA9150	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-29 -A	46-1040	AAA9151	Cs137, Iso U, Iso Pu, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-29 -A	46-1040	AAA9151	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-29 -A	46-1040	AAA9151	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-29 -A	46-1040	AAA9151	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-29 -B	46-1040	AAA9152	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-29 -B	46-1040	AAA9152	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-29 -B	46-1040	AAA9152	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-29 -B	46-1040	AAA9152	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-29 -C	46-1040	AAA9153	Cs137, Iso U, Iso Pu, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-2	H-29 -C	46-1040	AAA9153	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-29 -C	46-1040	AAA9153	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-29 -C	46-1040	AAA9153	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	QA-PE		AAA9148	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 13

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-2	H-24	-A	46-1042	AAA9157	Iso Cs, Iso Pu, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-24	-A	46-1042	AAA9157	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-24	-A	46-1042	AAA9157	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-24	-A	46-1042	AAA9157	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-24	-B	46-1042	AAA9158	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-24	-B	46-1042	AAA9158	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-24	-B	46-1042	AAA9158	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-24	-B	46-1042	AAA9158	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-24	-C	46-1042	AAA9159	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-24	-C	46-1042	AAA9159	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-24	-C	46-1042	AAA9159	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-24	-C	46-1042	AAA9159	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-25	-A	46-1043	AAA9160	Iso Cs, Iso Pu, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-25	-A	46-1043	AAA9160	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-25	-A	46-1043	AAA9160	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-25	-A	46-1043	AAA9160	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-25	-B	46-1043	AAA9161	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-25	-B	46-1043	AAA9161	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-25	-B	46-1043	AAA9161	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-25	-B	46-1043	AAA9161	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-25	-C	46-1043	AAA9162	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-25	-C	46-1043	AAA9162	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-25	-C	46-1043	AAA9162	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-25	-C	46-1043	AAA9162	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-28	-A	46-1041	AAA9154	Iso Cs, Iso Pu, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-2	H-28	-A	46-1041	AAA9154	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-28	-A	46-1041	AAA9154	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-2	H-28	-A	46-1041	AAA9154	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-2	H-28	-B	46-1041	AAA9155	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-28	-B	46-1041	AAA9155	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-28	-B	46-1041	AAA9155	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-28	-B	46-1041	AAA9155	VOCs	Sub Surface	40mL Amber	Auger
46-004-2	H-28	-C	46-1041	AAA9156	Iso Cs, Iso Pu, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-2	H-28	-C	46-1041	AAA9156	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-2	H-28	-C	46-1041	AAA9156	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-2	H-28	-C	46-1041	AAA9156	VOCs	Sub Surface	40mL Amber	Auger

clusion Zone

Daily Sampling Schedule for 1140

Day 15

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-m	H-169	-A	46-1124	AAA9485	Asbestos	Surface Soil	125mL Glass	Spade-spoon
46-004-m	H-169	-A	46-1124	AAA9485	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-m	H-169	-A	46-1124	AAA9485	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-m	H-169	-A	46-1124	AAA9485	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-m	H-169	-A	46-1124	AAA9485	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-m	H-169	-B	46-1124	AAA9486	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-169	-B	46-1124	AAA9486	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-169	-B	46-1124	AAA9486	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-169	-B	46-1124	AAA9486	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-169	-B	46-1124	AAA9486	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-169	-C	46-1124	AAA9487	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-169	-C	46-1124	AAA9487	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-169	-C	46-1124	AAA9487	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-169	-C	46-1124	AAA9487	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-169	-C	46-1124	AAA9487	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-8	-A	46-1044	AAA9163	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-8	-A	46-1044	AAA9163	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-g	H-8	-A	46-1044	AAA9163	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-8	-A	46-1044	AAA9163	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-8	-B	46-1044	AAA9164	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-8	-B	46-1044	AAA9164	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-8	-B	46-1044	AAA9164	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-8	-B	46-1044	AAA9164	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-8	-C	46-1044	AAA9165	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-8	-C	46-1044	AAA9165	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-8	-C	46-1044	AAA9165	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-8	-C	46-1044	AAA9165	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-9	-A	46-1045	AAA9166	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-9	-A	46-1045	AAA9166	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-g	H-9	-A	46-1045	AAA9166	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-9	-A	46-1045	AAA9166	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-9	-B	46-1045	AAA9167	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-9	-B	46-1045	AAA9167	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-9	-B	46-1045	AAA9167	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-9	-B	46-1045	AAA9167	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-9	-C	46-1045	AAA9168	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-9	-C	46-1045	AAA9168	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-9	-C	46-1045	AAA9168	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-9	-C	46-1045	AAA9168	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 16

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-m	H-10	-A	46-1046	AAA9169	Asbestos	Surface Soil	125mL Glass	Scoop-spoon
46-004-m	H-10	-A	46-1046	AAA9169	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Scoop-spoon
46-004-m	H-10	-A	46-1046	AAA9169	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Scoop-spoon
46-004-m	H-10	-A	46-1046	AAA9169	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Scoop-spoon
46-004-m	H-10	-A	46-1046	AAA9169	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-004-m	H-10	-B	46-1046	AAA9170	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-10	-B	46-1046	AAA9170	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-10	-B	46-1046	AAA9170	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-10	-B	46-1046	AAA9170	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-10	-B	46-1046	AAA9170	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-10	-C	46-1046	AAA9171	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-10	-C	46-1046	AAA9171	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-10	-C	46-1046	AAA9171	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-10	-C	46-1046	AAA9171	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-10	-C	46-1046	AAA9171	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-11	-A	46-1047	AAA9172	Asbestos	Surface Soil	125mL Glass	Scoop-spoon
46-004-m	H-11	-A	46-1047	AAA9172	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Scoop-spoon
46-004-m	H-11	-A	46-1047	AAA9172	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Scoop-spoon
46-004-m	H-11	-A	46-1047	AAA9172	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Scoop-spoon
46-004-m	H-11	-A	46-1047	AAA9172	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-004-m	H-11	-B	46-1047	AAA9173	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-11	-B	46-1047	AAA9173	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-11	-B	46-1047	AAA9173	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-11	-B	46-1047	AAA9173	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-11	-B	46-1047	AAA9173	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-11	-C	46-1047	AAA9174	Asbestos	Sub Surface	125mL Glass	Auger
46-004-m	H-11	-C	46-1047	AAA9174	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-11	-C	46-1047	AAA9174	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-m	H-11	-C	46-1047	AAA9174	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-m	H-11	-C	46-1047	AAA9174	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-20	-A	46-1048	AAA9175	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Scoop-spoon
46-004-g	H-20	-A	46-1048	AAA9175	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Scoop-spoon
46-004-g	H-20	-A	46-1048	AAA9175	Semi-VOCs	Surface Soil	125mL Glass	Scoop-spoon
46-004-g	H-20	-A	46-1048	AAA9175	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-004-g	H-20	-B	46-1048	AAA9176	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-20	-B	46-1048	AAA9176	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-20	-B	46-1048	AAA9176	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-20	-B	46-1048	AAA9176	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-20	-C	46-1048	AAA9177	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-20	-C	46-1048	AAA9177	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-20	-C	46-1048	AAA9177	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-20	-C	46-1048	AAA9177	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 17

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-g	H-21	-A	46-1049	AAA9178	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-21	-A	46-1049	AAA9178	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-g	H-21	-A	46-1049	AAA9178	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-21	-A	46-1049	AAA9178	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-21	-B	46-1049	AAA9179	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-21	-B	46-1049	AAA9179	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-21	-B	46-1049	AAA9179	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-21	-B	46-1049	AAA9179	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-21	-C	46-1049	AAA9180	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-21	-C	46-1049	AAA9180	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-21	-C	46-1049	AAA9180	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-21	-C	46-1049	AAA9180	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-22	-A	46-1050	AAA9181	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-22	-A	46-1050	AAA9181	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-g	H-22	-A	46-1050	AAA9181	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-22	-A	46-1050	AAA9181	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-22	-B	46-1050	AAA9182	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-22	-B	46-1050	AAA9182	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-22	-B	46-1050	AAA9182	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-22	-B	46-1050	AAA9182	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-22	-C	46-1050	AAA9183	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-22	-C	46-1050	AAA9183	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-22	-C	46-1050	AAA9183	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-22	-C	46-1050	AAA9183	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-23	-A	46-1051	AAA9184	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-23	-A	46-1051	AAA9184	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-g	H-23	-A	46-1051	AAA9184	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-23	-A	46-1051	AAA9184	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-23	-B	46-1051	AAA9185	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-23	-B	46-1051	AAA9185	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-23	-B	46-1051	AAA9185	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-23	-B	46-1051	AAA9185	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-23	-C	46-1051	AAA9186	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-23	-C	46-1051	AAA9186	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-g	H-23	-C	46-1051	AAA9186	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-23	-C	46-1051	AAA9186	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	CA-PE		NA	AAA9449	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 18

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-g	H-44	-A	46-1052	AAA9187	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-44	-A	46-1052	AAA9187	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-44	-A	46-1052	AAA9187	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-44	-A	46-1052	AAA9187	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-44	-B	46-1052	AAA9188	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-44	-B	46-1052	AAA9188	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-44	-B	46-1052	AAA9188	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-44	-B	46-1052	AAA9188	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-44	-C	46-1052	AAA9189	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-44	-C	46-1052	AAA9189	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-44	-C	46-1052	AAA9189	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-44	-C	46-1052	AAA9189	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-45	-A	46-1053	AAA9190	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-45	-A	46-1053	AAA9190	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-45	-A	46-1053	AAA9190	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-45	-A	46-1053	AAA9190	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-45	-B	46-1053	AAA9191	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-45	-B	46-1053	AAA9191	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-45	-B	46-1053	AAA9191	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-45	-B	46-1053	AAA9191	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-45	-C	46-1053	AAA9192	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-45	-C	46-1053	AAA9192	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-45	-C	46-1053	AAA9192	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-45	-C	46-1053	AAA9192	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-46	-A	46-1054	AAA9193	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-g	H-46	-A	46-1054	AAA9193	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-46	-A	46-1054	AAA9193	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-g	H-46	-A	46-1054	AAA9193	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-g	H-46	-B	46-1054	AAA9194	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-46	-B	46-1054	AAA9194	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-46	-B	46-1054	AAA9194	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-46	-B	46-1054	AAA9194	VOCs	Sub Surface	40mL Amber	Auger
46-004-g	H-46	-C	46-1054	AAA9195	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-g	H-46	-C	46-1054	AAA9195	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-g	H-46	-C	46-1054	AAA9195	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-g	H-46	-C	46-1054	AAA9195	VOCs	Sub Surface	40mL Amber	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 19

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-4	-A	46-1058	AAA9205	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-4	-A	46-1058	AAA9205	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-4	-A	46-1058	AAA9205	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-4	-A	46-1058	AAA9205	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-4	-A	46-1058	AAA9205	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-4	-B	46-1058	AAA9206	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-4	-B	46-1058	AAA9206	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-4	-B	46-1058	AAA9206	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-4	-B	46-1058	AAA9206	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-4	-B	46-1058	AAA9206	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-4	-C	46-1058	AAA9207	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-4	-C	46-1058	AAA9207	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-4	-C	46-1058	AAA9207	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-4	-C	46-1058	AAA9207	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-4	-C	46-1058	AAA9207	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-5	-A	46-1055	AAA9196	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-5	-A	46-1055	AAA9196	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-5	-A	46-1055	AAA9196	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-5	-A	46-1055	AAA9196	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-5	-A	46-1055	AAA9196	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-5	-B	46-1055	AAA9197	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-5	-B	46-1055	AAA9197	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-5	-B	46-1055	AAA9197	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-5	-B	46-1055	AAA9197	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-5	-B	46-1055	AAA9197	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-5	-C	46-1055	AAA9198	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-5	-C	46-1055	AAA9198	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-5	-C	46-1055	AAA9198	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-5	-C	46-1055	AAA9198	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-5	-C	46-1055	AAA9198	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-5-dup	-A	46-1055	AAA9460	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-5-dup	-A	46-1055	AAA9460	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-5-dup	-A	46-1055	AAA9460	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-5-dup	-A	46-1055	AAA9460	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-5-dup	-A	46-1055	AAA9460	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-6	-A	46-1056	AAA9199	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-6	-A	46-1056	AAA9199	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-6	-A	46-1056	AAA9199	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-6	-A	46-1056	AAA9199	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-6	-A	46-1056	AAA9199	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-6	-B	46-1056	AAA9200	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-6	-B	46-1056	AAA9200	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-6	-B	46-1056	AAA9200	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-6	-B	46-1056	AAA9200	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-6	-B	46-1056	AAA9200	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-6	-C	46-1056	AAA9201	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-6	-C	46-1056	AAA9201	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-6	-C	46-1056	AAA9201	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-6	-C	46-1056	AAA9201	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 19

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-6	.C	46-1056	AAA9201	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-7	.A	46-1057	AAA9202	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-7	.A	46-1057	AAA9202	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-7	.A	46-1057	AAA9202	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-7	.A	46-1057	AAA9202	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-7	.A	46-1057	AAA9202	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-7	.B	46-1057	AAA9203	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-7	.B	46-1057	AAA9203	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-7	.B	46-1057	AAA9203	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-7	.B	46-1057	AAA9203	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-7	.B	46-1057	AAA9203	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-7	.C	46-1057	AAA9204	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-7	.C	46-1057	AAA9204	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-7	.C	46-1057	AAA9204	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-7	.C	46-1057	AAA9204	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-7	.C	46-1057	AAA9204	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 20

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-14 -A	46-1059	AAA9208	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-14 -A	46-1059	AAA9208	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-14 -A	46-1059	AAA9208	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-14 -A	46-1059	AAA9208	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-14 -A	46-1059	AAA9208	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-14 -B	46-1059	AAA9209	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-14 -B	46-1059	AAA9209	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-14 -B	46-1059	AAA9209	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-14 -B	46-1059	AAA9209	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-14 -B	46-1059	AAA9209	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-14 -C	46-1059	AAA9210	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-14 -C	46-1059	AAA9210	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-14 -C	46-1059	AAA9210	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-14 -C	46-1059	AAA9210	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-14 -C	46-1059	AAA9210	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-15 -A	46-1060	AAA9211	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-15 -A	46-1060	AAA9211	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-15 -A	46-1060	AAA9211	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-15 -A	46-1060	AAA9211	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-15 -A	46-1060	AAA9211	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-15 -B	46-1060	AAA9212	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-15 -B	46-1060	AAA9212	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-15 -B	46-1060	AAA9212	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-15 -B	46-1060	AAA9212	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-15 -B	46-1060	AAA9212	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-15 -C	46-1060	AAA9213	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-15 -C	46-1060	AAA9213	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-15 -C	46-1060	AAA9213	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-15 -C	46-1060	AAA9213	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-15 -C	46-1060	AAA9213	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-16 -A	46-1061	AAA9214	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-16 -A	46-1061	AAA9214	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-16 -A	46-1061	AAA9214	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-16 -A	46-1061	AAA9214	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-16 -A	46-1061	AAA9214	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-16 -B	46-1061	AAA9215	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-16 -B	46-1061	AAA9215	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-16 -B	46-1061	AAA9215	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-16 -B	46-1061	AAA9215	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-16 -B	46-1061	AAA9215	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-16 -C	46-1061	AAA9216	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-16 -C	46-1061	AAA9216	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-16 -C	46-1061	AAA9216	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-16 -C	46-1061	AAA9216	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-16 -C	46-1061	AAA9216	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-17 -A	46-1062	AAA9217	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-17 -A	46-1062	AAA9217	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-17 -A	46-1062	AAA9217	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-17 -A	46-1062	AAA9217	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day 20

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-17 -A	46-1062	AAA9217	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-004-c2	H-17 -B	46-1062	AAA9218	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-17 -B	46-1062	AAA9218	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-17 -B	46-1062	AAA9218	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-17 -B	46-1062	AAA9218	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-17 -B	46-1062	AAA9218	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-17 -C	46-1062	AAA9219	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-17 -C	46-1062	AAA9219	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-17 -C	46-1062	AAA9219	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-17 -C	46-1062	AAA9219	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-17 -C	46-1062	AAA9219	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	CA-PE		AAA9450	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Scoop-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 21

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
Agg 5 6	H-12	-A	46-1065	AAA9226	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5 6	H-12	-A	46-1065	AAA9226	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5 6	H-12	-B	46-1065	AAA9227	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-12	-B	46-1065	AAA9227	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	H-12	-C	46-1065	AAA9228	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5 6	H-12	-C	46-1065	AAA9228	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5 6	H-13	-A	46-1066	AAA9229	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5 6	H-13	-A	46-1066	AAA9229	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	H-13	-B	46-1066	AAA9230	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-13	-B	46-1066	AAA9230	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	H-13	-C	46-1066	AAA9231	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-13	-C	46-1066	AAA9231	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-004-c2	H-18	-A	46-1063	AAA9220	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-18	-A	46-1063	AAA9220	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-18	-A	46-1063	AAA9220	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-18	-A	46-1063	AAA9220	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-18	-A	46-1063	AAA9220	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-18	-B	46-1063	AAA9221	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-18	-B	46-1063	AAA9221	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-18	-B	46-1063	AAA9221	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-18	-B	46-1063	AAA9221	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-18	-B	46-1063	AAA9221	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-18	-C	46-1063	AAA9222	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-18	-C	46-1063	AAA9222	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-18	-C	46-1063	AAA9222	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-18	-C	46-1063	AAA9222	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-18	-C	46-1063	AAA9222	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-19	-A	46-1064	AAA9223	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-19	-A	46-1064	AAA9223	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-c2	H-19	-A	46-1064	AAA9223	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-19	-A	46-1064	AAA9223	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-19	-A	46-1064	AAA9223	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-19	-B	46-1064	AAA9224	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-19	-B	46-1064	AAA9224	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-19	-B	46-1064	AAA9224	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-19	-B	46-1064	AAA9224	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-19	-B	46-1064	AAA9224	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-19	-C	46-1064	AAA9225	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-19	-C	46-1064	AAA9225	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-c2	H-19	-C	46-1064	AAA9225	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-19	-C	46-1064	AAA9225	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-19	-C	46-1064	AAA9225	VOCs	Sub Surface	40mL Amber	Auger

xclusion Zone

Daily Sampling Schedule for 1140

Day 22

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
Agg 5.6	H-162 -A	46-1067	AAA9232	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	H-162 -A	46-1067	AAA9232	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	H-162 -B	46-1067	AAA9233	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-162 -B	46-1067	AAA9233	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	H-162 -C	46-1067	AAA9234	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-162 -C	46-1067	AAA9234	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	H-162-du -A	46-1067	AAA9463	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	H-162-du -A	46-1067	AAA9463	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	H-163 -A	46-1068	AAA9235	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	H-163 -A	46-1068	AAA9235	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	H-163 -B	46-1068	AAA9236	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-163 -B	46-1068	AAA9236	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	H-163 -C	46-1068	AAA9237	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
Agg 5.6	H-163 -C	46-1068	AAA9237	Metals, (6010)	Sub Surface	125mL Plastic	Auger
Agg 5.6	QA-Rins		AAA9456	Cs137, Iso Th, Iso U	QA Water	2 Liter Plastic	
Agg 5.6	QA-Rins		AAA9456	Metals, (6010)	QA Water	250mL Plastic	

Exclusion Zone

Daily Sampling Schedule for 1140

Day 23

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
Agg 5.6	QA-PE		AAA9451	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	S-16	46-1071	AAA9240	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	S-16	46-1071	AAA9240	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	SS-1	46-1069	AAA9238	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	SS-1	46-1069	AAA9238	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
Agg 5.6	SS-2	46-1070	AAA9239	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
Agg 5.6	SS-2	46-1070	AAA9239	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon

cclusion Zone

Daily Sampling Schedule for 1140

Day 24

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-a	H-176	-A	46-1125	AAA9458	Cs137, Iso U, Iso Am	Surface Soil	250mL Plastic	
46-006-a	H-176	-A	46-1125	AAA9458	Metals, (6010)	Surface Soil	125mL Plastic	
46-006-a	H-176	-A	46-1125	AAA9458	Pesticides	Surface Soil	125mL Glass	
46-006-a	H-176	-A	46-1125	AAA9458	Semi-VOCs, PCBs	Surface Soil	125mL Glass	
46-006-a	H-176	-A	46-1125	AAA9458	VOCs	Surface Soil	40mL Amber	
46-006-a	H-176	-B	46-1125	AAA9459	Cs137, Iso U, Iso Am	Sub Surface	250mL Plastic	Auger
46-006-a	H-176	-B	46-1125	AAA9459	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-a	H-176	-B	46-1125	AAA9459	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-176	-B	46-1125	AAA9459	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-176	-B	46-1125	AAA9459	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	H-176	-C	46-1125	AAA9460	Cs137, Iso U, Iso Am	Sub Surface	250mL Plastic	Auger
46-006-a	H-176	-C	46-1125	AAA9460	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-a	H-176	-C	46-1125	AAA9460	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-176	-C	46-1125	AAA9460	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-176	-C	46-1125	AAA9460	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	H-2	-A	46-1073	AAA9244	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-a	H-2	-A	46-1073	AAA9244	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-2	-A	46-1073	AAA9244	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-2	-A	46-1073	AAA9244	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-2	-A	46-1073	AAA9244	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-a	H-2	-B	46-1073	AAA9245	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-a	H-2	-B	46-1073	AAA9245	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-B	46-1073	AAA9245	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-B	46-1073	AAA9245	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-B	46-1073	AAA9245	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	H-2	-C	46-1073	AAA9246	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-a	H-2	-C	46-1073	AAA9246	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-C	46-1073	AAA9246	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-C	46-1073	AAA9246	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-2	-C	46-1073	AAA9246	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	H-3	-A	46-1074	AAA9247	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-006-a	H-3	-A	46-1074	AAA9247	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-3	-A	46-1074	AAA9247	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-3	-A	46-1074	AAA9247	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-a	H-3	-A	46-1074	AAA9247	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-a	H-3	-B	46-1074	AAA9248	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-a	H-3	-B	46-1074	AAA9248	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-B	46-1074	AAA9248	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-B	46-1074	AAA9248	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-B	46-1074	AAA9248	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	H-3	-C	46-1074	AAA9249	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-006-a	H-3	-C	46-1074	AAA9249	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-C	46-1074	AAA9249	Pesticides	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-C	46-1074	AAA9249	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-a	H-3	-C	46-1074	AAA9249	VOCs	Sub Surface	40mL Amber	Auger
46-006-a	QA-Rins			AAA9457	Cs137, Iso U, Iso Am, Iso Th	CA Water	2 Liter Plastic	
46-006-a	QA-Rins			AAA9457	Metals, Mercury	CA Water	250mL Plastic	
46-006-a	QA-Rins			AAA9457	Pesticides	CA Water	1 Liter Amber	
46-006-a	QA-Rins			AAA9457	Semi-VOCs, PCBs	CA Water	1 Liter Amber	

Exclusion Zone

Daily Sampling Schedule for 1140

Day 25

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-48 -A	46-1072	AAA9241	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-48 -A	46-1072	AAA9241	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-48 -A	46-1072	AAA9241	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-48 -A	46-1072	AAA9241	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-48 -A	46-1072	AAA9241	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-48 -B	46-1072	AAA9242	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-48 -B	46-1072	AAA9242	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -B	46-1072	AAA9242	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -B	46-1072	AAA9242	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -B	46-1072	AAA9242	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-48 -C	46-1072	AAA9243	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-48 -C	46-1072	AAA9243	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -C	46-1072	AAA9243	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -C	46-1072	AAA9243	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-48 -C	46-1072	AAA9243	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-49 -A	46-1075	AAA9250	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-49 -A	46-1075	AAA9250	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49 -A	46-1075	AAA9250	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49 -A	46-1075	AAA9250	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49 -A	46-1075	AAA9250	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-49 -B	46-1075	AAA9251	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-49 -B	46-1075	AAA9251	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -B	46-1075	AAA9251	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -B	46-1075	AAA9251	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -B	46-1075	AAA9251	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-49 -C	46-1075	AAA9252	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-49 -C	46-1075	AAA9252	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -C	46-1075	AAA9252	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -C	46-1075	AAA9252	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-49 -C	46-1075	AAA9252	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-49-dup -A	46-1075	AAA9466	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-49-dup -A	46-1075	AAA9466	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49-dup -A	46-1075	AAA9466	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49-dup -A	46-1075	AAA9466	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-49-dup -A	46-1075	AAA9466	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-50 -A	46-1076	AAA9253	Cs137, Iso U, Iso Am, Iso Th	Surface Soil	250mL Plastic	Spade-spoon
46-004-c2	H-50 -A	46-1076	AAA9253	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-50 -A	46-1076	AAA9253	Pesticides	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-50 -A	46-1076	AAA9253	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-c2	H-50 -A	46-1076	AAA9253	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-c2	H-50 -B	46-1076	AAA9254	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-50 -B	46-1076	AAA9254	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-50 -B	46-1076	AAA9254	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-50 -B	46-1076	AAA9254	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-c2	H-50 -B	46-1076	AAA9254	VOCs	Sub Surface	40mL Amber	Auger
46-004-c2	H-50 -C	46-1076	AAA9255	Cs137, Iso U, Iso Am, Iso Th	Sub Surface	250mL Plastic	Auger
46-004-c2	H-50 -C	46-1076	AAA9255	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-c2	H-50 -C	46-1076	AAA9255	Pesticides	Sub Surface	125mL Glass	Auger
46-004-c2	H-50 -C	46-1076	AAA9255	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 25

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-c2	H-50 -C	46-1076	AAA9255	VOCs	Sub Surface	40mLAmber	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 26

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-b2	H-54	-A	46-1077	AAA9256	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-b2	H-54	-A	46-1077	AAA9256	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-b2	H-54	-A	46-1077	AAA9256	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-54	-A	46-1077	AAA9256	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-b2	H-54	-B	46-1077	AAA9257	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-54	-B	46-1077	AAA9257	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-b2	H-54	-B	46-1077	AAA9257	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-b2	H-54	-B	46-1077	AAA9257	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-54	-C	46-1077	AAA9258	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-54	-C	46-1077	AAA9258	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-b2	H-54	-C	46-1077	AAA9258	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-b2	H-54	-C	46-1077	AAA9258	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-55	-A	46-1078	AAA9259	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-b2	H-55	-A	46-1078	AAA9259	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-55	-A	46-1078	AAA9259	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-55	-A	46-1078	AAA9259	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-b2	H-55	-B	46-1078	AAA9260	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-55	-B	46-1078	AAA9260	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-55	-B	46-1078	AAA9260	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-55	-B	46-1078	AAA9260	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-55	-C	46-1078	AAA9261	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-55	-C	46-1078	AAA9261	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-55	-C	46-1078	AAA9261	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-55	-C	46-1078	AAA9261	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-56	-A	46-1079	AAA9262	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-b2	H-56	-A	46-1079	AAA9262	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-56	-A	46-1079	AAA9262	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-56	-A	46-1079	AAA9262	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-b2	H-56	-B	46-1079	AAA9263	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-56	-B	46-1079	AAA9263	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-56	-B	46-1079	AAA9263	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-56	-B	46-1079	AAA9263	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-56	-C	46-1079	AAA9264	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-56	-C	46-1079	AAA9264	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-56	-C	46-1079	AAA9264	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-56	-C	46-1079	AAA9264	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-57	-A	46-1080	AAA9265	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-b2	H-57	-A	46-1080	AAA9265	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-57	-A	46-1080	AAA9265	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-004-b2	H-57	-A	46-1080	AAA9265	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-b2	H-57	-B	46-1080	AAA9266	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-57	-B	46-1080	AAA9266	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-57	-B	46-1080	AAA9266	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-57	-B	46-1080	AAA9266	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	H-57	-C	46-1080	AAA9267	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-b2	H-57	-C	46-1080	AAA9267	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-b2	H-57	-C	46-1080	AAA9267	Semi-VOCs	Sub Surface	125mL Glass	Auger
46-004-b2	H-57	-C	46-1080	AAA9267	VOCs	Sub Surface	40mL Amber	Auger
46-004-b2	QA-PE			AAA9452	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon

clusion Zone

Daily Sampling Schedule for 1140

Day 27

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-t	S-4	46-1081	AAA9268	Asbestos	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-4	46-1081	AAA9268	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-t	S-4	46-1081	AAA9268	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-4	46-1081	AAA9268	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-4	46-1081	AAA9268	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-t	S-5	46-1082	AAA9269	Asbestos	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-5	46-1082	AAA9269	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-t	S-5	46-1082	AAA9269	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-5	46-1082	AAA9269	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-5	46-1082	AAA9269	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-t	S-6	46-1083	AAA9270	Asbestos	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-6	46-1083	AAA9270	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-t	S-6	46-1083	AAA9270	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-6	46-1083	AAA9270	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-t	S-6	46-1083	AAA9270	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-b	S-7	46-1084	AAA9271	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-b	S-7	46-1084	AAA9271	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-008-b	S-7	46-1084	AAA9271	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-b	S-7	46-1084	AAA9271	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-b	S-8	46-1088	AAA9275	Gamma Spectroscopy	Surface Soil	125mL Glass	Spade-spoon
46-008-b	S-8	46-1088	AAA9275	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day 2

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-007	S-14	46-1086	AAA9273	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-007	S-14	46-1086	AAA9273	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-007	S-14	46-1086	AAA9273	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-007	S-14	46-1086	AAA9273	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-007	S-15	46-1087	AAA9274	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-007	S-15	46-1087	AAA9274	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-007	S-15	46-1087	AAA9274	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-007	S-15	46-1087	AAA9274	VOCs	Surface Soil	40mL Amber	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 2

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-s	H-60	-A	46-1088	AAA9275	Isotopic Uranium	Surface Soil	500mL Plastic	Spade-spoon
46-004-s	H-60	-A	46-1088	AAA9275	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-s	H-60	-A	46-1088	AAA9275	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-s	H-60	-A	46-1088	AAA9275	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-s	H-60	-B	46-1088	AAA9276	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-60	-B	46-1088	AAA9276	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-60	-B	46-1088	AAA9276	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-60	-B	46-1088	AAA9276	VOCs	Sub Surface	40mL Amber	Auger
46-004-s	H-60	-C	46-1088	AAA9277	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-60	-C	46-1088	AAA9277	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-60	-C	46-1088	AAA9277	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-60	-C	46-1088	AAA9277	VOCs	Sub Surface	40mL Amber	Auger
46-004-s	H-61	-A	46-1089	AAA9278	Isotopic Uranium	Surface Soil	500mL Plastic	Spade-spoon
46-004-s	H-61	-A	46-1089	AAA9278	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-s	H-61	-A	46-1089	AAA9278	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-s	H-61	-A	46-1089	AAA9278	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-s	H-61	-B	46-1089	AAA9279	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-61	-B	46-1089	AAA9279	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-61	-B	46-1089	AAA9279	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-61	-B	46-1089	AAA9279	VOCs	Sub Surface	40mL Amber	Auger
46-004-s	H-61	-C	46-1089	AAA9280	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-61	-C	46-1089	AAA9280	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-61	-C	46-1089	AAA9280	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-61	-C	46-1089	AAA9280	VOCs	Sub Surface	40mL Amber	Auger
46-004-s	H-62	-A	46-1090	AAA9281	Isotopic Uranium	Surface Soil	500mL Plastic	Spade-spoon
46-004-s	H-62	-A	46-1090	AAA9281	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-004-s	H-62	-A	46-1090	AAA9281	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-s	H-62	-A	46-1090	AAA9281	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-s	H-62	-B	46-1090	AAA9282	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-62	-B	46-1090	AAA9282	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-62	-B	46-1090	AAA9282	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-62	-B	46-1090	AAA9282	VOCs	Sub Surface	40mL Amber	Auger
46-004-s	H-62	-C	46-1090	AAA9283	Isotopic Uranium	Sub Surface	500mL Plastic	Auger
46-004-s	H-62	-C	46-1090	AAA9283	metals, Hg, plus Cs & Li	Sub Surface	125mL Plastic	Auger
46-004-s	H-62	-C	46-1090	AAA9283	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-s	H-62	-C	46-1090	AAA9283	VOCs	Sub Surface	40mL Amber	Auger
46-007	S-86		46-1126	AAA9461	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-007	S-86		46-1126	AAA9461	metals, Hg, plus Cs & Li	Surface Soil	125mL Plastic	Spade-spoon
46-007	S-86		46-1126	AAA9461	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-007	S-86		46-1126	AAA9461	VOCs	Surface Soil	40mL Amber	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 30

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-b	H-100 .A	46-1096	AAA9291	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-b	H-100 .A	46-1096	AAA9291	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-006-b	H-100 .A	46-1096	AAA9291	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-b	H-100 .B	46-1096	AAA9292	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-006-b	H-100 .B	46-1096	AAA9292	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-b	H-100 .B	46-1096	AAA9292	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-b	H-100 .C	46-1096	AAA9293	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-006-b	H-100 .C	46-1096	AAA9293	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-b	H-100 .C	46-1096	AAA9293	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-b	H-99 .A	46-1095	AAA9288	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-b	H-99 .A	46-1095	AAA9288	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-006-b	H-99 .A	46-1095	AAA9288	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-b	H-99 .B	46-1095	AAA9289	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-006-b	H-99 .B	46-1095	AAA9289	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-b	H-99 .B	46-1095	AAA9289	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-b	H-99 .C	46-1095	AAA9290	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-006-b	H-99 .C	46-1095	AAA9290	Metals, (6010)	Sub Surface	125mL Plastic	Auger
46-006-b	H-99 .C	46-1095	AAA9290	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-008-e	S-10	46-1091	AAA9284	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-e	S-10	46-1091	AAA9284	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-e	S-10	46-1091	AAA9284	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-e	S-10	46-1091	AAA9284	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-e	S-10-dup	46-1091	AAA9472	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-e	S-10-dup	46-1091	AAA9472	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-e	S-10-dup	46-1091	AAA9472	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-e	S-10-dup	46-1091	AAA9472	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-e	S-11	46-1092	AAA9285	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-e	S-11	46-1092	AAA9285	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-e	S-11	46-1092	AAA9285	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-e	S-11	46-1092	AAA9285	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-e	S-12	33-1093	AAA9286	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-e	S-12	33-1093	AAA9286	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-e	S-12	33-1093	AAA9286	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-e	S-12	33-1093	AAA9286	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-e	S-13	46-1095	AAA9287	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-e	S-13	46-1095	AAA9287	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-e	S-13	46-1095	AAA9287	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-e	S-13	46-1095	AAA9287	VOCs	Surface Soil	40mL Amber	Spade-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 11

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-b	NS-3	46-1127	AAA9498	Cs137, Iso U	Surface Soil	250mL Plastic	
46-006-b	NS-3	46-1127	AAA9498	Metals, (6010)	Surface Soil	125mL Plastic	
46-006-b	NS-3	46-1127	AAA9498	Semi-VOCs, PCBs	Surface Soil	125mL Glass	
46-006-b	NS-4	46-1128	AAA9462	Cs137, Iso U	Surface Soil	250mL Plastic	
46-006-b	NS-4	46-1128	AAA9462	Metals, (6010)	Surface Soil	125mL Plastic	
46-006-b	NS-4	46-1128	AAA9462	Semi-VOCs, PCBs	Surface Soil	125mL Glass	
46-006-b	NS-5	46-1129	AAA9464	Cs137, Iso U	Surface Soil	250mL Plastic	
46-006-b	NS-5	46-1129	AAA9464	Metals, (6010)	Surface Soil	125mL Plastic	
46-006-b	NS-5	46-1129	AAA9464	Semi-VOCs, PCBs	Surface Soil	125mL Glass	

xclusion Zone

Daily Sampling Schedule for 1140

Day 12

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-r	CA-PE		[illegible]	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-d	S-69	46-1099	AAA9296	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-d	S-69	46-1099	AAA9296	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-008-d	S-69	46-1099	AAA9296	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-d	S-69	46-1099	AAA9296	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-d	S-70	46-1100	AAA9297	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-d	S-70	46-1100	AAA9297	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-008-d	S-70	46-1100	AAA9297	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-d	S-70	46-1100	AAA9297	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-r	SS-15	46-1097	AAA9294	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-r	SS-15	46-1097	AAA9294	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-r	SS-15	46-1097	AAA9294	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-r	SS-15	46-1097	AAA9294	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-r	SS-16	46-1098	AAA9295	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-r	SS-16	46-1098	AAA9295	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-r	SS-16	46-1098	AAA9295	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-r	SS-16	46-1098	AAA9295	VOCs	Surface Soil	40mL Amber	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day 11

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-008-g	H-178	-A	46-1127	AAA9300	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-178	-A	46-1127	AAA9300	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-g	H-178	-B	46-1127	AAA9303	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-008-g	H-178	-B	46-1127	AAA9303	VOCs	Sub Surface	40mL Amber	Auger
46-008-g	H-96	-A	46-1101	AAA9298	Mercury	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-96	-A	46-1101	AAA9298	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-96	-A	46-1101	AAA9298	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-g	H-96	-B	46-1101	AAA9299	Mercury	Sub Surface	125mL Glass	Auger
46-008-g	H-96	-B	46-1101	AAA9299	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-008-g	H-96	-B	46-1101	AAA9299	VOCs	Sub Surface	40mL Amber	Auger
46-008-g	H-97	-A	46-1102	AAA9301	Mercury	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-97	-A	46-1102	AAA9301	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-97	-A	46-1102	AAA9301	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-g	H-97	-B	46-1102	AAA9302	Mercury	Sub Surface	125mL Glass	Auger
46-008-g	H-97	-B	46-1102	AAA9302	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-008-g	H-97	-B	46-1102	AAA9302	VOCs	Sub Surface	40mL Amber	Auger
46-008-g	H-98	-A	46-1103	AAA9304	Mercury	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-98	-A	46-1103	AAA9304	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-008-g	H-98	-A	46-1103	AAA9304	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-g	H-98	-B	46-1103	AAA9305	Mercury	Sub Surface	125mL Glass	Auger
46-008-g	H-98	-B	46-1103	AAA9305	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-008-g	H-98	-B	46-1103	AAA9305	VOCs	Sub Surface	40mL Amber	Auger

Exclusion Zone

Daily Sampling Schedule for 1140

Day 14

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-008-a	S-40	46-1118	AAA9333	Metals, (6010)	Surface Soil	125ml Plastic	Scoop-spoon
46-008-a	S-40	46-1118	AAA9333	Semi-VOCs	Surface Soil	125ml Glass	Scoop-spoon
46-008-a	S-41	46-1119	AAA9334	Metals, (6010)	Surface Soil	125ml Plastic	Scoop-spoon
46-008-a	S-41	46-1119	AAA9334	Semi-VOCs	Surface Soil	125ml Glass	Scoop-spoon
Agg 5 6	S-52	46-1120	AAA9335	Cs137, Iso Th, Iso U	Surface Soil	250ml Plastic	Scoop-spoon
Agg 5 6	S-52	46-1120	AAA9335	Metals, (6010)	Surface Soil	125ml Plastic	Scoop-spoon
46-008-a	S-82	46-1133	AAA9494	Metals, (6010)	Surface Soil	125ml Plastic	Scoop-spoon
46-008-a	S-82	46-1133	AAA9494	Semi-VOCs	Surface Soil	125ml Glass	Scoop-spoon

xclusion Zone

Daily Sampling Schedule for 1140

Day 15

PRS	Sample		Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-m	H-51	-A	46-1111	AAA9314	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-m	H-51	-A	46-1111	AAA9314	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-m	H-51	-A	46-1111	AAA9314	Semi-VOCs	Surface Soil	500mL Plastic	Spade-spoon
46-004-m	H-51	-A	46-1111	AAA9314	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-m	H-51	-B	46-1111	AAA9315	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-51	-B	46-1111	AAA9315	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-51	-B	46-1111	AAA9315	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-51	-B	46-1111	AAA9315	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-51	-C	46-1111	AAA9316	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-51	-C	46-1111	AAA9316	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-51	-C	46-1111	AAA9316	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-51	-C	46-1111	AAA9316	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-52	-A	46-1112	AAA9317	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-m	H-52	-A	46-1112	AAA9317	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-m	H-52	-A	46-1112	AAA9317	Semi-VOCs	Surface Soil	500mL Plastic	Spade-spoon
46-004-m	H-52	-A	46-1112	AAA9317	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-m	H-52	-B	46-1112	AAA9318	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-52	-B	46-1112	AAA9318	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-52	-B	46-1112	AAA9318	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-52	-B	46-1112	AAA9318	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-52	-C	46-1112	AAA9319	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-52	-C	46-1112	AAA9319	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-52	-C	46-1112	AAA9319	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-52	-C	46-1112	AAA9319	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-53	-A	46-1113	AAA9320	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-m	H-53	-A	46-1113	AAA9320	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-m	H-53	-A	46-1113	AAA9320	Semi-VOCs	Surface Soil	500mL Plastic	Spade-spoon
46-004-m	H-53	-A	46-1113	AAA9320	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-m	H-53	-B	46-1113	AAA9321	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-53	-B	46-1113	AAA9321	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-53	-B	46-1113	AAA9321	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-53	-B	46-1113	AAA9321	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	H-53	-C	46-1113	AAA9322	Cs137, Iso U	Sub Surface	250mL Plastic	Auger
46-004-m	H-53	-C	46-1113	AAA9322	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-m	H-53	-C	46-1113	AAA9322	Semi-VOCs	Sub Surface	500mL Plastic	Auger
46-004-m	H-53	-C	46-1113	AAA9322	VOCs	Sub Surface	40mL Amber	Auger
46-004-m	QA-PE	-C		AAA9454	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon

clusion Zone

Daily Sampling Schedule for 1140

Day in

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-d	H-173 -A	46-1130	AAA9465	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-173 -A	46-1130	AAA9465	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-173 -A	46-1130	AAA9465	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-173 -A	46-1130	AAA9465	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-173 -B	46-1130	AAA9467	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-173 -B	46-1130	AAA9467	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-173 -B	46-1130	AAA9467	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-173 -B	46-1130	AAA9467	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-173 -C	46-1130	AAA9468	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-173 -C	46-1130	AAA9468	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-173 -C	46-1130	AAA9468	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-173 -C	46-1130	AAA9468	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-174 -A	46-1138	AAA9469	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-174 -A	46-1138	AAA9469	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-174 -A	46-1138	AAA9469	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-174 -A	46-1138	AAA9469	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-174 -B	46-1138	AAA9470	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-174 -B	46-1138	AAA9470	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-174 -B	46-1138	AAA9470	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-174 -B	46-1138	AAA9470	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-174 -C	46-1138	AAA9471	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-174 -C	46-1138	AAA9471	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-174 -C	46-1138	AAA9471	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-174 -C	46-1138	AAA9471	VOCs	Sub Surface	40mL Amber	Auger
46-006-g	NS-1	46-1104	AAA9307	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-g	NS-1	46-1104	AAA9307	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-006-g	NS-1	46-1104	AAA9307	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-g	NS-2	46-1105	AAA9308	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-006-g	NS-2	46-1105	AAA9308	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-006-g	NS-2	46-1105	AAA9308	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Gamma Spectroscopy	Surface Soil	1 Liter Plastic	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Isotopic Cesium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Isotopic Plutonium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Isotopic Uranium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Metals, (soil10)	Surface Soil	125mL Plastic	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	S-1-dup	33-1106	AAA9475	VOCs	Surface Soil	40mL Amber	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day 37

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-d	H-170 -A	46-1133	AAA9482	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-170 -A	46-1133	AAA9482	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-170 -A	46-1133	AAA9482	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-170 -A	46-1133	AAA9482	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-170 -B	46-1133	AAA9483	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-170 -B	46-1133	AAA9483	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-170 -B	46-1133	AAA9483	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-170 -B	46-1133	AAA9483	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-170 -C	46-1133	AAA9484	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-170 -C	46-1133	AAA9484	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-170 -C	46-1133	AAA9484	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-170 -C	46-1133	AAA9484	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-171 -A	46-1131	AAA9488	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-171 -A	46-1131	AAA9488	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-171 -A	46-1131	AAA9488	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-171 -A	46-1131	AAA9488	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-171 -B	46-1131	AAA9489	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-171 -B	46-1131	AAA9489	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-171 -B	46-1131	AAA9489	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-171 -B	46-1131	AAA9489	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-171 -C	46-1131	AAA9490	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-171 -C	46-1131	AAA9490	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-171 -C	46-1131	AAA9490	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-171 -C	46-1131	AAA9490	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-172 -A	46-1132	AAA9491	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Spade-spoon
46-006-d	H-172 -A	46-1132	AAA9491	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-172 -A	46-1132	AAA9491	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	H-172 -A	46-1132	AAA9491	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-006-d	H-172 -B	46-1132	AAA9492	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-172 -B	46-1132	AAA9492	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-172 -B	46-1132	AAA9492	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-172 -B	46-1132	AAA9492	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	H-172 -C	46-1132	AAA9493	Cs137, Iso U, Iso Pu	Sub Surface	250mL Plastic	Auger
46-006-d	H-172 -C	46-1132	AAA9493	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-006-d	H-172 -C	46-1132	AAA9493	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-006-d	H-172 -C	46-1132	AAA9493	VOCs	Sub Surface	40mL Amber	Auger
46-006-d	S-28	33-1110	AAA9313	Gamma Spectroscopy	Surface Soil	1 Liter Plastic	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	Isotopic Cesium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	Isotopic Plutonium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	Isotopic Uranium	Surface Soil	500mL Plastic	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-006-d	S-28	33-1110	AAA9313	VOCs	Surface Soil	40mL Amber	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day 38

PRS #	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-004-a2	H-82 -A	46-1114	AAA9323	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-82 -A	46-1114	AAA9323	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-82 -A	46-1114	AAA9323	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-82 -A	46-1114	AAA9323	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-82 -B	46-1114	AAA9324	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-82 -B	46-1114	AAA9324	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-82 -B	46-1114	AAA9324	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-82 -B	46-1114	AAA9324	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-82 -C	46-1114	AAA9325	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-82 -C	46-1114	AAA9325	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-82 -C	46-1114	AAA9325	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-82 -C	46-1114	AAA9325	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-83 -A	46-1116	AAA9326	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-83 -A	46-1116	AAA9326	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-83 -A	46-1116	AAA9326	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-83 -A	46-1116	AAA9326	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-83 -B	46-1116	AAA9327	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-83 -B	46-1116	AAA9327	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-83 -B	46-1116	AAA9327	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-83 -B	46-1116	AAA9327	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-83 -C	46-1116	AAA9328	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-83 -C	46-1116	AAA9328	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-83 -C	46-1116	AAA9328	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-83 -C	46-1116	AAA9328	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-84 -A	46-1116	AAA9329	Cs137, Iso Th, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-004-a2	H-84 -A	46-1116	AAA9329	Metals, Mercury	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-84 -A	46-1116	AAA9329	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Spade-spoon
46-004-a2	H-84 -A	46-1116	AAA9329	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-004-a2	H-84 -B	46-1116	AAA9330	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-84 -B	46-1116	AAA9330	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-84 -B	46-1116	AAA9330	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-84 -B	46-1116	AAA9330	VOCs	Sub Surface	40mL Amber	Auger
46-004-a2	H-84 -C	46-1116	AAA9331	Cs137, Iso Th, Iso U	Sub Surface	250mL Plastic	Auger
46-004-a2	H-84 -C	46-1116	AAA9331	Metals, Mercury	Sub Surface	125mL Glass	Auger
46-004-a2	H-84 -C	46-1116	AAA9331	Semi-VOCs, PCBs	Sub Surface	125mL Glass	Auger
46-004-a2	H-84 -C	46-1116	AAA9331	VOCs	Sub Surface	40mL Amber	Auger
46-008-t	S-29	46-1117	AAA9332	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-t	S-29	46-1117	AAA9332	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-t	S-29	46-1117	AAA9332	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-008-t	S-29	46-1117	AAA9332	VOCs	Surface Soil	40mL Amber	Spade-spoon
46-008-t	S-29-duo	46-1117	AAA9478	Cs137, Iso U	Surface Soil	250mL Plastic	Spade-spoon
46-008-t	S-29-duo	46-1117	AAA9478	Metals, (6010)	Surface Soil	125mL Plastic	Spade-spoon
46-008-t	S-29-duo	46-1117	AAA9478	Semi-VOCs	Surface Soil	125mL Glass	Spade-spoon
46-008-t	S-29-duo	46-1117	AAA9478	VOCs	Surface Soil	40mL Amber	Spade-spoon

Exclusion Zone

Daily Sampling Schedule for 1140

Day

PRS	Sample	Site ID #	AAA#	Analysis Suite 1140	Matrix	Container	Technique
46-006-d	S-83	46-1134	AAA9495	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Scoop-spoon
46-006-d	S-83	46-1134	AAA9495	Metals, Mercury	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-83	46-1134	AAA9495	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-83	46-1134	AAA9495	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-006-d	S-84	46-1135	AAA9496	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Scoop-spoon
46-006-d	S-84	46-1135	AAA9496	Metals, Mercury	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-84	46-1135	AAA9496	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-84	46-1135	AAA9496	VOCs	Surface Soil	40mL Amber	Scoop-spoon
46-006-d	S-85	46-1136	AAA9497	Cs137, Iso U, Iso Pu	Surface Soil	250mL Plastic	Scoop-spoon
46-006-d	S-85	46-1136	AAA9497	Metals, Mercury	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-85	46-1136	AAA9497	Semi-VOCs, PCBs	Surface Soil	125mL Glass	Scoop-spoon
46-006-d	S-85	46-1136	AAA9497	VOCs	Surface Soil	40mL Amber	Scoop-spoon

Appendix B

Maps of Sampling Locations and Support Zones

N

State Plane Coordinate System, New Mexico Central Zone
1927 North American Datum

Grid provides New Mexico State Plane coordinates in feet.
Grid interval, in feet: 500
Feet per inch on map = 100

SCALE 1:1200

Notice: The information on this map is provisional and has not been checked for accuracy. Maps should not be relied upon to establish legal claims, boundary lines or locations of improvements.

Basemap Sources: Utility and structure data are from Los Alamos National Laboratory Engineering Division and Los Alamos County Utility and Engineering Departments. Contour data is from Los Alamos National Laboratory Environmental Restoration Program aerial survey, September, 1991.

University of California

Los Alamos National Laboratory

Earth & Environmental Sciences Division

FIMAD Facility for Information Management, Analysis, and Display
FIMAD is the electronic data repository for the Environmental Restoration Program at Los Alamos National Laboratory.

Produced by: Doug Walther
Date: February 17, 1994 FIMAD Plot ID: G101914

Appendix 6

8/17/94 First day in the field sampling at Cañada del
0800 Buey at TA-46

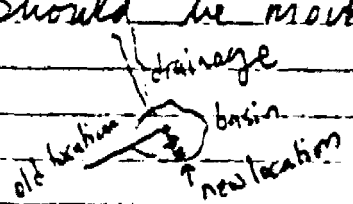
Setting up. At site: Linda Fluk (FTL), Kenny Hansel (Sampler), Lynn Kidman (FTM), Mike Powell (HPT), Cornelius Flynn (SSO), Jim Roberts (Field Coordinator)

0930 Health & Safety Briefing given by Cornelius Flynn. The above personnel present and Roy Michelotti (OUSL) present for briefing

Spence Sepporn will be a sampler on-site from 8-17 through 8-26-94. At which time Kristi Arnodt will continue as the sampler

~1030 All present signed the H&S acknowledgement form.

1045 Field team walked out to an allowed fan location to learn how to relocate the samples. It was determined in the walk around TA-46 that the fan sample locations should should be moved down fan. Reasons: deposition in the past was different from deposition in present. The movement of fan is dynamic. It is believed that these fans are gradually moving up fan. So therefore we should sample down fan in order to sample deposits from ~30 years ago.



I will walk through sampling areas today with Kenny & relocate all the fan samples. / Linda Fluk

Kenny & I walked the area and re-located 8/18/94 A
the Gas samples according to the above 0800
mentioned information Refer to page
125 of this notebook for those samples which were
were re-located.

We set up support zone, CRZ Da
Set up for sampling Hc
160° left site

0850
0900
0920

Sampling at TA-46

located
[illegible]
[illegible]
les which

3/18/94 At site. Linda Fluk (FTL), Mike Powell (HPT)
0800 Kenny Hansel (Documenter), Spence Sepponen (Sampler)
Cornelius Flynn (SSO)
Weather is warm, sunny, clear, still

Day 1 Sampling at H-93, H-94
Hand auger sampling will be conducted as follows:
First sample will be collected using spade & scoop method (LANL-ER SOP 06.09) This is the H-A sample (top sample per location).
Second sample (middle H-B) will be collected w/ auger bucket. This sample will be collected from the ~~[illegible]~~ 1'-5' interval. One bucket at a time will be removed & placed on ground in order taken out. Each bucket will be monitored for rad & VOCs. If there is elevated reading the sample will be collected from this interval. If no elevated readings the sample will be collected from the bottom of the 5' interval. If tuff is encountered before 5' then the middle "B" sample will be collected from the interface.
Third sample (bottom H-C) will be collected from the 5'-10' interval. Refer to above for the actual sample collection selection (ie monitoring, tuff interface...)

0850 H&S meeting
0900 All signed off the tailgate safety meeting form and the orientation form
0920 Into EZ: M. Powell, K. Hansel, S. Sepponen, C. Flynn

Continuation of sampling procedure:

Piece of plastic laid down next to each location. The soil from auger is emptied on plastic in the order that it is removed. When finished sampling the soil will be returned into the hole in the order that it is removed. As the material is laid on plastic it is monitored for rad & VOCs. ~1105

Dust suppression is performed with water sprayer. 1120

The auger flight will be decontaminated after each location. A bucket with alconox water is brought into EZ ~~if possible~~ totally & the auger flight is washed & then rinsed.

Sampling times:
930
1000
1005

We will take 2 swipes of of the augers bucket: 1 pre-swipe will be taken before the bucket is decomed. The second swipe is taken after the bucket is decomed. The 1st (pre) swipe is taken to determine whether the wash water is rad. The 2nd (post) swipe is to confirm that there was NO cross contamination of rad constituents.

Note: All surface samples which will be analyzed for VOCs will be collected from depth 6"-12". 1530

We found some pottery sherds near our EZ. We called the archeology group

~1105 Kay Mary (ESH-8) came out to site. She walked around & found a few more pieces. phone # (665-6093). She said we could continue working here and we would most likely encounter more pieces. We do not have to call (at the above number) if we find scattered pieces like we found. - We are cleared to continue working in the area.

1120 Lev. left site
Finished Sampling

~~pes~~ ~~Sample no~~ ~~Time~~ ~~Comments~~ ~~Sample~~
~~46-004-h~~ ~~AAA 9037~~ ~~0930~~ ~~H-94-A~~
~~AAA 9038~~ ~~1001~~ ~~hit soil/tuff~~ ~~H-94-B~~
~~AAA 9437~~ ~~1007~~ ~~H-94-dup~~
~~AAA 9040~~ ~~1020~~ ~~H-93-A~~
~~AAA 9041~~ ~~1045~~ ~~hit soil/tuff~~ ~~H-93-B~~

Sample #	Sample	Time	Control #
H-94-A	AAA 9040	0930	1140 46-0002,0001A
H-94-B	AAA 9041	1001	"
H-94-dup-A	AAA 9437	1007	1140 46-0001,0001-A
H-93-A	AAA 9037	1020	"
H-93-B	AAA 9038	1045	"
PE Blank	AAA 9436	1300	1140-0002

Pete will take our samples to the Rad Van located at TA-54

1530 Left Site

6

Sampling in Cañada del Buey, TA-46

8/19/94 Field Team Members: Linda Fluk (FTL) Kenny
0800 Hunsel (documenter), Mike Powell (HPT),
Spence Seppones (sampler, hand augerer), Cornelius
Flynn (SSO)
Weather: Overcast, warm, still

Note: yesterday during the hand augering, the top ~ 1.5' was rubble tuff layer, underlain by darker colored soil. The team determined that the soil/tuff interface was reached as the auger was met refusal - the material coming up with auger bucket was dark colored weathered tuff w/ altered (clay) minerals.

0830 H&S meeting
All signed off. Tailgate meeting forms

Into exclusion zone: M. Powell, C. Flynn, M. Powell, K. Hansel
Sampling today: H-90, H-91, H-92

H-90 407 Discussion of SOPs
CANL-ER-SOP 1.07 R2 will be used - Sample Control & Field Documentation
We will be using computer generated forms
The daily summary report is now included in with the Daily field report - according to a phone conversation with Roy Bohnson it was fine that the 2 summaries could be combined.

1075

JF

LANL-ER-SOP 01.02 R0 Sample Containers & Preservat
We will follow the DRAFT version
Note: Attachments A & B (information on specific contain
has been removed in the DRAFT LANL-ER-SOP
01.02 R1. The proper sample containers will be
supplied by CST-9. We will take note of the
containers & volume requirements in R0 &
assure CST-9 provides us with the numbers
sizes recommended & the proper physical
properties of the containers (ie glass, poly...)

LANL-ER-SOP-1.03 R1 Handling, Packaging &
Shipping of Samples. Will be followed

LANL-ER-SOP-01.05 R0 Field Quality Control Samples
NOTE: our site specific Quality Assurance/
Quality Control Plan (5/23/97) will supersede
guidance in the above SOP (This has been stated
in the site specific plan which has been approved
by the needed authorities. The basic SOP
will be followed except where it is superseded by
the site specific plan.

Back to sampling activities:
The sampling team is encountering soil/tuff
interface at shallow depths. They are either
hitting very large boulders & rocks which
have moved down slope or more likely
outcropping tuff.

10:45 Team finished collecting samples.
Decontaminating bottles & equipment.
VF

Decon procedures are as discussed in the Site Specific Waste Management Plan and the (FIP) Field Implementation Plan. 8/22/94 0800

Sample Loc	Sample #	Time	Control #
H-90-A	AAA9043	0907	0003 0003-A
H-92-A	AAA9058	0930	0005 0003-A
H-92-B	AAA9059	0952	0005 0003-A
H-91-A	AAA9055	1003	0004 0003-A
H-91-B	AAA9056	1020	0004 0003-A

0830
0907

Finished Sampling early
back to the Office for paperwork
& database work
1315 left Site

* Note: Cornelius Flynn & Mike Powell have trained to SOPs needed by the Field Sampling worker (ie SOPs 1.01, 1.02, 1.03, 1.04, 1.05, 1.06, 06.09, 06.10). They may help out with Sampling activities if needed.

1040

Sampling at Cañada del Buey

8/22/94

0800 Field team members: Linda Fluk (FTL), Mike Powell (HPT), Kenny Hansel (documenter), Cornelius Flynn (SSO, sampler), Spence Sepponen (hand augerer)

Weather is cool & clear (autumn is on its way) ground is wet

0830 Tailgate Safety meeting - All signed off

0907 Sampling team in to EZ: M. Powell, K. Hansel, S. Sepponen, C. Flynn
L. Fluk in SZ

Note: SOP 06.09 does not have provision in Records Section to use the Sample Collection Log Form (instead of Borehole Log Form). We will be logging soils on the Sample Collection Log Forms. Measures are underway to make a correction to the SOP to add Sample Collection Log Form to Records Section.

Note: RFI Workplan states we will determine whether soils are hydric in Cañada del Buey. Lynn Kidman (ICF KE) will write up a discussion which indicates the soil is NOT hydric

1040 Sampling team back. They sampled at 3 locations H-87, H-88 - H-89. Only able to get 1 sample per location because they hit the tuff at very shallow depth

Sample loc	Sample ID	Time	depth	COC #	8/23/94
H-87-A	AAA 9052	0945	surface 10"	0006 0006A	0800
H-88-A	AAA 9049	900	" 12"	0007 0006	
H-89-A	AAA 9046	0928	" 12"	0008 0006-A	

We finished sampling early.

We will excavate north of bldg TA-46-31 to locate an outfall pipe. Will use shovel & follow the GPR reflection line emerging from the building. 0855

Kenny Hensel & Spence Seppenen will do the excavation.

Kenny & Spence followed the line down most of the way down the canyon slope - dug down up to 6 feet deep and excavated up to 7 feet on other end of the line - No outfall pipe was found. 0950 15

0950

We walked some outfall areas and checked on sample stakes

NOTE: Change made to decon procedure discussed on page 4. The auger pouch of hand auger will be decontaminated after each sample rather than after each location.

The outfall lines are being re-lettered as we sample as some old lettering has been washed off.

1540 Left site

S. Foster Hall (FTL)

Sampling at Cañada del Buey

8/23/94 Field Team members: Linda Fluk, Kenny Hansel
0800 Spence Seponnen, Cornelius Flynn, Mike Powell

Weather is cool & clear

Sampling today: H-72, H-73, H-74, H-75
Sample team in EZ: K. Hansel (documenter), C. Flynn (SSO, sampler), M. Powell ~~(S. Seponnen)~~ 8/23/94 (HPT), S. Seponnen (hand auger).
L. Fluk (FTL) will be in SZ.

0855 Tailgate Safety meeting - All signed off

We got 4 more auger buckets, which we will bring into the EZ. We will change the bucket for every sample. The bucket will be changed at depth below 1st sample 12" - 18"

0950 8/23/94 Team into the EZ

0950 Jim Roberts at site. He brought the transportation cart out to the site. The cart has two trailers which can be attached (or just one can be used). We will start using the cart & determine the best way to use it. The road in the Canyon will

Samples collected

Sample location	Sample	Control #	Time
H-72-A	AAA9061	0009, 0009-A	0930
H-73-A	AAA9064	0009, 0009-A	0950
H-74A	AAA9067	0010, 0009-A	1005
H-74B	AAA9066	"	1030
H-75A	AAA9070	0011, 0009-A	1040

- COC # 06, 0006-A, 0007, 0006, 0008, 0006-A

-46-31 use ion line ill do down on keep on to

ea lea

educe bucket alles location

so we bean

H-75-B	AAA 9071	00-11,0069A	1105	3/24/94
H-76A	AAA 9073	0 012,0069A	1120	0800
PE Blank	AAA 9436	0012	1140	

The transportation Cart is locked up to a tree for the evening (& all other evenings)
Refer to the OU1190 Field Implementation Plan for the procedures for using the transportation Cart

Set the weather station up

1615 left Site

Jeffrey [illegible] FTL

Sampling at Cañada del Buey

8/24/94 Field Team Members: Linda Flint, Cornelius Flynn,
0800 Mike Powell, Spence Seppanen, Kenny Hurtel
Weather Cool, overcast, humid, but dry

We will use the transportation cart today.
- The sampling team will drive from the CRZ to the base of the canyon slope where they will be collecting samples for the morning. The trailer hooked to the back of the trailer will be used to carry a cooler (with ice) and sampling equipment. The samples will be put in the cooler when the team is finished sampling (unless the cooler is in eyesight & very close to the team. (IE Chain of custody will be maintained) The team will move from the cart to the base of the canyon slope - the barracade tape & step directly into the EZ to sample. The drivers will leave the cart with clean inner liners. Refer to the FIP for more detail on the use of the cart.

Today we will have 2-way radios - these radios have earphones which must be in to communicate. The documenter (in the EZ) will have a radio & the FTL (in the SZ) will have a radio. If the field team member wants to communicate they will use the horn on the cart, or the Ryder truck to get the other persons attention, then both persons will put earphone in ear, & will communicate

We will try using the radios this way.

0830 Tailgate Safety Meeting - All signed off

0900 Sampling team into EZ 1500
documenter (K. Hanel) & Sampler
Sampler SSO (G. Flynn) 1515
HPT (M. Powell)
Hand augerer (S. Sepponen)

C. Pike (FTL) in SZ

0950 Roy Micholoff & Don Davidson at site
We walked around site & talked w/ sampling team about the use of the (g.f) transportation cart. Discussed other field activities.

1055 Roy Micholoff & Don Davidson left site.

1135 Sampling team back w/ samples

Sample location	Sample	Time	COC #	depth
H-77-A	AAA9076	0925	0013 0013A	0-12"
H-77B	AAA9077	0940	"	12-18"
H-65A	AAA9079	0955	0014 0013A	0-11"
H-66A	AAA9082	1010	"	0-9"
H-67A	AAA9085	1100	0015 0013A	6-11"
H-68A	AAA9088	1110	"	6-12"
rinsate	AAA9272	1400	0015	

Rinsate was collected by pouring reagent grade deionized distilled water (from CST-9) over the decomed stainless 1620

Stool auger buckets & into the appropriate samples' containers which have been preserved with the appropriate preservative.

1500 Claudia Trujillo visited site - spoke with Mike Powell

1515 Left site (Claudia Trujillo)

We worked out the use of transportation cart:
1. Cart is parked adjacent to CRZ
2. Sampling team loads equip into trailer from CRZ
3. team gets into cart
4. team drives to the EZ & parks adjacent to barrier tape
5. Team steps directly into EZ
6. A cooler is secured in the trailer & chained & locked shut. When samplers finish collection samples, they put samples in cooler (w/ice) & lock it up to maintain COC, & collect more samples
7. When team finished they step directly from EZ into cart & drive back to CRZ
8. Team unloads equip into CRZ & step directly into CRZ

∴ Samplers feet never touch ground not in the EZ or CRZ w/out decon.

1620 Left site / of Yuba Hub FTC

depth
3A 0-12"
12-18"
3A 1-11"
0-9"
3A 6-11"
6-12"

Sampling at Cañada del Buey

8/25/94 0800 Field Team Members: Linda Fluke, Cornelius Flynn, Mike Powell, Spence Sepponen, Ken Hansel — 8/29/94 0800

Weather is cloudy, still ground is wet from downpour last night — 0905

0830 Tailgate Safety Meeting - All signed off

0855 Sampling team into the CRZ
K. Hansel (documenter, sampler)
C. Flynn (SSO, sampler)
S. Sepponen (hand augerer)
M. Powell (HPT) — 0920

Sampling today for days 6 & 7 of sampling

1205 Sampling team is back from sampling — 1105

	Sample loc	Sample #	Time	COC #	depth
	H-69-A	AAA9091	0930	1140-0018	7"
	H-70A	AAA9094	0945	0015, 0016A	8"
	H-70-dup-A	AAA9439	1000	"	7"
	H-71-A	AAA9092	1020	0018, 0016-A	10"
No VOCs	H-80-A	AAA9106	1105	0017, 0016-A	3"
No VOCs	H-81-A	AAA9109	1045	0018, 0016-A	4"
no VOCs	H-78-A	AAA9100	1130	"	4"
	H-79-A	AAA9103	1115	0018, 0016-B	8"
	PE Blank	AAA9446	1215	0018	—

We have finished collecting samples through day 7 on the sample schedule. We will do office work tomorrow & will not sample — ~1130 ~1145

1600 The transportation cart worked well today. Left site. Linda Fluke

Sampling at Cañada del Buey

8/29/94 0800 Field Team Members: Linda Flick, Kenny Hansel, Krish Aumodt, Mike Powell, Cornelius Flynn

Weather is clear, cool, ground is damp

0905 Tailgate Safety meeting - All signed off

- We will use walkie talkies today. Sampling team has 1 radio, Linda Flick in SD will have other radio.

0920 Sampling Team in CRZ

K. Aumodt (documenter)

K. Hansel (hand auger, samples)

C. Flynn (SSO sampler)

M. Powell (APT)

1105 Spence Seponner called to tell me he broke a bone in his hand - he believes this happened while hand auger at this site on Thursday 8/25/94 - He felt a strange pain in his right hand middle finger large knuckle (attached to hand). Spence went to Urgent Care hospital in Albuquerque on Sat 8/27/94 when he felt intense pain.

Spence called Ivan Wachler & myself to report the injury.

He will be seeing a physician this afternoon. I will fill out incident report & contact the appropriate authorities.

~1130 I spoke with Ivan Wachler about injury

~1145 I left a message with the ES&H Contact person - Virginia Smith

1225 Sampling team back with samples: Aug 31 1999 0800

	Sample loc	Sample #	time	COC #	depth	hit/miss	
	H-40-A	AAA9342	1000	0023, 0021-A	8"		
No VOCs	H-39-A	AAA9339	1020	0022, 0021-A	6"		
	H-38A	AAA9336	1035	0022, 0021-A	5# 18"	VOCs 6-12	
	H-64-A	AAA9115	1045	0021, 0021-A	12"		NO 840
	H-64-B	AAA9116	1100	0021, 0021-A	24-34"		
	H-63A	AAA9112	1120	0021, 0021-A	5# 18"	VOC 6-12	
	S-32	AAA9118	1145	0020, 0021-A	0-6"		
	S-33	AAA9119	1210	0020, 0021-A	0-6"		0855
	S-17	AAA9120	1155	0020, 0021-A	0-6"		
	PE Blank	AAA9447	0915	0020	NA		

1230 Virginia Smith called me back. She said all of the paperwork will be taken care of as Van Wechler distributes paperwork to all of the appropriate authorities. We do not have to fill out or submit any other paperwork besides the ICEKE incident report (Gold team) ~1015 ~1045 1125

regarding injury incident

Finished up NO VOCs

1545 Left site

No VOCs
No VOCs

(Judy Hs)
LA (PTC)

Sampling at Cañada del Buey

Aug 31 1994 Field team members: Linda Flak, Cornelius Flynn
0800 Mike Powell, Kenny Hansel, Kristi Aemodt

Weather: Stormy weather around us, Totally - overcast, threatening, dry for now

0840 Tailgate Safety Meeting
Weather is threatening so we will stop sampling if it starts thundering lightly or pouring

0855 Sampling team into to CA2 → EZ
Kenny Hansel (Hand auger, sample)
Kristi Aemodt (documenter)
Mike Powell (HPT)
Cornelius Flynn (SSO)
In the SZ: Linda Flak (FTL)

~1015 Ray Michelotti & Jim Roberts at Site
~1045 Ray Michelotti & Jim Roberts left site
1125 Sampling team out of the EZ

	Sample loc	Sample #	time	COC #	depth
No VOCs	H-37-A	AAA9127	0920	0024, 0024A	5"
	H-33-A	AAA9130	0930	"	8"
No VOCs	H-34-A	AAA9142	0945	0025, 0024A	6"
No VOCs	H-32-A	AAA9139	1000	0026, 0024A	4"
"	H-32-A-dup	AAA9140	1020	"	4"
	H-30-A	AAA9133	1025	0025, 0024A	18"

We broke off a piece of the hand auger extension rod - stuck in the top handle section - will get the proper tools to fix tonight & will continue hand augering tomorrow - LF

20

We finished working early 9/6/94

We will not be Sampling for the next 2 days because Sample receiving at CST-9 will not accept any 0800
Samples (with holding times ≤ 7 days) 0840
after 11:00 am thursday 9/1/94 0850
so that they have time to process all Samples before the long weekend.

1440 Off site

0915

Left FTL

per Wirtl

1055

1115

1215

Sampling at Cañada de Buey

9/6/94 Field Team Members: Linda Fluh, Kristi Burnadt,
0800 Mike Powell, Cornelius Flynn, Kenny Hansel

Weather: cool, partly cloudy, dry

0840 Tailgate Safety Meeting
All signed off

0850 Sampling team into the CRZ
Kristi Burnadt (Documenter)
Ken Hansel (hand auger, Sampler)
Mike Powell (HPT)
Cornelius Flynn (SSO)
In the SZ: Linda Fluh (FTL)

0915 I staked sample locations for unlocated (newly located) outfall AO (PRS 006d) The Samples are H-179, H-180, H-181.

H-179 located at the outfall pipe (AO)
H-180 located at 1st sediment catchment down drainage from the pipe - located at center of catchment
H-181 located also at 1st sediment catchment but lateral

per Wirkpl

1055 Virginia Smith visited site. She took a look at the transportation cart - We discussed H&S issues.

1115 Virginia Smith left site

1215 Sampling team back with samples, & out of the CRZ

CF

4 receiving 3 days) 9/1/94 all heard

	Sample loc	Sample ID	Time	Depth	COC	
	H-36-A	AAA9124	0915	0-6"	1140-0027, 0022A	5/17/94 0800
	H-35-B	AAA9122	0940	36-42"	1140-027, 0027A	
	H-35-A	AAA9121	0925	0-6, 12"	"	
NO VOCs	H-31-A	AAA9136	0955	0-6"	1140-0028, 0027-A	0830
"	H-26-A	AAA9145	1010	0-4"	"	0855
"	H-27-A	AAA9148	1020	0-4"	"	
"	H-29-A	AAA9151	1030	0-6"	1140-0029, 0022A	
	PEBlank	AAA9448	1155	—	"	
	H-24-A	AAA9157	1040	0-6, 12"	"	
	H-24B	AAA9158	1110	42-48"	1140-0030 0022A	
	H-25-A	AAA9160	1125	0-6, 12"	"	
	H-25-B	AAA9161	1135	30-36"	"	1025
	H-28-A	AAA9154	1145	0-6, 12"	1140-0031, 0022A	

The alpha probe which was given to us by Virginia Smith is not working - I will call Virginia to let her know & get another one.

1545 Left site 1210

NoVOCs
"

1335

Sampling at Cañada del Buey

5/7/99 0800	Field Team members: Linda Fluk, Cornelius Flynn, Mike Powell, Kristi Aamodt, Kenny Hansel
	Weather: Cool, partly cloudy, ground is moist from last nights rain
0830	Tailgate Safety Meeting - All signed off
0855	Sampling team solo, CRE
	Kristi Aamodt (documenter)
	Kenny Hansel (hand auger, sampler)
	Cornelius Flynn (SSO)
	Mike Powell (HPT)
	In the SZ is Linda Fluk (FTL)
1025	I called JCI to let them know we will be sampling on the mesa top early next week - They need to come out to site to locate utilities. Gene Velasquez will call me back
1210	Sampling team back w/ samples

	Sample loc	Sample ID	Time	Depth	COC
	H-20-A	AAA9175	0950	0-8"	1140-0033, 00
	H-20-B	AAA9176	1005	48-54"	0033, 0032-A
	H-11-A	AAA9172	1025	0-6", 12"	0034, 0032-A
	H-10-A	AAA9169	1040	"	"
No COCs	H-9-A	AAA9166	1100	0-5"	0032, 0032-A
"	H-8-A	AAA9163	1111	0-4"	0032, 0032-A
	H-22-A	AAA9181	1130	0-6", 10"	0035, 0032-A
	H-23-A	AAA9184	1145	0-6", 12"	"

1335 Clarita Trujillo visiting site
She took the alpha probe and will provide

1345 us with a new probe (or a working probe) 0800
Clonta Trujillo left site

Paper work completed.
Labels put on bottles 0830
1320 Samples brought to CST-9 rad van

1340 left site 0850
0855
0910
1005

1030
1115

0151

1200 A

Jim Hall
14 Pm

Sampling at Cañada del Buey

0800 At site: Field Team members: Linda Flint, Mike Sowell, Cornelius Flynn, Alex Hansel, Kristi Handy
Weather: cool, clear, dry

0830 Jim Roberts at site. He dropped off Satellite Storage area signs.
0850 Jim Roberts left site
0855 Tailgate Safety - All signed off
0910 Sampling team (same as yesterday) in CAZ
1005 At site: Roy Michelotti, ~~Brad Martin~~, Tim Icher, Martin Herrera.
Tim & Martin are from EPA - They are auditing the use of the transportation cert.
They suggested we put together a contingency plan
1030 Roy left site
1115 Tim Icher & Martin Herrera left site
They conducted an informal survey or audit today. We talked about the use of the transportation cert & how no regulations or SOPs should be compromised. They got a good idea about how we use the cert and they will go back to office & talk w/ people & check regs to assure no problems. They will come back out to site possibly next week to conduct a more formal audit.
We will write up a contingency management plan and detailed procedure for using the cert.
1200 At site Gerry Kelly, Dorothy Hard, Lynn Eichman

Virginia Smith called & informed me that DOE will be coming out to the site at ~ 1330. — 9/9/94 0800

1210 I am leaving to go to JA 33 to observe the Sea Mist Installation. Lynn Kidman will take over team management responsibility. — 0820

1210 Linda Plub leaving site.

1343 At site: David Angles (DOE/AV/HPD) Kim Delman (DOE/AL/APD), Joe Louck (ES&H-5), Virginia Smith (ICFKE)

1400 Linda Plub back to site

Talking with visitors & describing site operations. They are checking out health & safety concerns. — 0900

~0930

	Sample loc.	Sample #	Time	Depth	COC #
* no VOCs	H-179A	AAA9499	0940	0-5'	0036, 0036-A
"	H-180A	AAA9502	0955	0-6"	036, 0036-A
"	H-181A	AAA9505	1005	0-4'	0037, 0036-A
	H-6-A	AAA9199	1055	0-6" 12"	0037, 0036-A
	H-7A	AAA9202	1110	0-6", 6-8"	0038, 0036-A
	H-5A	AAA9196	1130	0-6", 13"	"
	H-5dup	AAA9460	1138	0-6", 6-8'	0039, 0036-A
No VOCs	H-4A	AAA9205	1150	0-6", 3"	0036, 0036A

~1010

1415 Jim Roberts at site

1420 Visitors left site — 1030

~1430 Jim Roberts & Lynn Kidman left site

1635 Left site

Judy Jah

Judy Jah

Sampling at Cañada del Buey

9/9/94 Field team members: Linda Fluk, Kenny Harrod,
0800 Kristi Aamodt, Mike Sewell, Cornelius Flynn,
Lynn Kidman
Weather is cool, clear, still, dry

0820 Linda Fluk went to meet JCI & USWEST Comm.
at main gate to locate utilities
located utilities behind the secured fence
only. I should call them when we will
sample at other locations on the mesa top
so they can locate them. They will only
do 2 weeks worth of sampling
drop only because the spray paint washes
away.

0900 Linda Fluk dropped samples from yesterday
off to Cal van

0930 Linda Fluk spoke with Jim Roberts on phone
about sampling in the secured area. Jim
said we cannot sample behind the
secured area until our procedures are
cleared with Property Office group at
OS group. - We must wait till we set up
a meeting. We will sample other areas
first.

1010 Linda Fluk called JCI to set up a time
to meet with them to strike other locations.

1030 Sampling team back with the deep samples.
are becoming more

JF

	Sample loc	Sample ID	Time	Depth	COC	
No VOCs	H-44A	AAA9187	0915	0-3"	~~0047, 0047-A~~ 0041	9/12/94
"	H-45A	AAA9170	0925	0-4"	"	0900
	H-46A	AAA9193	0940	0-6" 12"	0042, 0040-A	0900
	H-21-A	AAA9178	0950	0-6" 6-12"	0040, 0040-A	
	H-21-B	AAA9179	1005	42-48"	"	
NO VOCs	H-169-A	AAA9485	1015	0-6"	0042, 0040-A	
						1005
b. Brooks 52583 1050	George Brooks called me to tell me that 7 of our samples exceeded holding time. AAA 9061, 9064, 9068, 9070, 9071, 9073, 9067 The cooler with these samples was left in the Red Van by Bret before he left for vacation. There was miscommunication - or no communication about these samples but they were discovered the other day when Bril returned.					1055
	We will have to collect these samples again - for the organic constituents. I will make note in this book when we re-collect the samples.					1145
~1130	Lynn Fiedman left site					
	Finishing early today to assure samples can be processed at CST-9 before the weekend & do other tasks.					
1245	Left site	Linda Hirt CFFT				

Sampling at Cañada del Buey

9/12/94 Field team members: Linda Pluh, Cornelius Flynn,
0800 Ken Hansel, Kristi Aumodt, Mike Powell
Weather: Partly cloudy, still, dry
0900 Sampling team into CRZ
Ken Hansel (hand auger sampler)
Kristi Aumodt (documenter)
Mike Powell (HPT)
Cornelius Flynn (SSO)
In the SZ: Linda Pluh (FTL)

1005 At site: Roy Michelotti, Brad Martin, Don Hickmott
Visiting site, observing site operations
1055 Roy Michelotti, Brad Martin, Don Hickmott left site

Sample H-17 was washed downdrainage. Ken placed sample at appropriate location as he remembered its original location. It will be re-surveyed.
1145 Sampling team back from sampling
Collected dump samples

Sample Loc	Sample #	time	depth	COC#
H-19-A	AAA9222	0935		1140-0043, 0043-A
H-18-A	AAA9225	0935		"
H-12-A	AAA9226	0945	0-6"	"
H-12B	AAA9227	0950	24-30"	"
H-13-A	AAA9229	1000	0-6"	1140-0044, 0043-A
H-13-B	AAA9230	1005	24-30"	"
H-16-A	AAA9214	1020	0-6"	"
H-16B	AAA9215	1035	36-42"	1140-0045, 0043-A
H-17A	AAA9217	1045	0-6"	"
H-17B	AAA9218	1055	36-42	1140-0046, 0043-A

cont.	Sample loc	Sample #	time	depth	COC #
	H-15-A	AAA9211	1105	0-6"	1140-0046, 0043-A
	H-15-B	AAA9212	1115	30-36"	1140-0047, 0043-A
	H-14A	AAA9208	1125		"

1330 Jim Hale met with JCI and US West Communications to locate utilities on the mesa top where we will sample ~~not for~~ the rest of this week & into next week. We will meet again next week to locate utilities on the mesa top in the rest of the areas where we will be sampling.

1345 Left site

Jim Hale

Sampling at Cañada del Buey

9-13-94 Field Team Members: Linda Flub, Kristi Aamodt,
0800 Mike Powell, Cornelius Flynn, Terry Hansel
Weather: cool, mostly cloudy, ground is wet
- from last nights rain

NA30 Linda Flub spoke with George Brooks (CST-9) about our 7 samples which were not submitted to sample receiving from the rad van. He assurered me we will NOT get billed for 1 day of rad van service - for our lost time. Bret Lockhart did run the soil at the rad van and will give us the results. We will collect the samples again today. George said we do NOT have to re-submit the soil again to the rad van since we will be collecting the soil from the same exact locations as last time.

We are told by CST-9 rad van personnel that we should bring our sample bottles to sample receiving ourselves (since they have trouble storing & transporting the sample bottles. These sample containers will be brought to sample receiving at the same time that the rad baggies are dropped off at the rad van (ie the same day the samples are collected). In other words we should drop off sample containers to sample receiving before the soil is analyzed at the rad van

George said we should bring our samples to

be analyzed at the rad van to Chris at TA-35 from now on (rather they take them to Brit at TA-59, which is what we did from the start)

0950 Sampling team into CAZ - off to take samples:

Kenny Harrel (hand-augerer, sampler)
Krish Jamodt (documenter)
Cornelius Flynn (SSO)
Mike Lovell (HPT)

Cornelius Flynn is wearing a personal air pump today. Filters will be analyzed for Be, Cd, & Pb

1145 Sampling team leads

Sample loc	sample #	time	depth	COC #
H-163-A	AAA9235	1020	0-4"	1140-0048, 0048A
H-162-A	AAA9232	1030	0-4"	"
H-162-dup	AAA9463	1035	0-4"	"
PE Blank	AAA9450	1050	—	"
QE rinsate	AAA9456	1330	—	"
H-76-A	AAA9073	1050	6-12"	1140-0050
H-75-A	AAA9070	1100	"	"
H-75 B	AAA9071	1105	18-24"	"
H-74-A	AAA9067	1115	6-12"	1140-0049
H-74 B	AAA9068	1120	12-19"	"
H-73A	AAA9064	1130	6-12"	"
H-72-A	AAA9061	1135	0-12"	"

Samples re-collected because rad van exceeded holding time

To be analyzed for organics

KJ

We are finished sampling at Cañada del Buey and are packing up to start sampling on the mesa top

The transportation cart was swiped (the seats, floors) and it was swiped clean so that the field team members were then able to enter the cart & drive it from the canyon to the mesa top. and the cart was deemed clean.

1601 left site

Jeb Hall (KFT)

9-14-94 0800 Moving day. We are moving from Cañada de Buey to the mesa top. Leroy Hansel & Mike Powell are packing up and setting up on the mesa top.
Linda Thurp & Kristi Hamott are checking out every sample location on the mesa top to assure there is a stake in place. If there is a broken stake (ie many stakes have been mowed down with a lawn mower) then a new stake will be placed in exact location.
If the stake is missing then a new stake will be placed in the appropriate location according to the DQOs. This stake must be re-surveyed. Refer to page 125 of this notebook for sample locations which have been re-located & must be re-surveyed.

1300 Left site - All set up and all stakes & locations checked

Jeff Thurp (FTL)

Sampling on the Mesa top

9-15-94 At new site on mesa top
0800 Field team members: Linda Pluh, Mike Powell
Cornelius Flynn, Kenny Hassel, Kristi Aamodt
Jim Roberts
Weather is cool - autumn fire is here
0910 Tailgate Safety meeting - All signed off
0940 Field team off to sample
Kenny Hassel (Sampler)
Kristi Aamodt (Documenter)
Mike Powell (HPT)
Cornelius Flynn (SSO)
Linda Pluh in SZ (FTL)
Jim Roberts will accompany the other field team members to unlock a gate for them so they may access their first location to be sampled. Jim is in the SZ.

Team went to sample SS1 & SS2 however there was ~ 2 feet of water ponded & the stakes were covered w/ ~ 1 foot of water. Team did not collect these samples today - they will wait to see if the water drops up soon & will collect samples at that time.

Team went to 4 separate exclusion zones - the cart worked well at transporting them long distances.

12:10 Sampling team back w/ dump samples

/w

Sample #	Sample # (LOC 09-15-94)	time	depth	COC #
S-52	AAA9335	1000	0-6"	1140-0051, 0054
S-82	AAA9494	1025	"	"
S-90	AAA9333	1020	"	"
S-41	AAA9334	1035	"	"
S-16	AAA9240	1105	"	"
S-10	AAA9284	1140	"	1140-0052, 0054A
S-10-dup	AAA9472	1150	"	"
S-13	AAA9286	1155	"	"
S-11	AAA9285	1125	0-6" 6-8" VOCs	1140-0053, 0054A
S-12	AAA9287	1200	0-6"	"
PE Blank	AAA9451	1000	—	1140-0051

1620 Left site

JF (FTL)

Sampling on Mesa top

9/16/94 Field Team Members: Linda Pluh, Mike Powell
0800 Cornelius Flynn, Kristi Agnodt, Ken Hansel
Weather: cool, clear, still, dry

0830 Tailgate Safety meeting, All signed off
0847 Sampling Team Entry CRZ
Ken Hansel (Samples)
Mike Powell (HPT)
Cornelius Flynn (SSO)
Kristi Agnodt (documenter)
Linda Pluh (FTL) in SZ
0945 Roy Michelotti at site. We went to look at locations US-4 US-3, NS-25 w/ Roy
Everything looks good
0955 Roy left site
1000 Sampling team back to CRZ with Swip samples.

1000 C&C Portable unit dropped off

	Sample loc	Sample #	time	depth	Coc #
No VOCs	H-96-A	AAA9298	0905	0-6"	1140-0054, 0054A
	H-97-A	AAA9301	0910	0-6", 6-12"	"
	H-178-A	AAA9300	0915	"	"
	H-98-A	AAA9304	0935	"	1140-0055, 0054A
	H-98-B	AAA9305	0945	12"-18"	"

We are leaving early for our field team picknick
We picked up the COBRA jack hammer at drilling & sample management - we will use this next week.
1200 Left site
(Linda Pluh w/ FTL)

Sampling on mesa top

9/20/94 0800 Field sampling team: Linda Plate, Mike Powell, Ken Hanel, Kristi Aarnodt, Jim Roberts, Weather is cool, overcast dry, wind 25 mph
Jim Roberts is talking with 5 people from OS group about security issues - How to get personnel in the East past the Security. They agreed on a way to get personnel through. We will sample in the secure area next monday through Thursday. The guards will be informed ahead of time as far as what we will be doing. We will get special escort papers with just the four personnel.

~0835 Gerry Kelly at site. Left site ~0850

0855 Gracia Coffin (EM/ER) at site to take pictures

0910 Claude Trujillo at site

0930 Sampling team into CRZ
hand auger, documenter: Kristi Aarnodt
Sampler, jack hammerer: Ken Hanel
HPT: Mike Powell
SSO: Cornelius Flynn
Linda Plate in the SZ
Gracia Coffin will follow the sampling & take photos.
Claude Trujillo will go out with sampler to observe sampling activity

~0840 Phone conversation with Mary Perkins (NMED) about splitting samples at locations H-171, H-174 & H-6.
Mary said that this thursday is a good day to split samples H-171, & H-174. She does NOT want to go into the EZ. We will collect the samples for her & she

will stand behind the caution tape in the SZ. Mary will sample everything which we sample - for all the same analytes and at all of the same depths. We will set up bottles for her and we will set up chain of custody forms for her as well. All of Mary's samples must go through the red van - we will take her samples to the red van along with our samples at the end of the day. Mary will bring her own cooler and we will store her samples in our freezer until we have received the red van results. At that time Mary will pick up her samples & transport them to the State Lab in Albuquerque. We will go through the same procedures again on monday to collect sample H-61 behind the secure area.

1025 Clarita Trujillo left site
1050 Gracia Coffin left site
1205 Sampling team back to CRZ

Sample loc	Sample #	time	depth	COC #
H-99	AAA9288	0955	0-5"	1140-0056, 0056-A
H100	AAA9291	1000	0-6"	"
NS-3	AAA9499	1030	0-6"	"
NS-4	AAA9462	1035	0-6"	"
NS-5	AAA9466	1040	0-6"	1140-0057, 0056-A
SS-16	AAA9295	1130	0-6"	"

1600 Left site

[illegible] (FTL)

Sampling on mesa top

9/21/94 Field team members: Linda Fluh, Mike Powell, 09
0800 Kristi Aymont, Cornelius Flynn, Ken Hanel 09
Weather: cool ~58°F, still, partly cloudy
0825 Tailgate Safety meeting - All signed off 10
~0845 Sampling team in CA 2
Washing new hand augers.
Ken Hanel: hand augerer & sampler
Kristi Aymont: documenter
Cornelius Flynn: SSO
Mike Powell: HPT
Linda Fluh in SZ

~0920 Under placed location S-29 & S-30. According to decision made by Ron Michelotti, the 2 samples were placed in areas which look likely for run-off water & sediment to accumulate. Refer to page 127 & 126 of this notebook - location will be surveyed later.

~0915 Who signed in the sampling team in building WA-128. for sampling locations S-83, S-84 & S-85. 15
Person to talk w/ is Ellie at 6656168.
Because the team can NOT decontam EZ I signed team in & I will call Ellie to sign the team out.

0930 Talked w/ Doug Hoff. He will open up the Shed west of bldg 31 so we can sample NS-1 & NS-2. Doug said it was O-K to use jack hammer to break asphalt & repair it after in order to sample

0935 Lynn Kidman at Site
0950 Linda called Ellie James Springfield to sign out field team from the area north of bldg TA-46-58
1005 Roy Michelotti at site
Discussing tour we will be going on Friday
Do we need to give h.s.s. briefing Roy call Virginia Smith. Let people know they are not getting the briefing because of nature of visit. Virginia will speak w/ group.
1200 Roy & Lynn left site
1200 Sampling team drove up to CRZ

Sample loc	Sample #	time	depth	COC #
S-84	AAA9496	0920	0-6", 6-8"	1140-0058, 0058-A
S-85	AAA9497	0930	"	"
S-83	AAA9[illegible]	0940	"	1140-0062, 0058-A
S-30	AAA9478	1000	"	1140-0059, 0058-A
S-29	AAA9332	1010	"	"
S-29-dup	AAA9478	1015	"	1140-0060, 0058-A
H-172-A	AAA9491	1045	0-6", 6-12"	"
H-172-B	AAA9492	1100	54-60"	1140-0061, 0058-A
H-172-C	AAA9493	1130	72-84"	"
H-172-dup-A	AAA9475	1145	0-6", 6-12"	1140-0062, 0058-A

1555 Left Site

9/22/94

Sampling on Mem Tog

0800 Field team members: Linda Phh, Ken Hansel, Kristi Aamodt, Mike Powell, Cornelius Flynn
Weather is 45°F, windy, cloudy

~0750 Mike Powell & Jim Roberts at sled west of Bldg 31. Mike is doing a rad scan & monitor of the sled

0805 Mary Perkins & Steve Yanicak (NMED) at site. They will be splitting samples with us this morning. We will collect the samples for them. They will not enter the EZ - will stay behind barrier tape. SSO gave them H&S briefing

0830 Mike & Jim Returned: Mike found a few small locations w/ elevated rad readings. One location on asphalt was ~ 500 cpm higher than background (~ 150-160 cpm) & one location on concrete was ~ 300 cpm. It will be difficult to sample in these locations

I talked with Mike about hot sample
Slope of outfall reading ~ 200-300 cpm at top and ~ 130-150 cpm on bottom of the drainage. The rad readings were in the entire drainage - activities decreased down drainage to ~ background at the top by fence.

0905 Sample team in CRZ
Kristi Aamodt (documenter)
Ken Hansel (hand auger, sampler)
Mike Powell (HPT)
Cornelius Flynn (SSO)

Linda Fluh in SZ
Mary Perkins & Steve Yanicak behind
Naylor tape - observing sampling. Jim
Roberts also watching sampling behind tape.
1045 Jim Roberts left site.
1100 Mary Perkins & Steve Yanicak left site.
1200 Sampling team back

Sample loc	Sample #	time	depth	COC #
→ H-171-A	AA9488	0940	0-6", 6-12"	1140-0063 0063-A
H-170-A	AA9482	1000	0-6", 6-12"	1140-0064, 0063-A
H-170B	AA9483	1025	36-48	"
→ H-174-A	AA9469	1040	0-6", 6-8"	1140-0063, 0063-A
H-173-A	AA9465	1120	0-6", 13"	1140-0065, 0063-A
LF 4-22-94 S-28	AA9313	1140	0-6", 10"	"

1230 Tailgate Safety Meeting
All signed off
1315 Linda Fluh met with JCI & US West
to check on the last of the utilities
1500 Mike Powell & Linda Fluh went to the shed
on west end of bldg 31. Mike showed me
hot spots. We noted the oil stains where
the samples will be collected.

Linda Fluh spoke w/ Roy Michaletti today on phone
Roy said he noticed that ESH-1 had already
done a rad survey in the shed. He is not
concerned with sampling where the oil stains
are located. So we will keep these 2 sampling
locations where they are.

1620 Left site
(Linda Fluh LF 1 FM)

9-23-94 44

Sampling on Mesa Top

0715 Field team members: Linda Fluk, Mike Powell, Kristi Aamodt, Ken Hansel, Cornelius Flynn, Jim Roberts, Lynn Kedman, Ray Michelette

Weather: cool, clear, slight breeze, dry

6720458 Mary Perkins

Setting up the SZ for a group tour which will be conducted here.

0805 Group tour begins. People arrived - we gave a demonstration of field operations at TA-46 & the use of the transportation cart.

0900 Tour complete - successful

0715 Lynn Kedman left site

0905 Sampling team off to sample

Kristi Aamodt: documenter

Mike Powell: HPT

Ken Hansel: hand augers, sampler

Cornelius Flynn: SSO

Linda Fluk in the SZ.

0905 Linda called Ellie to let her know the sampling team will be working inside the fenced area - she signed the group in & out.

~0915 Ray Michelotti & Jim Roberts left site

1015 Linda Fluk called Chris at bad van to check on results from yesterday samples. He said nothing showed elevated radiation. Therefore Mary Perkins can drive her samples to State Lab in ABQ.

1015 Mary Perkins picked up her samples. I relinquished the samples to her per COC. She will drive samples to

Start lot

1030 Sampling team - back w/ Samples

sample loc	Sample #	time	depth	COC #
H-84-A	AA9324	0910	0-5.5"	1140-0066, 0066-A
H-83-A	AA9326	0915	0-4"	"
H-82-A	AA9323	0930	0-6"	"
H-51-A	AA9317	0945	0-5.5"	1140-0067, 0066-A
H-52-A	AA9317	0955	0-5"	"
H-53-A	AA9320	1005	0-4"	"

1315 Left site

Sampling on Mesa top

9/26/94 Field team members: Linda Fink, Cornelius Flynn,
0800 Kristi Aamodt, Ken Hassel, Mike Powell, Jim Roberts
weather is ~53°F still clear, dry

0824 Mary Perkins (NMED) at site. She will
split a sample with us today (H-61). So
will not go into the EZ. Procedure for
collecting & splitting sample is the same
as done last week.

0830 Tailgate Safety Meeting - All signed off
Field team getting ready to go &
sample in the secure area today.
Jim Roberts worked out a procedure with
security personnel here at TA-46 for
getting field team members through secure
area. Escort papers were made
with just the 4 people riding on the
cart (the sampling team). Kenny Hassel
will serve as escort. Jim Roberts will
go with them & spend the day behind
the fence to make sure everything goes
smoothly.

0855 Sampling team into EZ
Kristi Aamodt (Hard auger sampler)
Kenny Hassel (documenter)
Cornelius Flynn (SSO)
Mike Powell (HPT)
Linda Fink in SZ
Jim Roberts & Mary Perkins will go
into secure area (out of EZ)

0900 Field team off to stop sampling.

0928 Mary Perkins left. Her sample was collected. Will call
Steve Yanicak (672-0448) tomorrow when results
come back from rad van.

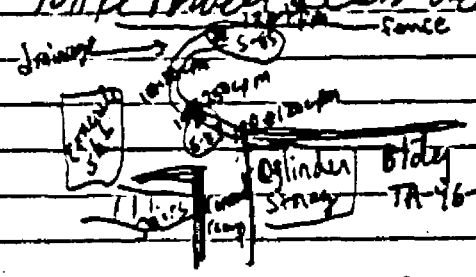
1035 Clenta Trujillo stopped by trailer. We talked a little. She said she will stop by again tomorrow. Clenta left after few minutes.

1135 Sampling team back w/ cargo samples.

	sample loc	Sample #	time	depth	COC #
	H-60-A	AAA9275	0925	0-6", 6-12", 12"	1140-0068
NMED	H-61-A	AAA9278	0910	"	"
	H-62-A	AAA9281	0935	0-4"	1140-0069, 0068-A
	S-86	AAA9461	0945	0-4"	"
	S-14	AAA9273	1010	0-6", 6-8"	1140-"
	S-15	AAA9274	0955	0-6", 6-8"	1140-0070, 0068-A
	S-7	AAA9271	1040	0-5"	"
	S-8	AAA9441	1045	0-6"	1140-0070, 0068-A
QTcollecting	~~S-9~~	~~AAA9442~~	~~1050~~	~~0-6", 6-12"~~	~~1140-0070~~ "
Imported collected QT sampling	YE Blank	AAA9454	0930	NA	1140-0068, 0068A

1430 Dorothy Hood at site to visit location north of TA-46-58 where there were elevated rad readings.

1445 Signed into area (Linda Pitts)
Mike Powell scanned area with rad monitor



rock (tuff) reading 100-130 cpm
x sample points
concrete reading 80-100 cpm

The rad reading in general area read 100-120 cpm

1600 Left site

(FTL)

Sampling on Mesa Top

9/27/94 Field team members: Gene Fish, Cornelius Flynn
0800 Mike Powell, Ken Hansel, Kirk Aarnodt, Jim Abbott
Weather: Warm, sunny, clear, dry, still
0815 Claudia Trujillo & Ron Thomas (CESH-7) at site to speak with Mike Powell. Mike updated them on all rad related findings
0830 Claudia & Ron left site
0835 Tailgate Safety Meeting All signed off
0845 Sampling team to C-Pit
[illegible] Kirk Aarnodt (Sampler, Hand augerer)
Mike Powell (HPT)
Ken Hansel (Documenter)
Cornelius Flynn (SSO)
Work Plan in SZ

~ 0920 Team collected samples in pond
went off to security area & guards would not let them enter without signing in themselves.
I spoke with guard, who spoke with supervisor & allowed them to enter if I signed in for them.
~1000 Sampling team went into secure area to collect samples.
1200 Sampling team back

	Sample Loc	Sample #	time	depth	COC #
	SS-1	AAA9238	0905	0-6"	1140-0071, 0071-A
	SS-2	AAA9239	0910	"	"
No VOCs	H-17A	AAA9458	1020	0-4"	"
"	H-3-A	AAA9247	1030	0-6"	"
	H-7A	AAA9244	1035	0-6" 6-12" 12-15"	1140-0072, 0071-A
No VOCs	H-48A	AAA9241	1055	0-6"	"

	H-49-A	AAA9250	1105	0-6"	1140-0072, 0071-A
	H-49-A-dup	AAA9466	1110	0-4"	1140-0073, 0071-A
NO UDOC	H-50 A	AAA9253	1120	0-4"	"
	S-69	AAA9296	1140	0-6", 6-12"	1140-0074, 0071-A
	S-70	AAA9297	1150	"	"

1600 NMED personnel (Steve Yanucah) picked up sample
1630 left site

Jackie Hill
(EFFC)

071-A

0071-A

Sampling at Mesa Top

9-29-94 Field team members: Linda Flint, Kristi Aumodt
0800 Mike Powell, Cornelius Flynn, Ken Hansel, Jim Roberts
Weather: Cool, clear, still, dry
0825 Tailgate safety meeting - All signed off
0830 Two people from security came by SZ & talked w/ Jim about getting team past guards & into security area. The SSO was charged to accomodate the actual use of the cart & transport of personnel through security area
0845 Sampling team into CRZ
Kristi Aumodt (documenter)
Ken Hansel (hand augers, samples)
Mike Powell (~~SSO~~ HPT)
Cornelius Flynn (SSO)
Linda Flint is SZ
Jim Roberts into security area to lift the grate in order to sample SS-15

1035 Sampling team unable to get enough sediment to fill all bottles. - They will fill 125 ml plastic & glass for metal & semi VOC/PCB anal. If enough mat. they will fill up 250 ml plastic for rad analysis

1140 Sampling team back w/ samples

	Sample loc	Sample #	time	depth	Coc #
No VOCs	S-6	AAA9270	0910	0-4"	1140-0075, 0075-A
"	S-5	AAA9269	0920	0-3"	"
"	S-4	AAA9268	0925	0-6"	"
	H-57-A	AAA9265	0935	0-6, 6-12	1140-0076, 0075-A
	H-56-A	AAA9262	0950	"	"
	H-55-A	AAA9259	1000	0-3"	"

H-54-A	AA19256	1005	0-6", 6-12"	1140- 0077, 0075-A
SS-15	AA19294	1025	0-6"	"
NS-2	AA19308	1110	0-6", 6-12"	1140-0078, 0075-A
NS-1	AA19307	1050	"	"
PE Blank	AAA9452	1055	NA	1140 0075

We have completed all sampling per the 1994 field sampling schedule.

We will collect additional surface & hand auger samples next week (samples originally scheduled for 1995).

~1430 Left site

Jack Hill (RPE)

Sampling on Mesa top.

10 9/14/97 Field Team Members: Linda Fleck, Kristi Aarnodt, Corneliu Flynn, Mike Powell, Kenny Hanel

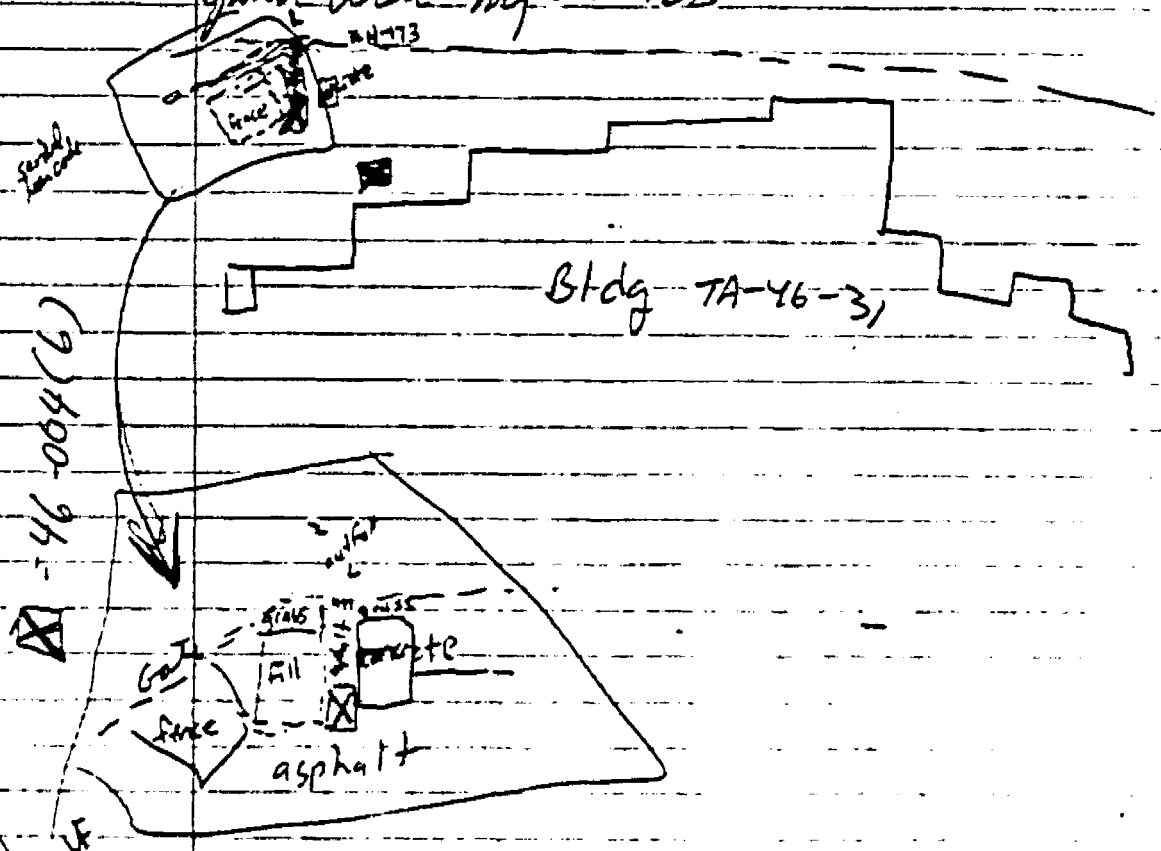
0800

0830 Tailgate Safety Meeting - All signed off

Weather - cool, cloudy, drizzling

0840 Field team members in CRZ
Kenny Hanel: Sampler handaugerer
Kristi Aarnodt: downhole
Mike Powell: HPT
Corneliu Flynn: SSO
Into the fence SZ

0850 I called Ellie (665-6168) to sign the field team in to collect samples behind the gated area by WA-128



looking north of bldg TA-46-31 to determine the need for collect more samples to assure no contamination from 2 drum storage areas & 46-004(b). Refer to maps on page 52. Samples are not to be collected on asphalt (I am told). Sample H-173 should capture drainage from one drum storage area. And outfall L sample location should capture drainage from the other drum storage area. The area by outfall L is paved asphalt (an asphalt drainage) which is paved to the fence or gate. The 1st possible location or area to capture run-off from the drum storage area would be by the outfall pipe.

Therefore it does not appear necessary for take more samples for TA#46-004-b because all runoff or drainage from these 2 drum storage areas will be sampled at 2 existing sample locations (H-173 & outfall L)

Question - Have we sampled for all the appropriate analytes?

1120 Roy Michelotti & Dennis Savelkoul visiting site. I spoke with Roy about the extra samples (discussed above). He feels locations H-173 & outfall L (H-77) should capture run-off. He suggested we collect bottles to be submitted for alkali metals (I will) 1st call CST-7 to ask if these 2 samples can be analyzed for alkalis or if we have to submit new sample bottles

	Sample loc	Sample #	time	depth	COC #
	S-74	AAA9508	0900	0-6", 6-12"	1140-0079, 0079-A
	S-88	AAA9509	0910	0-6", 6-12"	"
	S-31	AAA9510	0920	0-6", 6-12"	"
N VOCs	H-86-A	AAA9516	0930	0-3"	1140-0080, 0079-A
"	H-85-A	AAA9515	0935	0-4"	"
	S-38	AAA9513	0945	0-6", 6-8"	"
	S-39	AAA9514	0955	0-6", 6-8"	1140-0081, 0079-A
No VOCs	H-131-A	AAA9517	1010	0-4"	"
	H-132-A	AAA9518	1015	0-6", 6-12"	"
	S-68	AAA9512	1045	0-6"	1140-0082, 0079-A
	S-67	AAA9511	1055	0-6"	"
	H-146-A	AAA9519	1115	0-6"	"
	H-146-B	AAA9525	1130	54-60"	1140-0083, 0079-A
	H-146-C	AAA9526	1155	64-78"	"
	H-147-A	AAA9520	1200	0-6"	1140-0084, 0080-A
	~~QA-Rinsate~~	~~AAA9527~~	~~1330~~	—	"

1135 I spoke w/ Rebecca Eaton (CST-9) about samples H-173-A, AAA9465, 9-22-94, H-27-A AAA9148, 9-6-94 to ask if the lab could analyze for Cs, Pb, Li, K, Na in addition to the requested metal suite (requested & submitted on the above dates). Rebecca will call the lab to ask if they still have the sample & if they could use the existing sample for the alkali metal analyses.

1205 Roy & Dennis left site

1235 Cheryl, Jean, Mark w/ samples for day labeling, documenting

1600 left site, [illegible]

10-5-94 Clean up at TA-46
0700 we are finished sampling
Mike Powell & Cornelius Flynn are
swiping & counting all releasable
equipment from the CRZ

Mike swiped the Ryder Van inside
& outside. All swipe results reading
well below background.

1030 Kristi Aamodt collected rinsate sample
from the auger buckets. DI/Distilled
was obtained from CST-9. Water was
run over the decontaminated augers buckets.
The water was poured into appropriate
bottles. The appropriate preservatives placed
in bottles

QA Rinsate AAA9457 10:30

All equipment in the CRZ swiped & clean
Results of swipes are in file. Clean
equipment packed in truck

Claudia Trujillo at site for a visit

1400 Left site

Andy Fitch
ETL

10-12-94 Phone Conversation
1145 Rebecca Eaton Spoke wit Lab which will be analyzing our samples in regards to 2 samples to be submitted for alkali metal analysis (Refer to page 54 of this notebook).

AAA 9148 ↓ AAA 9527 ↓ Cs, Li, Rb

① The lab has gotten rid of Sample AAA9148
② The lab still has AAA 9465

We collected extra soil from the above 2 locations on 10-4-94
We will re submit Sample H-27-A (Hold AAA 9148) & re-designate sample AAA 9527 & submit for analysis of Cs, Rb, Li
The lab will take aliquot of AAA9465 and analyze it for Li, Rb, Cs

This will be noted in the data base

Rebecca will submit samples to the lab in the next few days

AAA9527 COC # 1140-0086 collected 10-4-94 at 1200
Document date 10/13/94
analysis Li, Cs, Rb

10-18-94 While doing a QA check in TA-46 database we noticed 2 sample locations were submitted for analyses of asbestos & TCLP & they really should not be analyzed for these 2 analyses. However they should be analyzed for VOC, Semi VOC, PCB.

We withheld the samples to be analyzed for asbestos & TCLP. Lovell (at CST-9 665 5713) will hold samples for us. We will adjust the COC forms.

We will have to return to these locations next year to collect samples to be analyzed for VOC, Semi VOC & PCB.
locations: H-146, H-147

AA