Los Alamos

ER Record I.D.# 005471 0

LOS ALAMOS NATIONAL LABORATORY

ENTERED

ENVIRONMENTAL RESTORATION
Records Processing Facility
ER Records Index Form

ERID NO: 54713 DATE RECEIVED: 7/23/96 PROCESSOR: BJ PG COUNT: 1278 9

PRIVILEGED (Y/N): N RECORD CATEGORY: P RECORD PACKAGE NO.: N/A

FILE FOLDER: ADDITION TO RECORDS PACKAGE 31 TA-36 FIELD SUMMARY REPORT, 1994, VOLUMES 1-4

CORRECTION (Y/N): N CORRECTED NO.: N/A CORRECTED BY: N/A

AR (Y/N): Y AR DESCRIPTION (D/G): N/A

MISCELLANEOUS: OU 1130

31602

THIS FORM IS SUBJECT TO CHANGE. CONTACT RPF FOR LATEST VERSION. (JAN. 1996)

(1278)

ICF KAISER

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

MEMORANDUM

Date: July 1, 1996

To: Darlene Carter, RPF (M707)

From: R.L. Kidman RLK

Subject: Addition to Records Package 31

The attatched TA-36 Field Summary Report, 1994, Volumes 1-4, should be added to Records Package 31. If you have any questions regarding this package please call Kim Sanchez at 661-5270.

RKL/ks

Received by ER-RPF
JUL 23 1996
BY

Los Alamos
NATIONAL LABORATORY

memorandum

Environmental Restoration, MS M773
Environmental Management Program

To/MS: Originator of ER Record Packages
From/MS: Darlene Carter, ER/RPF Field Records Coordinator
Phone/FAX: 5-7342/5-5358
Symbol: EM/ER: 95-627
Effective Date: November 1, 1995

SUBJECT: RECONCILIATION OF RECORD PACKAGES SUBMITTED TO RECORDS PROCESSING FACILITY (RPF)

Date: 07/08/96

Record Package #: 31/Addition Submitted: 07/08/96

Primary Contact: Kim Sanchez Group: TSF Kaiser

Mail Stop: _____ Telephone #: 606-5270

Attached is the table of contents (TOC) generated from the RPF Records Database in the order in which the package was received. Also attached is the TOC you submitted with the package. It is important that you reconcile what is in the system to what you have documented on the TOC.

If there are any discrepancies they have been noted for your attention. Please contact the ER Field Record Coordinator at your earliest opportunity to reconcile any discrepancies. Additions and modifications can be made within the package as needed.

Thank you for your cooperation.

Cy: Field Record Coordinator, MS M707
RPF, MS M707

Attachment(s): Originators TOC
RPF Package Report Listing

TA-36 FIELD SUMMARY REPORT, 1994

ICF Kaiser Engineers, Inc.

CONTENTS

ACRONYMS AND ABBREVIATIONS iv

EXECUTIVE SUMMARY v

1.0 INTRODUCTION 1

2.0 OBJECTIVES 11

3.0 SELECTION OF SAMPLING LOCATIONS 12

3.1 Reconnaissance Sample Locations—Biased 12
3.1.1 Visual Walkthrough Survey 12
3.1.2 Geophysical Survey 12
3.1.3 Geomorphic Surveys 14
3.1.4 Geohydrological Survey 15
3.1.5 Radiation Survey 17
3.1.6 Man-Made Structures 17
3.2 Reconnaissance Sample Locations—Randomized Samples 20
3.2.1 Randomization Protocol 20

4.0 FIELD SAMPLING ACTIVITIES 24

4.1 Sampling Approach 25
4.2 Field Documentation 26
4.3 Sampling Activities By PRS 27

5.0 HEALTH AND SAFETY MONITORING DURING SAMPLING ACTIVITIES 49

5.1 Administrative Health and Safety Requirements 49
5.2 Direct Monitoring of Hazardous Substances or Conditions 50
5.3 Dose Monitoring 50
5.4 Radiation Monitoring 51
5.5 Equipment Release Procedures 52

6.0 EQUIPMENT DECONTAMINATION 53

6.1 Decontamination of Manual Sampling Equipment 53
6.2 Decontamination of Drilling Equipment 53

7.0 WASTE MANAGEMENT 54

7.1 Satellite Waste Storage Areas 54
7.2 Less-Than-90-Day Storage Areas 55
7.3 Waste Characterization 55
7.4 Waste Disposal 55

8.0 CONCLUSION 56

9.0 EXHIBITS 57

REFERENCES 64

List of Figures

Figure 1-1. Location of PRSs within OU 1130 2
Figure 1-2. Location of PRS 36-001: MDA AA 3
Figure 1-3. Location of PRS 36-002: Sump 4
Figure 1-4. Location of PRS 36-003(a): Aggregate Septic System 5
Figure 1-5. Location of PRS 36-003(b): Aggregate Septic System 6
Figure 1-6. Location of PRS 36-004(a-e): Aggregate Firing Sites 7
Figure 1-7. Location of PRS 36-005: Boneyard 8
Figure 1-8. Location of PRS C-36-003: Photo Outfall 9
Figure 1-9. Location of PRS 36-004(d): Burn Pits 10
Figure 3-1. GPR Survey for PRS 36-001: MDA AA 13
Figure 3-2. Locations of Firing Site Hazard Radii 16
Figure 3-3. PRS 36-005 Boneyard Area—Grid Layout for the Radiation Survey 18
Figure 3-4. Randomization Grid at PRS 36-005: Boneyard 22
Figure 3-5. Randomization Sample Locations at PRS 36-005: Boneyard 23
Figure 4-1. Sample Locations Within PRS 36-001: MDA AA 28
Figure 4-2. Sample Locations Within PRS 36-002: Sump 31
Figure 4-3. Sample Locations Within PRS 36-003(a): Septic System 33
Figure 4-4. Sample Locations Within PRS 36-003(b): Septic System 36
Figure 4-5. Sample Locations Within PRS C-36-003: Photo Outfall 38
Figure 4-6. Sample Locations Within PRS 36-004: Upper Potrillo Canyon 40
Figure 4-7. Sample Locations Within PRS 36-004: Lower Potrillo Canyon 41
Figure 4-8. Sample Locations Within PRS 36-004: Fence Canyon 42
Figure 4-9. Sample Locations Within PRS 36-004: Water Canyon 43
Figure 4-10. Water Sample Locations Within PRS 36-004: Water Canyon 45
Figure 4-11. PRS 36-005: Boneyard Biased Sampling Locations 47

List of Tables

Table 1 State Plane Coordinates for the Randomized Sample Locations Within the Boneyard 21
Table 2 State Plane Coordinates for the Randomized Sample Locations Within the Hazard Radii of Meenie and Minie Firing Sites 21
Table 3 OU 1130 Field Team Members 24
Table 4 Waste Drums at TA-36 Waste Management Areas 54

List of Exhibits

Exhibit 1 Summary of 1994 Sampling at TA-36 58
Exhibit 2 Standard Operating Procedures Used During 1994 Sampling Activities at TA-36 62
Exhibit 3 Quality Control Samples Taken During the 1994 Sampling Season 63

ACRONYMS AND ABBREVIATIONS

AR	Administrative Requirements
CPM	Counts per minute
CRZ	Contamination reduction zone
EDI	Environmental Dimensions, Inc.
EM	Electromagnetic
ER	Environmental Restoration
EZ	Exclusion zone
GM	Geiger Mueller
GPR	Ground penetrating radar
HE	High Explosives
HPT	Health Physics Technician
Laboratory or LANL	Los Alamos National Laboratory
MAG	Magnetic
NFA	No Further Action
OU	Operable Unit
PCOC	Potential Contaminant of Concern
PE	Performance evaluation (sample)
PPE	Personal protective equipment
PRS	Potential Release Site
PVC	Poly Vinyl Chloride
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SOP	Standard Operating Procedure
SSHASP	Site-Specific Health and Safety Plan
SSO	Site Safety Officer
SZ	Support zone
TA	Technical Area
VOC	Volatile organic compounds

Executive Summary

EXECUTIVE SUMMARY

This report presents the activities for the 1994 RCRA Facility Investigation (RFI) for Operable Unit (OU) 1130 at Technical Area 36 (TA-36). TA-36 is an active area used for explosives and detonation testing since its establishment in the late 1940s.

OU 1130 borders TA-15 on the northwest and TA-18 and Pajarito Road on the northeast (Figure 1-1). On the south and east, it extends past State Road 4 and borders the community of White Rock. OU 1130 straddles Potrillo Canyon and is bounded to the north by Water Canyon.

The objectives of the 1994 RFI reconnaissance sampling was to verify the presence of contamination. The analytical results will help to determine if sampled PRSs will require further action.

The potential release sites (PRS) that were sampled 1994 are:

- 36-001, MDA AA
- 36-002, Sump
- 36-003(a) and 36-003(b), Septic Systems
- C-36-003, Photo Outfall
- 36-004(a-e), Aggregate Firing Sites
- and 36-005, Boneyard (Figures 1-2 through 1-8).

The potential contaminants of concern include depleted uranium, mercury, lead, beryllium, chromium, barium, other metals, high explosives, and organic compounds.

Section 4.3 lists sampling activities by PRS. This section also includes the sampling activities that were not conducted or completed during the 1994 season.

The health and safety monitoring program was designed to protect the health and safety of field team members, and consisted of direct-reading monitoring and integrated industrial hygiene sampling. The SSO was responsible for enforcing all health and safety requirements outlined in the Site Specific Health and Safety Plan (SSHASP). Within the SSHASP is a risk analysis, broken down by task, used to identify hazards and determine the level of personal protective equipment (PPE) needed for field personnel. Based on the risk analysis, Modified Level D PPE was used during sampling activities.

All samples were put into a portable ice chest after collection and relinquished to the Laboratory's mobile radiation laboratory and analyzed for gross alpha, beta and gamma contamination. Field duplicates and performance evaluation samples were also submitted for quality assessment.

Radiation surveys were conducted by the HPT to ensure that all sample bottles and sampling equipment released from the site met the requirements for conditional or unconditional release.

Extensive field documentation taken during the 1994 sampling season included:

- field log,
- sample collection logs,
- chain of custody/request for analysis forms,
- photo documentation,
- health and safety forms,
- and radiation monitoring and screening forms.

These documents can be found in Appendix 1 through Appendix 6.

Waste generated during sampling activities at TA-36 were managed in accordance with the approved Site-Specific Waste Management Plan. See Appendix 8, Attachment 1 for this document.

Sampling activities which were not conducted or completed will be continued in 1995.

Section 1

1.0 INTRODUCTION

Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) activities were conducted for Operable Unit (OU) 1130 at Technical Area 36 (TA-36) during 1994. These activities included field sampling efforts conducted from July 14 through November 21, 1994, as part of the Los Alamos National Laboratory (the Laboratory) Environmental Restoration (ER) Program.

The potential release sites (PRS) within OU 1130 (Figure 1-1) that were sampled during 1994 are: 36-001, MDA AA; 36-002, Sump; 36-003(a) and 36-003(b), Septic Systems; C-36-003, Photo Outfall; 36-004(a-e), Aggregate Firing Sites; and 36-005, Boneyard (Figures 1-2 through 1-8). Field activities at PRS 36-004(d), Burn Pits (Figure 1-9), were limited to site characterization surveys.

Media sampled included the following:

- surface soil and sediment;
- fluid and sludge;
- surface water discharge; and
- subsurface soil.

This report summarizes the activities that were conducted during 1994 at TA-36 and includes descriptions of the following:

- selection of sampling locations;
- field sampling activities;
- health and safety monitoring during sampling activities;
- decontamination procedures;
- equipment release procedures; and
- waste management.

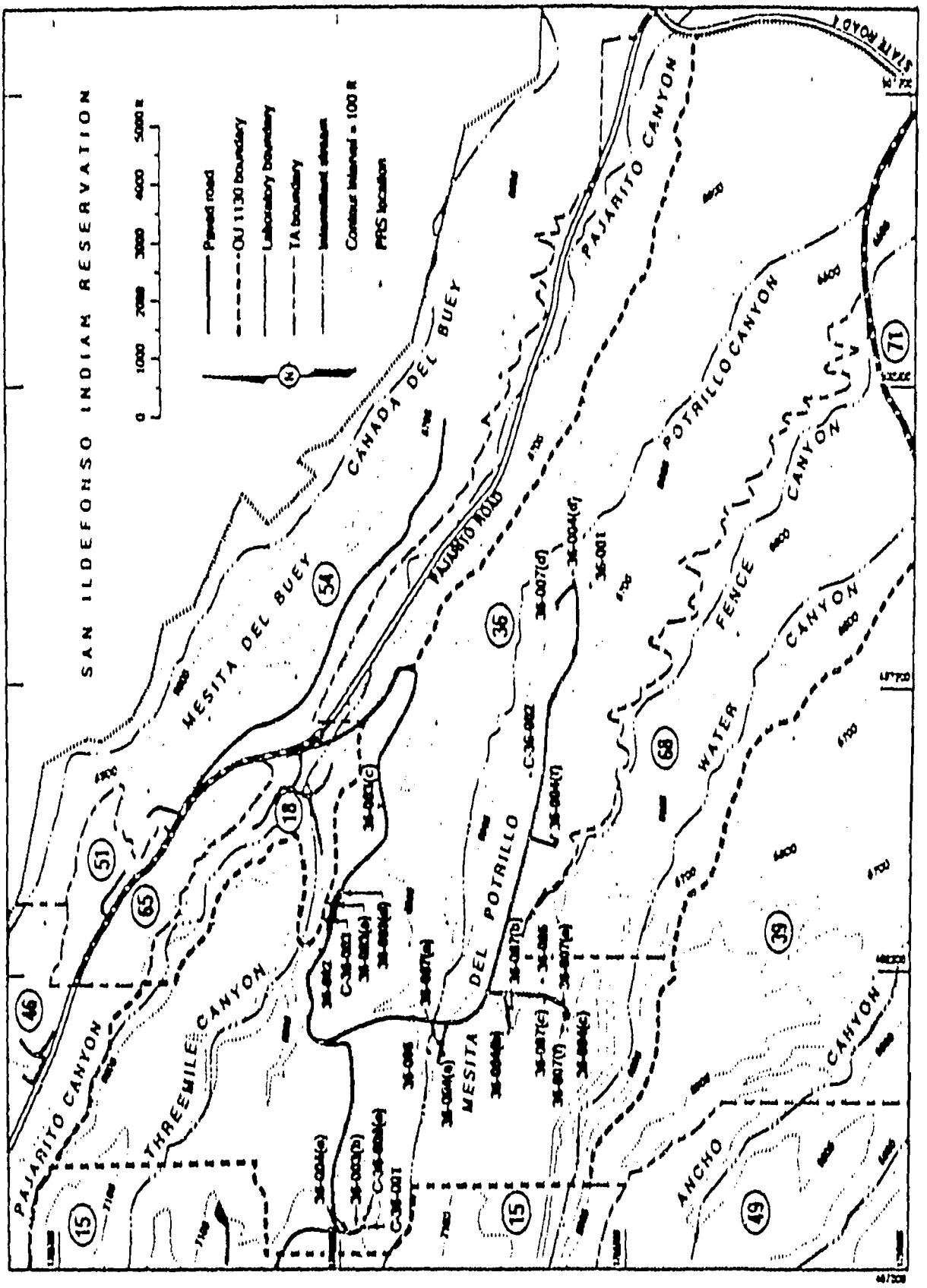


Figure 1-1. Location of PRSs within OU 1130

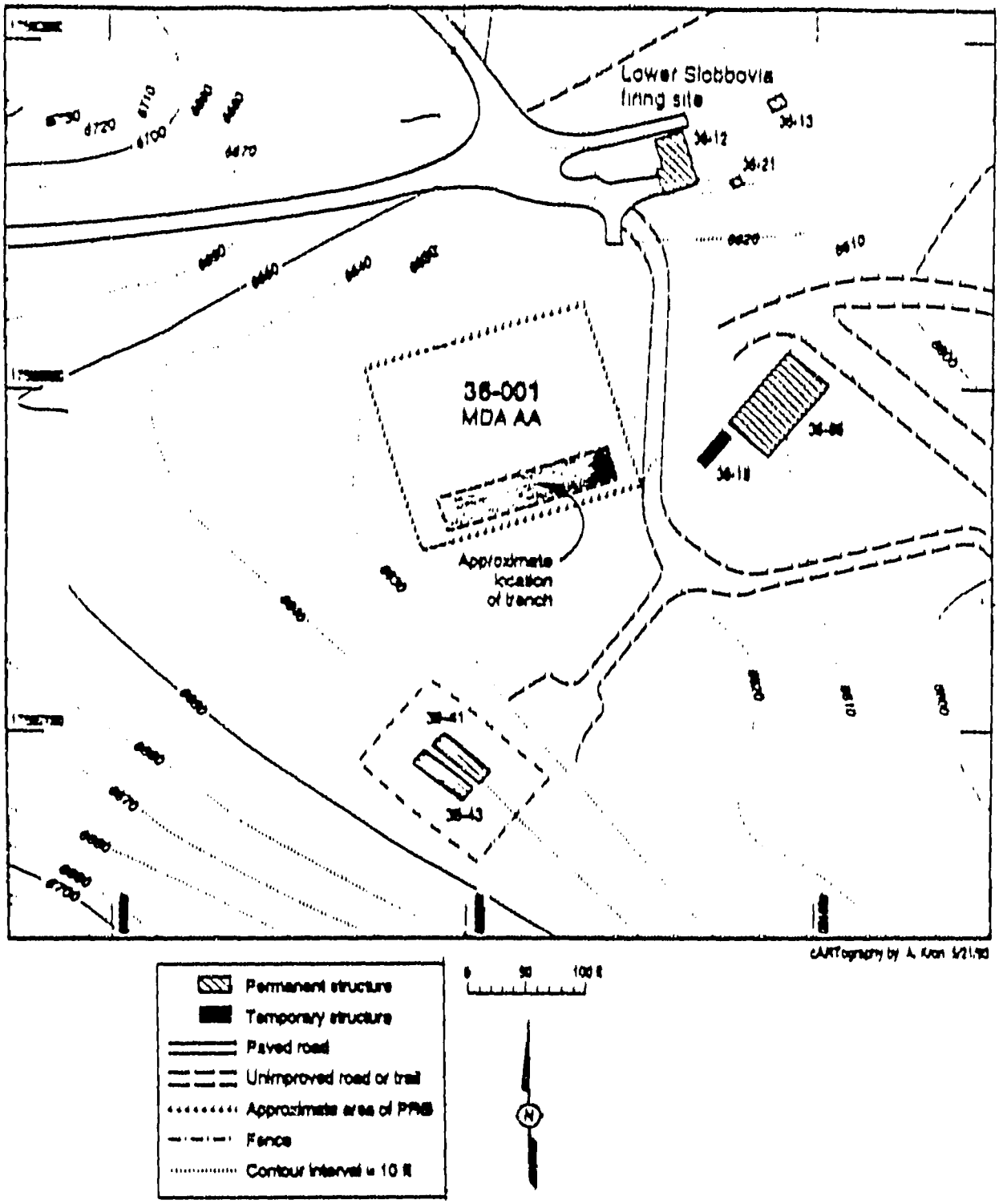


Figure 1-2. Location of PRS 36-001: MDA AA

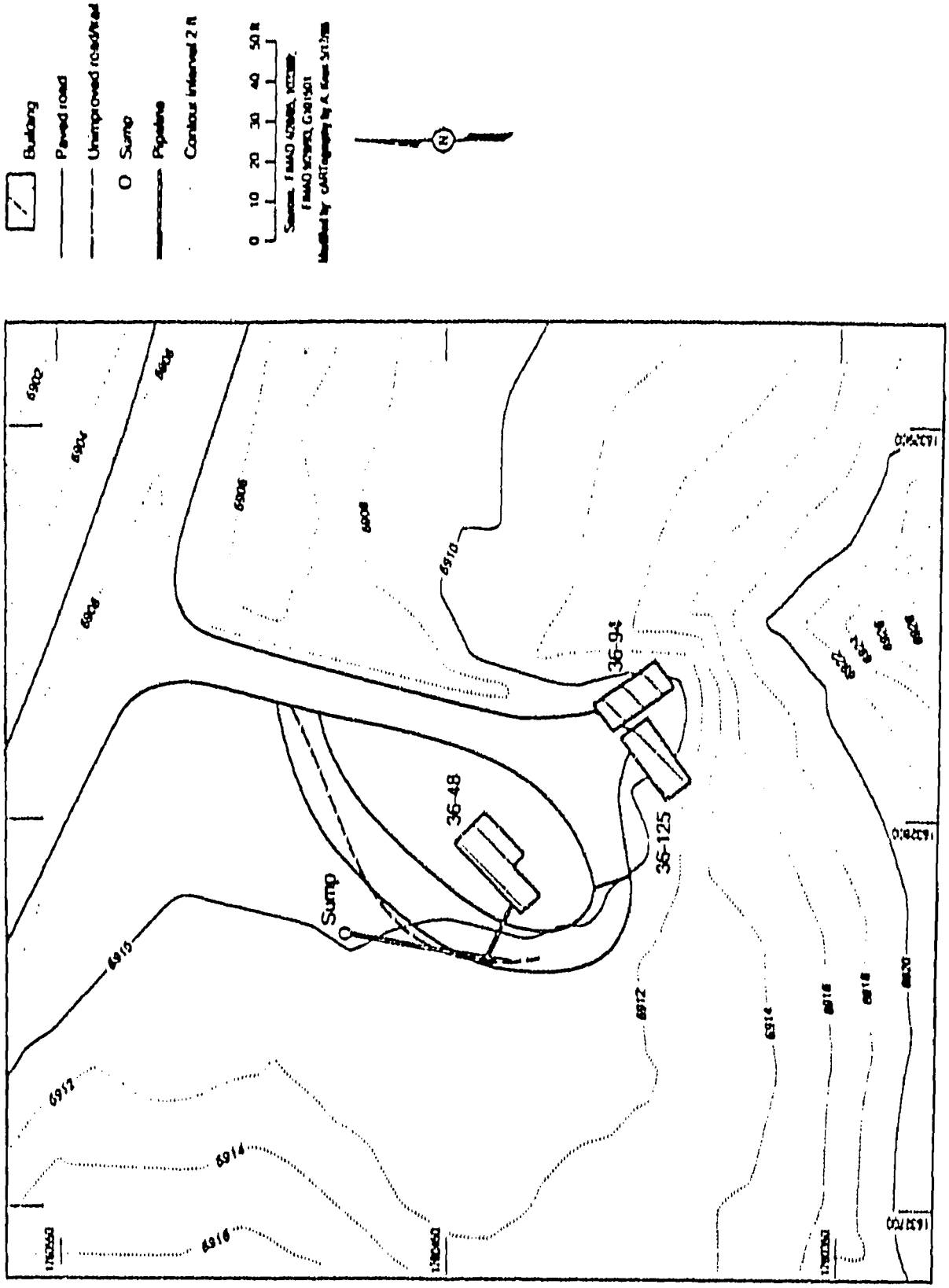


Figure 1-3. Location of PRS 36-002: Sump

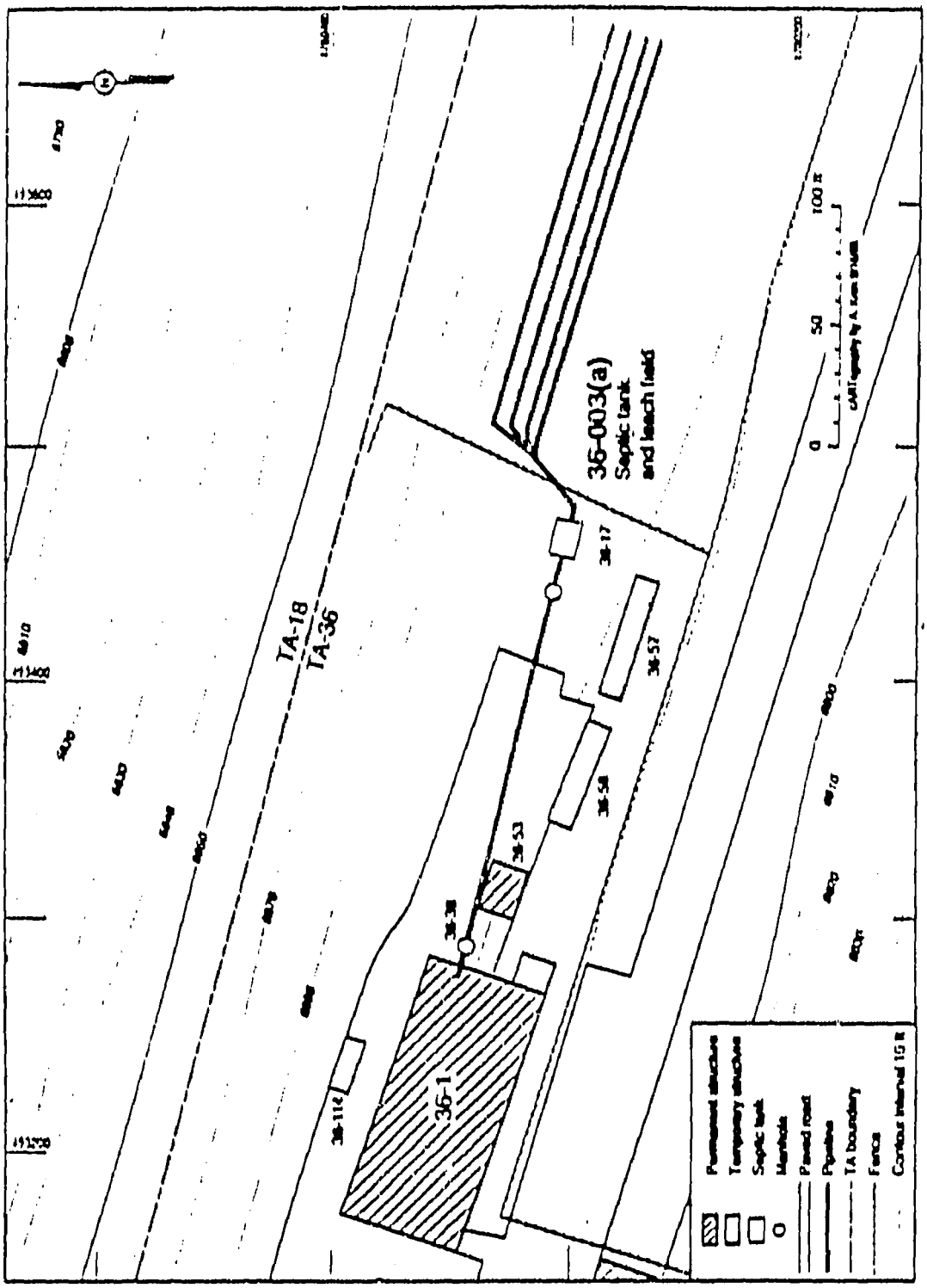


Figure 1-4. Location of PRS 36-003(a): Aggregate Septic System

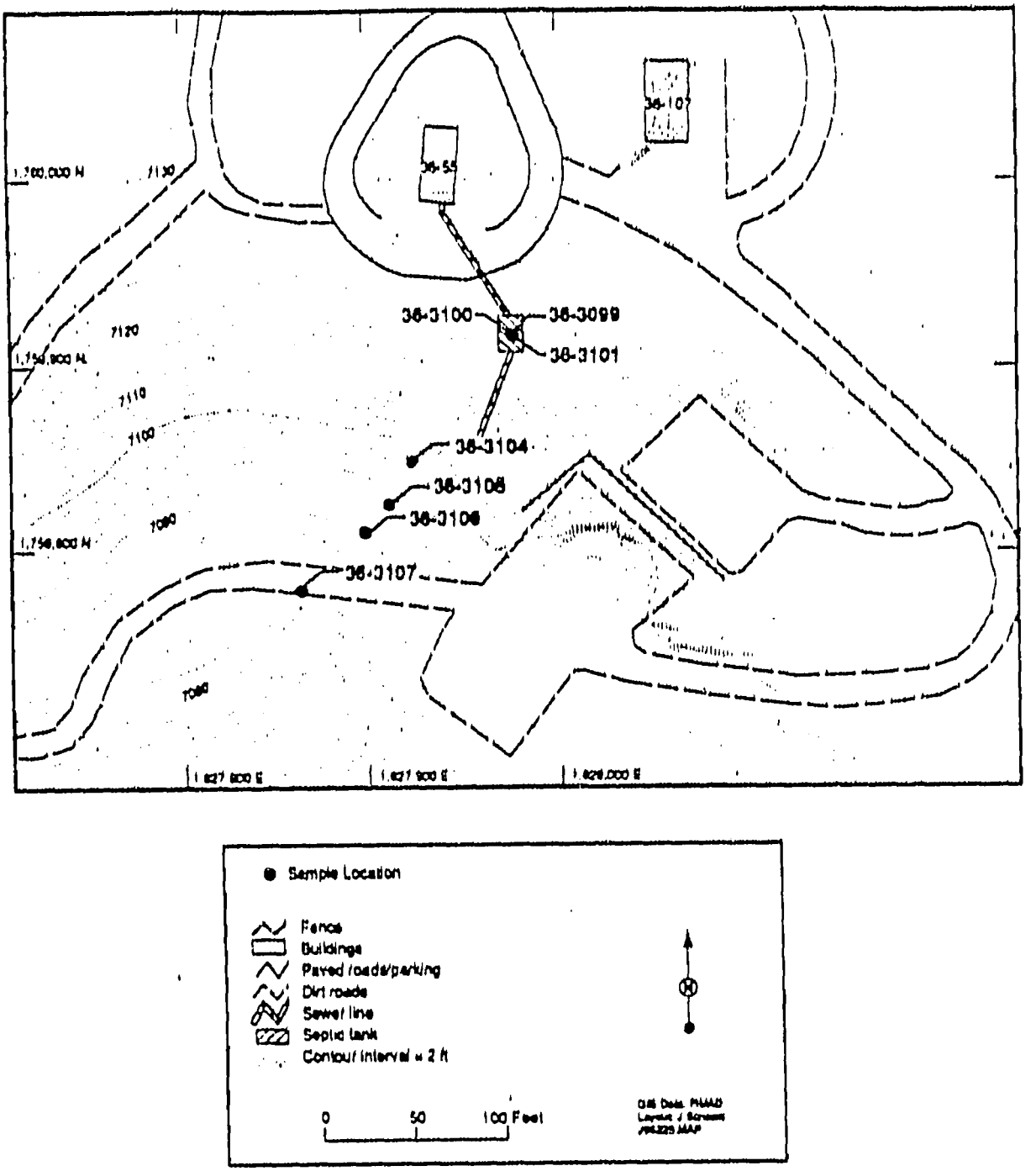


Figure 1-5. Location of PRS 36-003(b): Aggregate Septic System

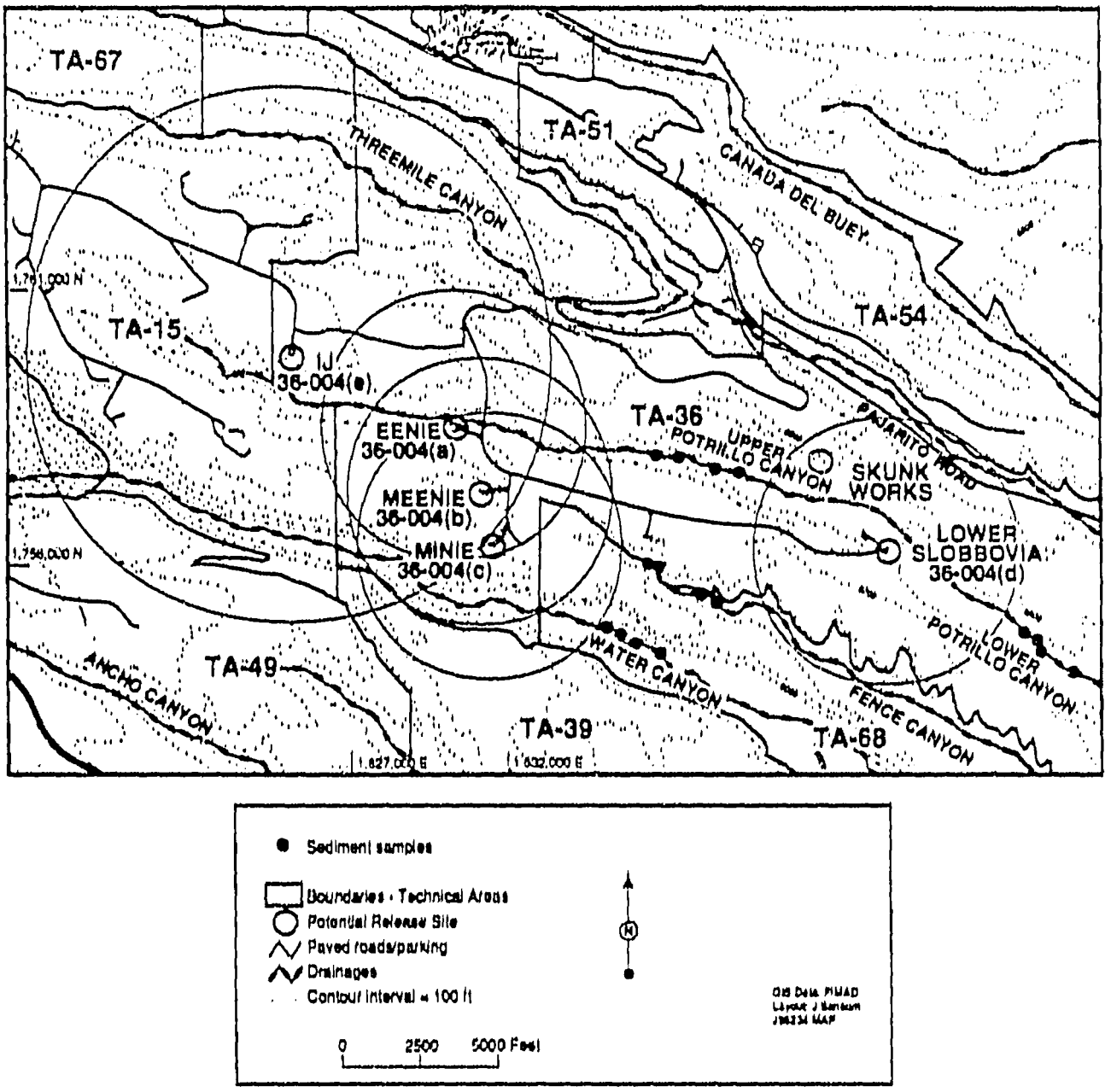


Figure 1-6. Location of PRS 36-004(a-e): Aggregate Firing Sites

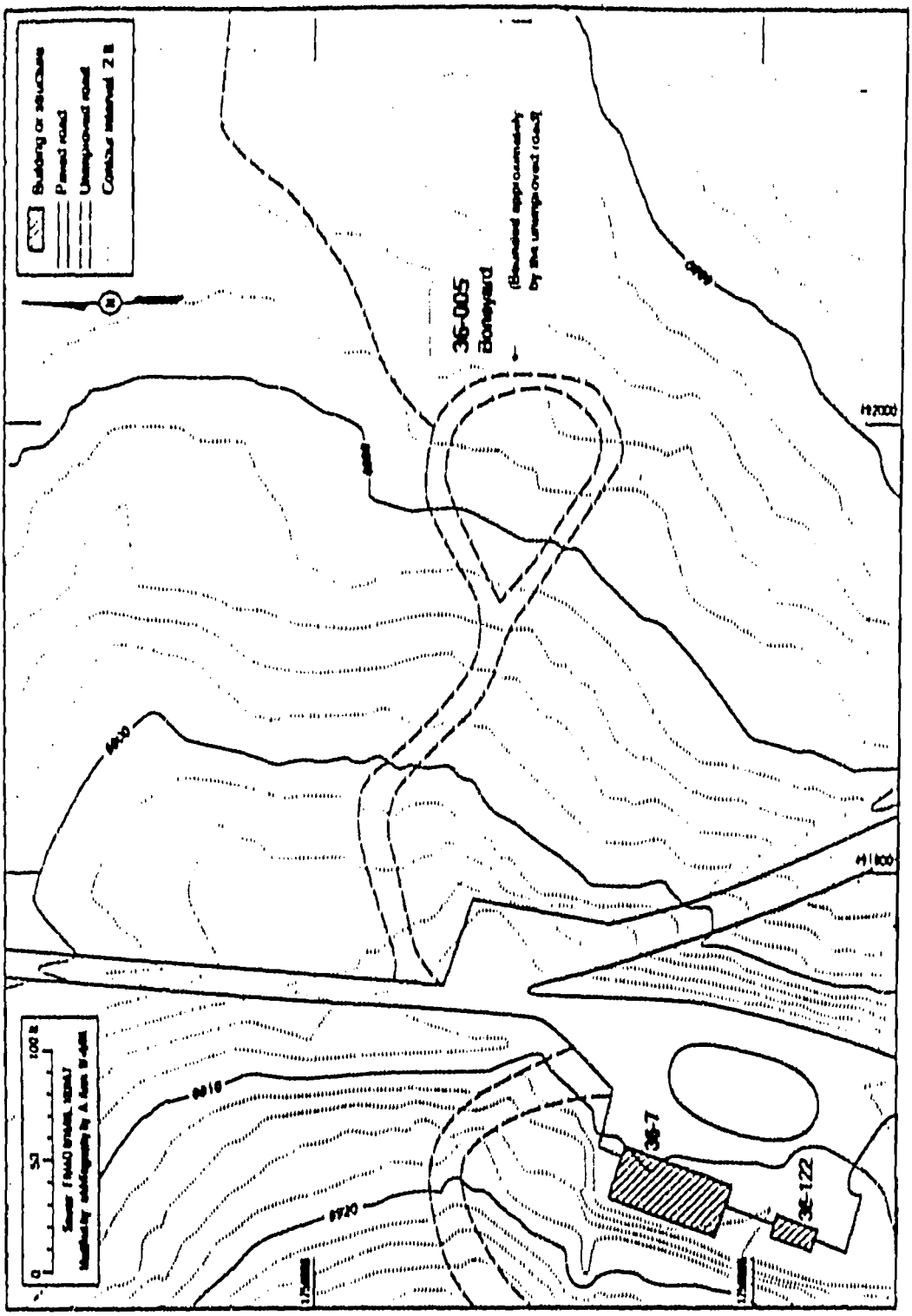


Figure 1-7. Location of PRS 36-005: Boneyard

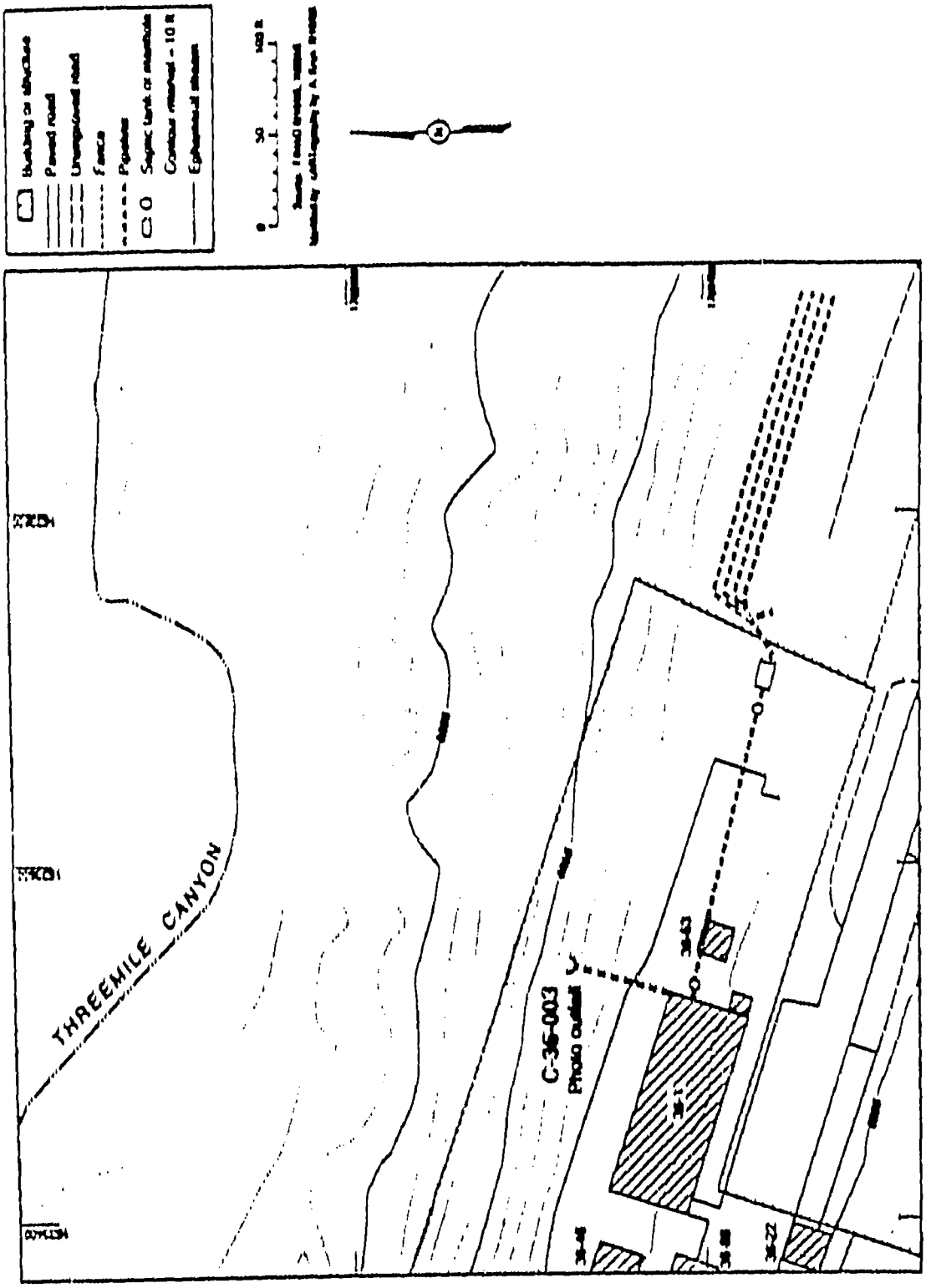


Figure 1-8. Location of PRS C-36-003: Photo Outfall

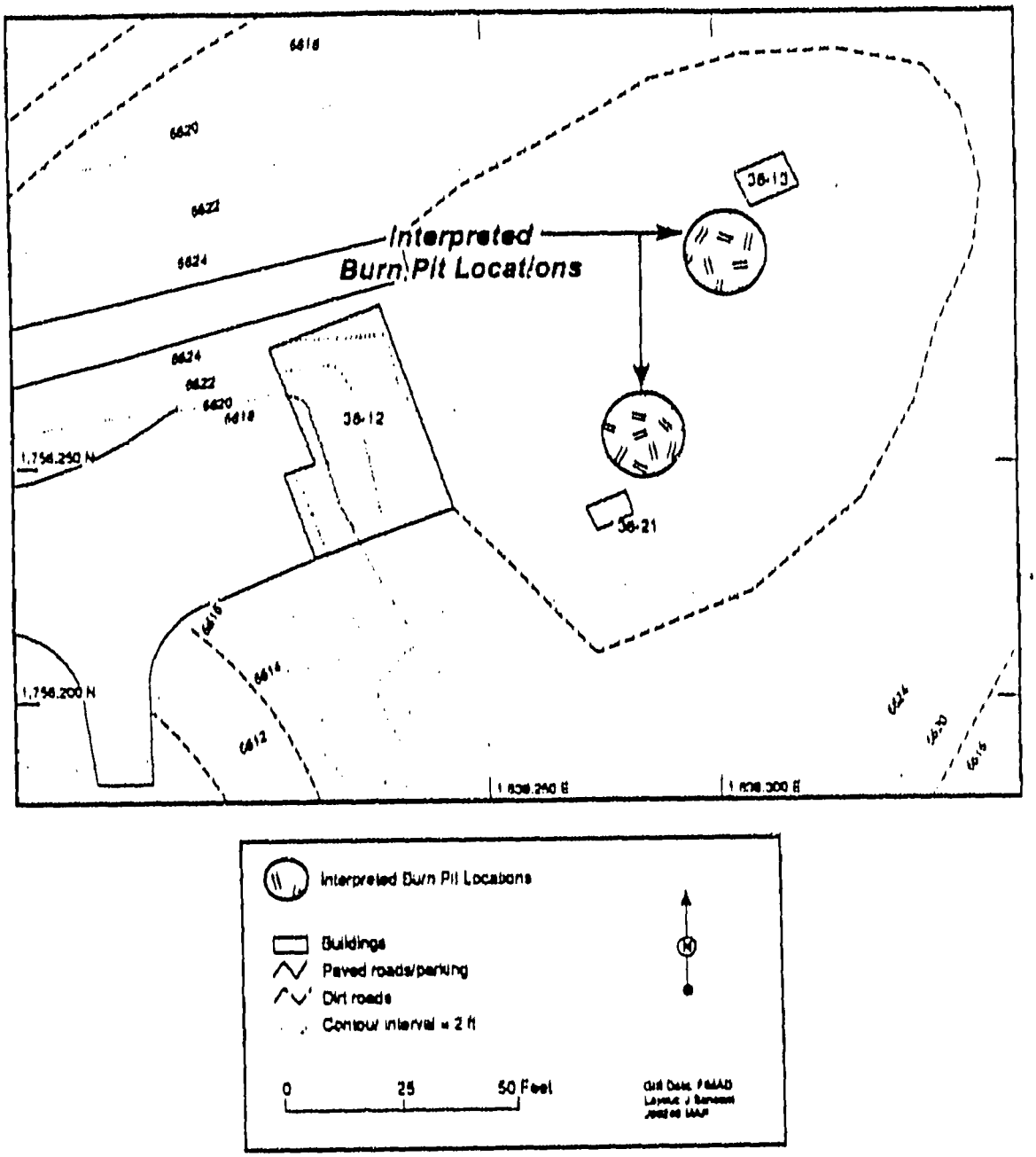


Figure 1-9. Location of PRS 36-004(d): Burn Pits

Section 2

2.0 OBJECTIVES

The objective of the 1994 RFI reconnaissance sampling was to verify the presence or absence of contamination. The ensuing analytical results will determine if the sampled PRSs require further action.

The objectives for each PRS is detailed in Section 4.3, Sampling Activities by PRS.

Section 3

3.0 SELECTION OF SAMPLING LOCATIONS

3.1 Reconnaissance Sample Locations—Biased

Biased sample locations were selected based on results from the visual walkthrough, geophysical, geomorphic, geohydrological, and radiation surveys that were conducted at PRSs within OU 1130. Sample locations were also selected based on the potential for contamination in or adjacent to manmade structures.

3.1.1 Visual Walkthrough Survey

Visual walkthrough surveys were conducted at OU 1130 to identify potential sample locations based on evidence of soil staining, signs of burning, surface debris, and vegetation disturbance.

Visual walkthrough surveys were conducted at PRSs: 36-001, MDA AA; 36-003(a), Leachfield; C-36-003, Photo Outfall; and 36-005, Boneyard.

PRS 36-005, Boneyard, was the only PRS with evidence of a visual indicator on which to bias a sample location.

Evidence of soil staining at the Boneyard was used to select sample location 36-3026 (see Exhibit 1).

3.1.2 Geophysical Survey

Ground Penetrating Radar Survey

PRS 36-001, MDA AA. Ground penetrating radar (GPR) surveys were performed over the anomalous zone, previously defined, at PRS 36-001, MDA AA (ICF KE 1993a). The GPR survey was performed in an attempt to better define the boundaries of the buried trenches.

Three north-south trending GPR traverses were performed at the 225W, 250W and 275W locations (Figure 3-1). The grid markers, from the survey grid previously set up for the radiation survey, were used for distance markers along each traverse. Both 500 MegaHertz (MHz) and 300 MHz antennas were utilized for the survey.

The resulting GPR records indicate numerous reflectors (buried objects) along each traverse. However, the reflectors did not occur in well defined zones.

Figure 3-1. GPR Survey for PRS 36-001: MDA AA

Media Place Holder Target

This target represents media that was not microfilmed. The original media can be obtained through the Records Processing Facility.

ER ID # 54713

Box # _____

Record Type: Map

Date: _____

Symbol: PRS 36-001, 36-004(d)

Subject:

ICF Kaiser Lower Slobbovia TA-36 LANL Plate 1 / Burnpit and Trench area - Vertical Magnetic Gradient (gammas/meter) Figure 3-1 GPR Survey MDA AA

The GPR records indicate the reflectors were distributed in a scattered manner and no indication of well-defined trenches were present in the data. This configuration is also supported by the EM and MAG data. No sample locations were selected based on GPR results.

Electromagnetic Survey

PRS 36-003(b), Septic System Outfall Pipe. An electromagnetic (EM) survey was conducted at PRS 36-003(b), Aggregate Septic System, located at the I-J Site. The purpose of the EM survey was to locate the end of the outfall pipe associated with the septic system located at I-J Site. The area is located on a localized steep incline; therefore, GPR could not be performed.

An EM-31 electromagnetic induction meter was used to generally locate the end of the outfall pipe. The EM-31 was carried across the general area where the outfall is believed to be buried. Numerous traverses were made both parallel and perpendicular to the assumed trend of the pipe. The data was examined in real time as the meter was carried across each traverse, and was interpreted to indicate that a utility did exist at that location; however due to the nature of the EM method, the location of the end of the pipe was only approximated. The estimate was most likely within a few feet of the end of the outfall pipe.

3.1.3 Geomorphic Surveys

Geomorphic surveys were conducted to identify probable migration pathways for PCOCs. These surveys entailed an analysis of 2 ft contour maps, review of aerial photographs, and site tours to identify landforms and surface processes. Sample biasing based on geomorphic surveys was utilized at : PRS 36-003 (b), IJ Site Septic Tank, to identify the outfall drainage pathways; PRS 36-004, Aggregate Firing Sites, to locate canyon sediment traps within drainage pathways; and, PRS 36-005, Boneyard, to assess the surface water migration pathways from potential source areas.

PRS 36-003(b), IJ Site Septic Tank Outfall Drainage Pathway. During the geophysical survey, the general location of the septic tank outfall pipe was located. This area is along a steep incline and ridge extending into Potrillo Canyon. The geomorphic survey referenced the results of the geophysical survey and determined that flow from the outfall area would continue along a drainage channel which flows into Potrillo Canyon.

Five sample locations were chosen along the drainage channel. See Exhibit 1 for the sample location information.

PRS 36-004, Aggregate Firing Sites Offsite Canyon Drainage Pathways. The intersections of each firing site hazard radii boundary with the primary canyon drainages were determined in the field using geodetic surveys. At each intersection, a geomorphic survey was conducted in the streambeds to identify several progressively downgradient sediment catchment areas.

Four sample locations were selected downgradient from the intersection of the Minie hazard radius with Water Canyon; four sample locations were selected downgradient from the intersection of the Minie hazard radius and Fence Canyon; four sample locations were selected between the lower intersection of the Meenie hazard radius and Potrillo Canyon and the upper intersection of the Lower Slobbovia hazard radius and Potrillo Canyon; and four sample locations were selected downgradient from the lower intersection of the Lower Slobbovia hazard radius and Potrillo Canyon (Figure 3-2). A total of 16 sample locations were identified within Upper Portrillo, Lower Potrillo, Water and Fence Canyons. See Exhibit 1 for the sample location information.

PRS 36-005, Boneyard Surface Water Pathway. Following a review of 2 ft contour maps and identification of potential source areas, the field team performed a site tour to determine the predominate surface water migration pathways from the source areas. Shallow drainage channels as well as areas of sheet water runoff were identified as flowing from the gently sloping storage area to the south towards Fence Canyon.

Nine samples were collected from the areas defined during the geomorphic survey to address the surface water pathways from the source areas.

3.1.4 Geohydrological Survey

Geohydrological surveys were conducted to determine the depth of sampling in areas where a potential for vertical migration of contaminants via leaching may exist. These surveys provide information regarding the leaching and migration potential of PCOCs. Generally, the soil/tuff interface is recognized as a viable contaminant trap and/or migration pathway for solutions due to the discontinuity of the more permeable soil overlying the less permeable tuff.

Geohydrological surveys were utilized at PRS 36-001, MDA AA; and PRS 36-003(a), Septic System Leachfield.

PRS 36-001 MDA AA. The soil/tuff interface at MDA AA was determined to be greater than 22 ft below ground surface (bgs). As the base of the trenches are approximately 10 ft bgs, two boreholes were drilled and samples were collected at 13 and 22 ft bgs respectively.

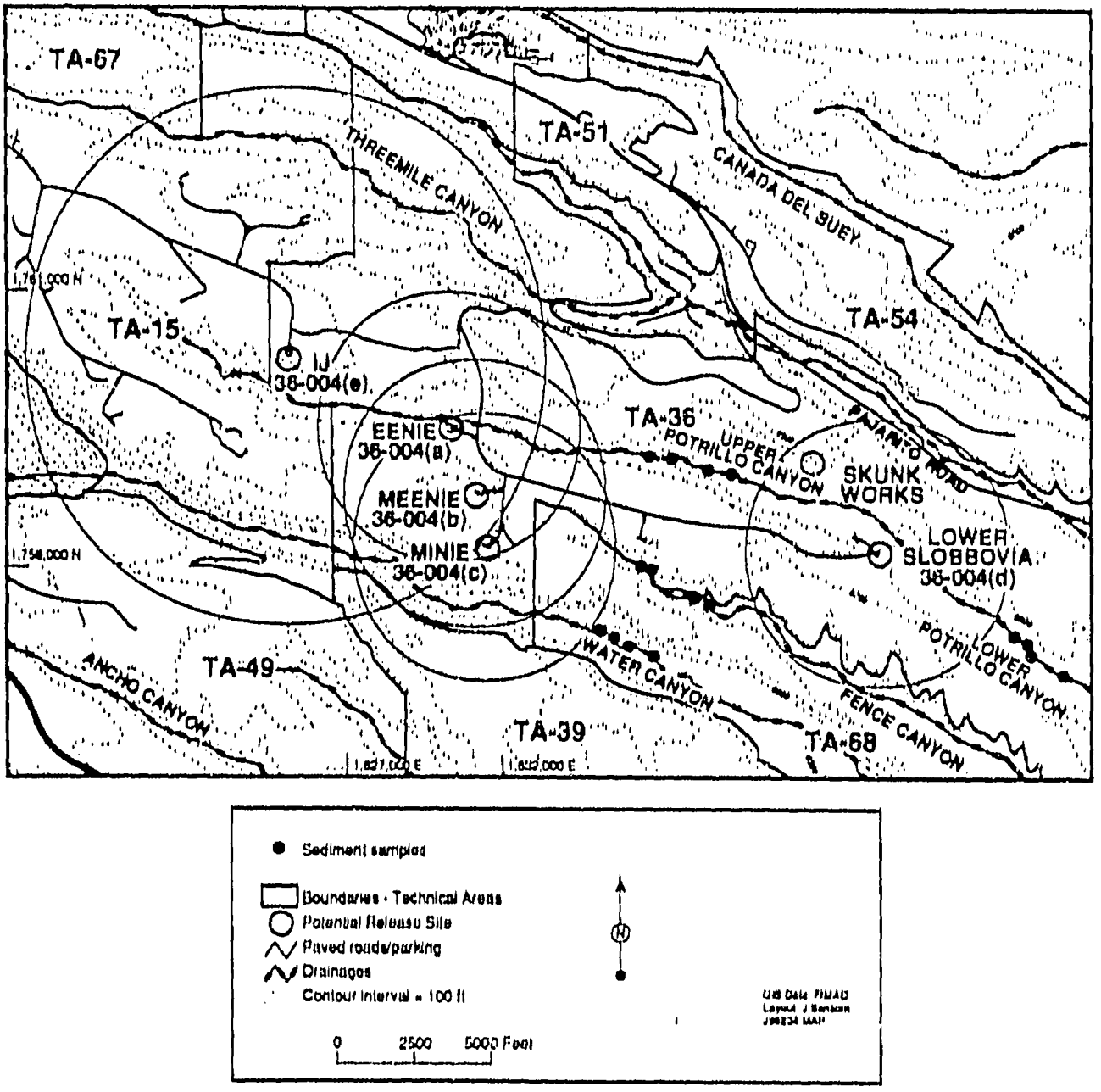


Figure 3-2. Locations of Firing Site Hazard Radii

PRS 36-003(a) Septic Tank Leachfield. In the leachfield, subsurface soil samples were to be collected at the soil/tuff interface beneath each septic tank drainline. As the clay pipe and trenches were set on the soil/tuff interface, ten samples were collected of the trench material at the soil/tuff interface. However, these samples were considered biased according to the criteria for manmade structures. To further assess the potential for vertical migration of PCOCs, an additional 4 samples were collected at approximately 2 ft below the trenches.

3.1.5 Radiation Survey

Radiation surveys were conducted to direct the locations of reconnaissance samples if above-background radiation levels were found.

Radiation surveys were conducted by Environmental Dimensions, Inc. (EDI) at PRS 36-004(d), Burn Pits; and PRS 36-005, Boneyard. These surveys used two Ludlum Model 2221 Scalar/Rate Meter single-channel analyzers, one with an Eberline SPA-3 scintillation probe and one with a Ludlum Model 44-9 pancake GM detector. Both were in contact with the ground surface when measurements were taken.

PRS 36-004(d), Burn Pits. Radiation measurements were made every 10 feet on a 200-foot by 200-foot grid. Results from the survey at this site indicated a few areas, mainly to the south and east of the shot pad to have slightly elevated readings.

No sample locations were selected as the radiation survey results did not exceed the biasing criteria of two or more times background.

PRS 36-005, Boneyard. Radiation measurements were made every 10 feet on a 400-foot by 400-foot grid (Figure 3-3). The Boneyard survey is only 80 percent complete. Current results from this survey indicate one or two spots marginally above background.

The radiation survey will be completed and potential sample locations will be selected based on the results of the survey.

3.1.6 Man-Made Structures

Manmade structures which may potentially serve as source areas have been identified based on archival research, review of aerial photographs and interviews with former/current laboratory employees. Sampling of these structures or residuals contained within would provide the greatest potential for determining the nature of the manmade structure as a source area.

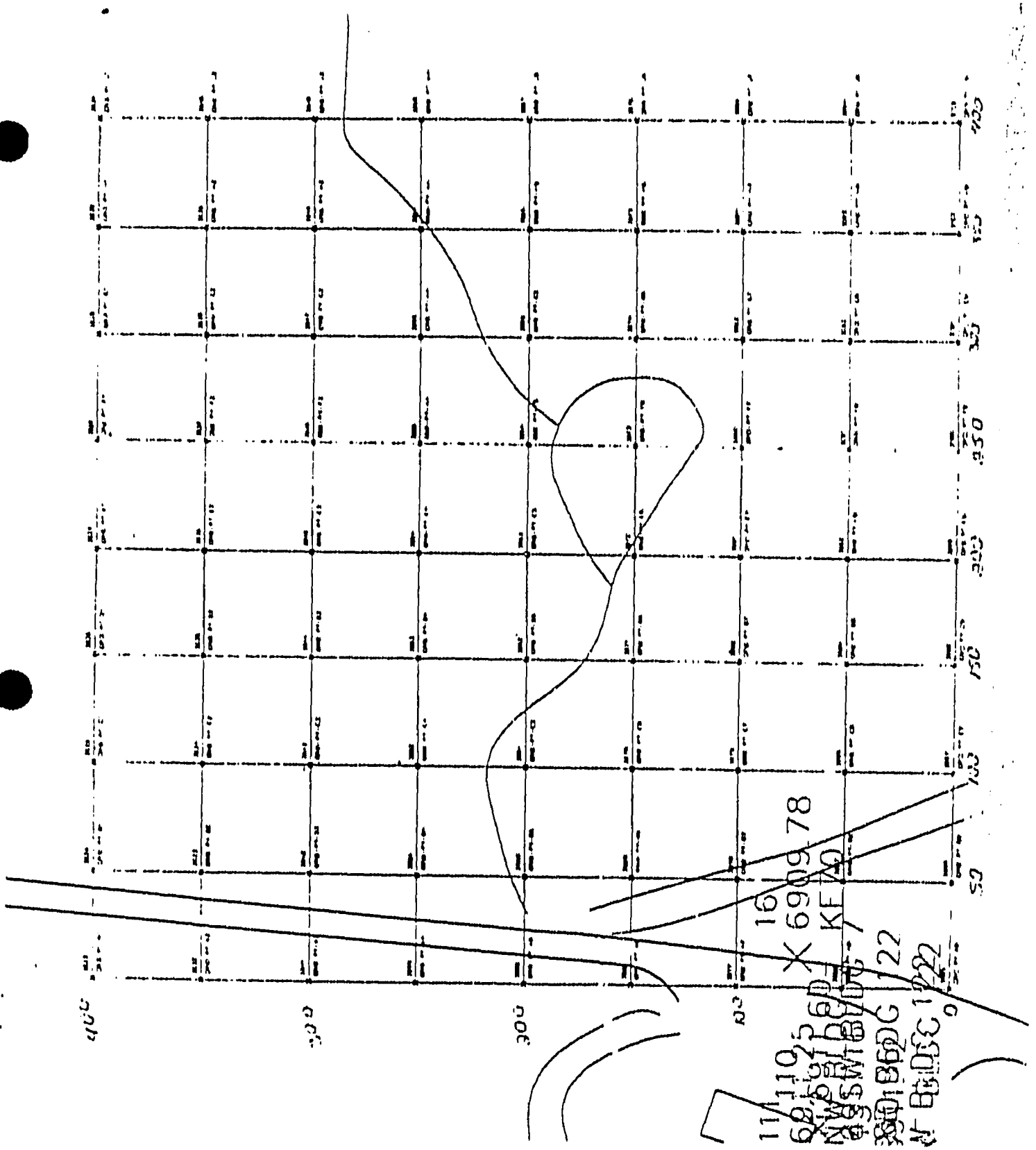


Figure 3-3. PRS 36-005 Boneyard Area—Grid Layout for the Radiation Survey

PRS 36-001, MDA AA. MDA AA consists of excavated trenches which were filled with test shot debris, typically burned, then backfilled. As the nature of the material disposed is unknown, the former trenches were identified as potential contaminant source areas.

Three borehole locations successfully encountered these structures. Six samples of the material from these locations were collected and submitted for laboratory analyses.

PRS 36-002, Sump. The Sump is an unlined, gravel filled pit which may have received hazardous materials from drainlines associated with two sinks located in building TA-36-48. As this structure potentially received PCOCs, the gravel fill may be coated with contaminant residuals.

Five samples were collected of the gravel fill which constituted the sump structure.

PRS 36-003(a), Septic System. The Main Building Septic System received sanitary and photochemical wastes from TA-36-1 and TA-36-22. Although the tank is no longer in use, it contained sanitary/drainline material. The associated leachfield received waste via the outflow pipe extending from the septic tank. The leachfield consists of clay pipe buried in shallow trenches and surrounded with fill material. Tank residuals were sampled at 4 locations/intervals. The associated leachfield pipe and trench fill material were sampled in 10 locations.

PRS 36-003(b), IJ Site Septic System. The IJ septic tank received sanitary and drainline wastes from the IJ firing site bunker. The septic system is no longer in use; however, waste remain in the tank. The nature of the waste is not known.

Four samples were collected from differing locations/intervals within the septic tank.

Biased sample locations addressing the septic tank outfall pipe were determined from geophysical and geomorphic surveys.

PRS 36-005, Boneyard. The Boneyard is an active and former surface storage area. Various materials such as drums, cylinders, and uranium contaminated scrap metal have been stored at this undeveloped area.

Eight samples were collected from surface soils underlying these stored materials.

PRS C36-003, Photo Outfall. The Photo Outfall consists of a 4-in metal pipe which received waste from the TA-36-1 photo laboratory. The potential for chemicals to remain within the inactive drainline is not known.

One aqueous sample was obtained by passing water through the drainline and collecting the liquid at the outfall opening.

3.2 Reconnaissance Sample Locations—Randomized Samples

Randomized sampling protocol was utilized at one PRS (36-005, Boneyard) during the 1994 sampling effort. The sampling strategy for PRS 36-005, Boneyard, outlined in the RFI Work Plan for OU 1130 (LANL 1993a), was to partition the site into four groups:

1. Drainage channels that carry surface water runoff during snow melt or heavy rainstorms;
2. Areas with elevated radioactivity (two or more times the background average);
3. Areas currently used for storage or showing signs of recent use, including areas with stained soil; and
4. The remainder of the site.

Each of these groups were to have eight samples collected using the randomization protocol described in Section 3.2.1. To maximize the probability of detecting contaminants of concern, groups 1 through 3 became biased sampling locations (detailed in Section 3.1) and only group 4 used the randomization protocol.

In addition, two random sample locations were selected within the hazard radii of Meenie and Minie firing sites, but outside the Boneyard site. Because the Boneyard is within the hazard radii of these active firing sites and continues to receive shrapnel from both of these sites, the samples collected from these locations will be used to evaluate contamination originating from the Meenie and Minie firing sites.

3.2.1 Randomization Protocol

The randomization protocol used was taken from the Environmental Protection Agency (EPA) guidance document, "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1, Soils and Solid Media" (EPA 1989). This protocol is based on a localized grid and uses each point of intersection as a reference point for random sampling locations. The randomization protocol for selecting random sampling locations conformed to the following procedure:

> A range of X (Xmin to Xmax) and Y (Ymin to Ymax) coordinates were determined to define a rectangle that circumscribed the sampling area. The sample locations, were selected by moving a random fraction of the distance from Xmin to Xmax, and another random fraction of the distance from Ymin to Ymax. If the resulting location (X,Y) was inside the sample area, the spot was marked as a sample

location. If it was outside the sampling area, the process was repeated until it was inside the sample area. This process was repeated until the required number of sample locations had been identified.

The grid at the Boneyard area was 300 ft by 300 ft, with the southwest corner being the origin. The origin grid stake is marked on the Boneyard area grid map as 1013-3097 (0,0) (Figure 3-4). The northwest coordinate stake is 1033-3043 (0,300); the southeast coordinate stake is 1016-3103 (300,0); and the coordinate stake for the northeast corner is 1030-3049 (300,300).

The sample locations were calculated with a random number function from a hand-held calculator.

The following are the state plane coordinates for the randomized sample locations within the Boneyard. See Figure 3-5 for a map of the sample locations.

Table 1

State Plane Coordinates for the Randomized Sample Locations Within the Boneyard

Sample Number	Location ID Number	Easting	Northing	Elevation
AAB1861	36-3042	1632233.44	1756772.72	6888.02
AAB1863	36-3043	1632191.82	1756650.65	6885.19
AAB1864	36-3044	1632206.79	1756874.14	6893.11
AAB1865	36-3045	1632313.45	1756883.78	6888.14
AAB1866	36-3046	1632104.42	1756743.32	6896.62
AAB1867	36-3047	1632174.56	1756842.75	6892.62
AAB1868	36-3048	1632310.31	1756862.29	6887.64
AAB1869	36-3049	1632144.23	1756648.19	6888.10

The following are the state plane coordinates for the randomized sample locations within the hazard radii of Meenie and Minie firing sites. See Figure 3-5 for a map of the sample locations.

Table 2

State Plane Coordinates for the Randomized Sample Locations Within the Hazard Radii of Meenie and Minie Firing Sites

Sample Number	Location ID Number	Easting	Northing	Elevation
AAB1870	36-3050	1632440.60	1756752.40	6878.60
AAB1872	36-3051	1632217.17	1756581.02	6879.33

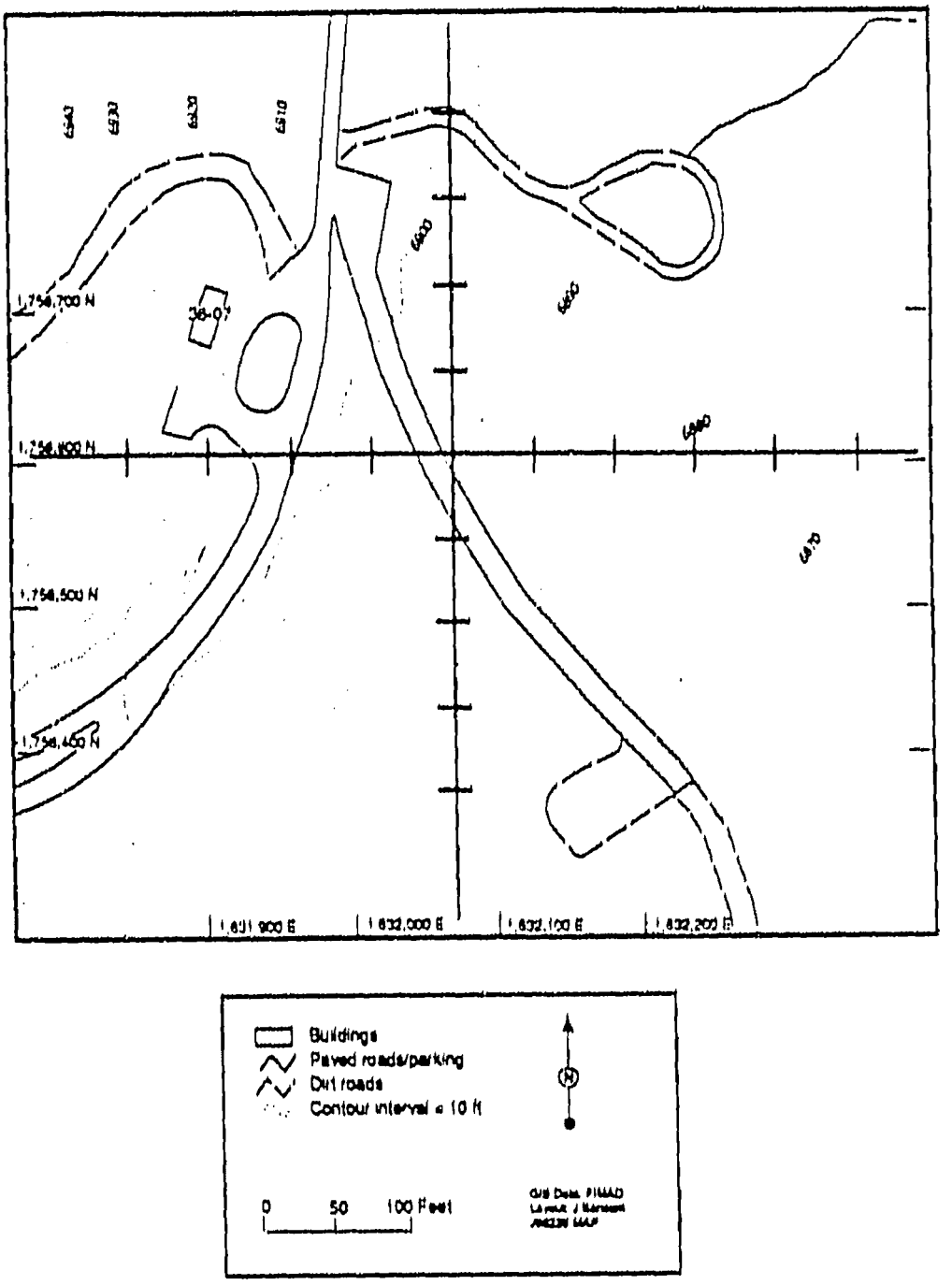


Figure 3-4. Randomization Grid at PRS 36-005: Boneyard

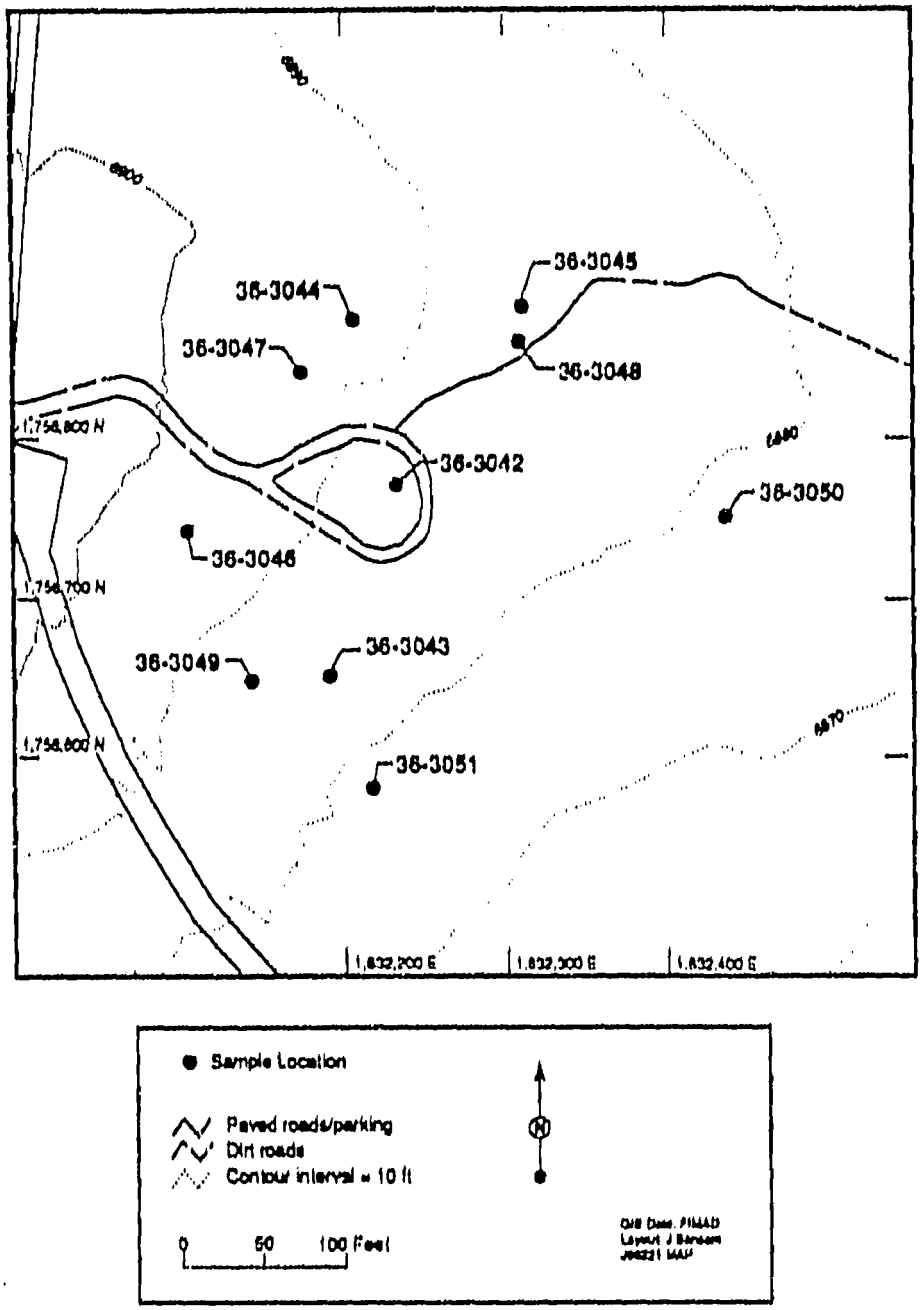


Figure 3-5. Randomization Sample Locations at PRS 36-005: Boneyard

Section 4

4.0 FIELD SAMPLING ACTIVITIES

Field sampling was conducted at TA-36 from July 14 through November 21, 1994. Personnel involved with field sampling activities are listed in this section, the approach to sampling is discussed in Section 4.1, and field documentation is described in Section 4.2. Environmental sampling of each PRS is described in Section 4.3, Sampling Activities by PRS. The sampling not conducted or completed in 1994 is covered in each PRS section.

Quality control sampling (described in Section 4.3 in each PRS section) consisted of equipment rinsate, field duplicates, and performance evaluation samples (see also Exhibit 3).

Table 3 identifies the OU 1130 field team members.

Table 3
OU 1130 Field Team Members

Field Team Member	Role	Organization
Lynn Kidman	Field Team Manager	ICF KE
Michael Henke	Field Team Leader	ESA-DE (Laboratory)
Peter Cram	Alternate Field Team Leader	ICF KE
Ken McFadden	Site Safety Officer	MK
John Taylor	Health Physics Technician	EDI Inc.
Bert Trujillo	Sampler	ICF KE
Jeff Bingham	Sampler	ESA-DE (Laboratory)
Nancy Ness	Sampler	ICF KE
Cristi Abeyta	General Support	ESA-DE (Laboratory)
Dick Cordi	General Support	ESA-DE (Laboratory)

The field team members present during any given day are listed in the field log notebook (Appendix 1).

The environmental samples taken at TA-36 during 1994 were collected using a field sampling plan based on sampling guidelines detailed in the RFI Work Plan (LANL 1993a). Environmental samples and/or field surveys were conducted at the following sites:

PRS 36-001, MDA AA
PRS 36-002, Sump
PRS 36-003(a), Septic System
PRS 36-003(b), Septic System
PRS C36-003, Photo Outfall
PRS 36-004(a-e), Firing Sites
PRS 36-004(d), Burn Pits (Field survey only)
PRS 36-005, Boneyard

Field activities at each PRS are described in Section 4.3. A summary of the samples taken during 1994 sampling at TA-36 is found in Exhibit 1.

4.1 Sampling Approach

Before each sample was collected, the health physics technician (HPT) and site safety officer (SSO) monitored the undisturbed sample location for the presence of above-background levels of radioactivity and organic vapors. Above-background levels of radiation or organics were not exceeded at TA-36 during the 1994 field season.

After it was shown that above-background levels of radiation or organics were not exceeded, the sample location was tested for the presence or absence of high explosives using the field HE Spot Test kit. At PRS 36-005, Boneyard, each sample location was visually inspected for HE in addition to using the HE Spot Test kit. No visual HE was noted. If the HE spot test results were negative, the sampler proceeded to collect the sample. If the HE spot test results came up positive, two additional spot tests were performed. For the material/soil to be considered as potentially containing HE, two of the three test results must be positive.

If VOC samples were to be collected, the VOC sample jars were filled immediately. The remaining sample was then homogenized, monitored for radiation and organic vapors (for personnel health and safety), and the remaining sample suites were collected.

All samples were preserved with ice packs in portable ice chests as soon as possible after collection. The samples were relinquished to the Laboratory's mobile radiation laboratory and CST-3, Sample Receiving, on the day of collection. Sample aliquots submitted to the mobile radiation laboratory were analyzed for gross alpha, beta, and gamma contamination. The results of the analyses were used by CST-3 to determine proper shipping of the samples to off-site laboratories. Until results from the mobile radiation laboratory were received, CST-3 could not relinquish the samples. If the samples could not be relinquished on the day of collection, they were stored in a freezer (to maintain a maximum of 4 degrees Celsius), and relinquished when results were received from the mobile radiation laboratory.

The Laboratory's Standard Operating Procedures (SOP) were used for all sampling activities. These SOPs are listed in Exhibit 2.

4.2 Field Documentation

Field documentation was performed in accordance with LANL-ER-SOP-1.04, Sample Collection and Field Documentation (LANL 1993b).

Documentation of 1994 sampling activities at TA-36 provides the necessary evidence to ensure and defend the quality of data derived from the environmental samples. This documentation includes:

- field log (Appendix 1),
- Sample Collection Logs (Appendix 2),
- Chain of Custody/Request for Analysis forms (Appendix 3),
- photo documentation log (Appendix 4),
- health and safety documentation (Appendix 5),
- and radiation monitoring and screening forms (Appendix 6).

The field log contains complete daily activities such as time of arrival at each PRS, time of tailgate safety meetings, time and description of each sample, and description of any deviations from proposed schedule. The field documentor (any member of the sampling team) used the Sample Collection Log to document information regarding the environmental sample (e.g., sample location, sample type, matrix, etc.). The Sample Collection Log was also used to document health and safety monitoring, radiation monitoring, and other applicable site/sampling information. Chain of Custody/Request for Analysis forms contain the chain of responsible person monitoring each sample from its time of collection, to its delivery to the mobile radiation laboratory and CST-3, Sample Receiving. The photo documentation log contains such information as time, date, frame number, roll number, direction of each photograph, and the identity of the photographer. This information is also recorded on the Sample Collection Logs. Health and Safety forms include information such as noise level monitoring, tailgate safety meetings, organic vapor monitoring, etc.

Radiation monitoring and screening forms contain:

- the records of radiation levels at each sample location within the PRS,
- the removable survey results of samples,
- the frisking results of personnel, and
- the screening levels of surveyed equipment.

4.3 Sampling Activities By PRS

PRS 36-001, MDA AA

PRS 36-001, MDA AA, former disposal trenches, are located approximately 300 feet southwest of the Lower Slobbovia Firing site. As the PRS is a subsurface feature with no surface markers, the general site boundaries were determined using geophysical surveys. Using these general boundaries, exploratory drilling was conducted to locate specific trench areas. Borehole cuttings were visually inspected to determine if the location had encountered an ash/debris area.

Four boreholes were drilled at MDA AA in October of 1994. Borehole cuttings indicated three locations had penetrated an ash/debris disposal area (Figure 4-1). These locations were sampled using two biasing criteria : 1) manmade structures (material from within the trench); and 2) geohydrological (native soil from beneath the trench to investigate ash/debris leaching potential).

Eight samples including one duplicate were collected from the three boreholes at PRS 36-001 (Exhibit 1). At two borehole locations, samples were collected from discrete intervals while, at the third location, soil cuttings from the entire borehole were composited into a single sample.

Borehole drilling was performed by the OU 1130 sampling crew using a rotary/vibratory drill rig with the following:

Equipment for vibratory drilling:

- vibratory motor (head)
- 4 in. outer diameter by 5 ft. augers
- 2.5 ft stainless steel split-spoon samplers
- 4 in. diameter by 5 in. stainless steel shoe

Equipment for rotary drilling:

- rotary motor (head)
- 4 in. outer diameter by 5 ft. solid stem augers and bit

All drilling at TA-36 was done by remote operation. Any person in the vicinity of the drilling activities was required to be at least 30 feet away from the drill rig to prevent injury from shrapnel should an auger or split-spoon hit and detonate a piece of HE. The electrical and hydraulic cables that connect the control box to the rig's motors were at least 30 feet long so the control box could be removed from the rig. The operator stood behind a blast shield with the control box. The blast shield was made of a 4 foot by 4 foot by 1/2 inch piece of Lexan™ plastic, bolted to a frame

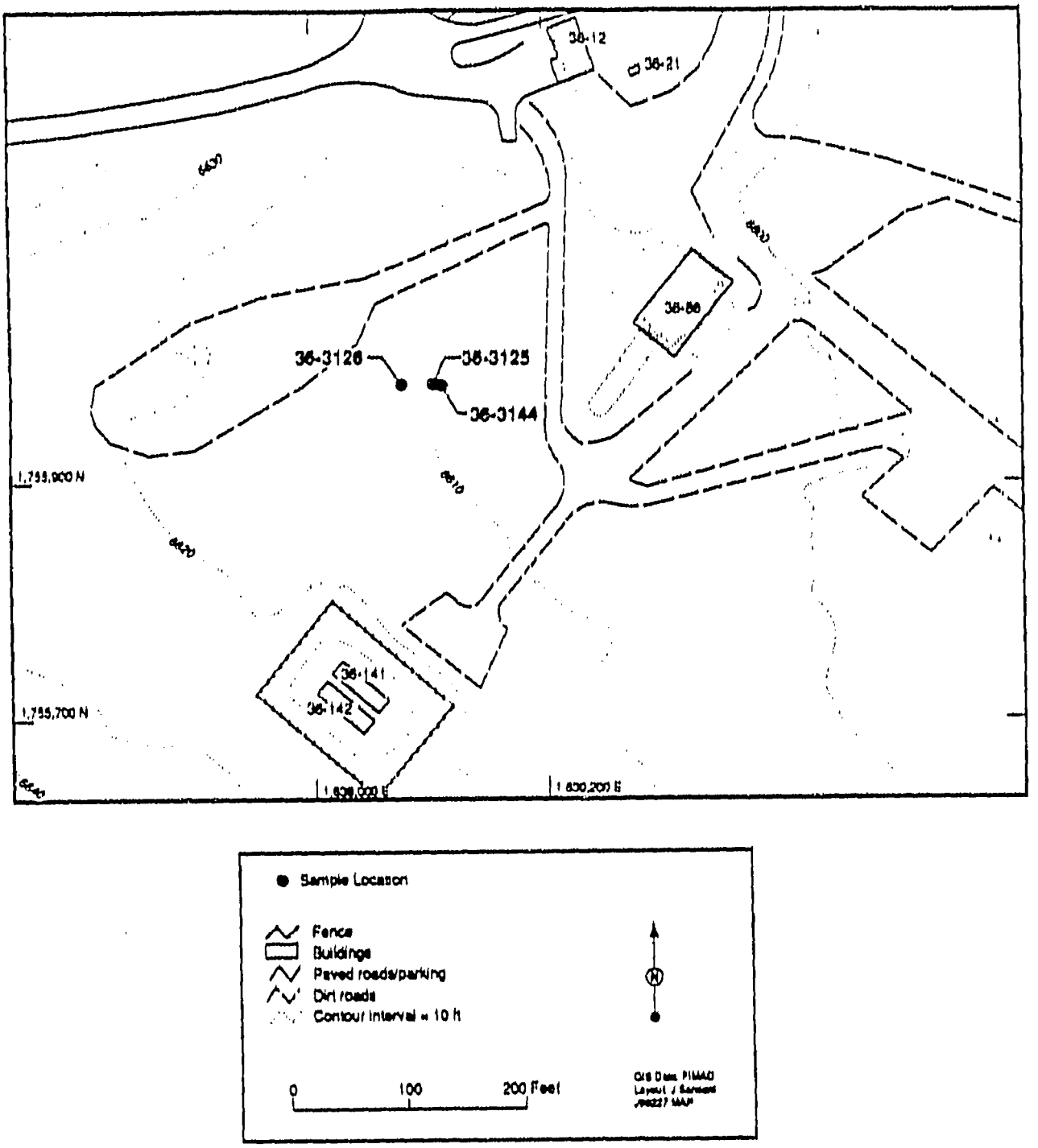


Figure 4-1. Sample Locations Within PRS 36-001: MDA AA

welded to 55-gallon drum. Two blast shields were used for these drilling activities. The second blast shield was used for the remainder of the crew.

The rotary drilling equipment was used to drill the borehole to the upper sample depth (e.g., 6 feet). The equipment was then switched to the vibratory equipment to collect the sample (e.g., 6 feet to 8 feet). If sampling at lower depth was required then the process was repeated. For example, if the next sample depth was 12 feet to 14 feet, the rotary equipment was used to drill to the upper sample depth (12 feet); the equipment was again switched to the vibratory equipment and the sample collected from the depth of 12 feet to 14 feet.

The split-spoon samplers were monitored for radiation and VOCs immediately after opening. The core material was then removed from the split-spoon sampler and placed into a stainless steel bowl. The samples that were to be analyzed for VOCs were immediately placed into 125-ml sample containers. The remaining material was broken up, mixed with a stainless steel spoon, and placed into the appropriate sample containers.

Drill cuttings generated from the drilling activities were segregated (by depth) into small piles around the borehole. After sampling was complete at each borehole, these cuttings were returned to the borehole to the approximate depths from which they were generated. The boreholes were sealed with bentonite.

Samples were collected from the boreholes inside the trenches (Figure 4-1). Soil cuttings were composited from one borehole while the remaining two boreholes had ash and underlying soils collected at discrete intervals. Eight samples (including one duplicate) were collected at different depths from three locations at PRS 36-001, trenches. See Exhibit 1.

Quality Control Samples

One field duplicate sample, number AAB1951 (duplicate of AAB1950), was collected at PRS 36-001, MDA AA during the 1994 sampling activities. This sample was collected from trench #1, borehole #2 from the overlying fill at 2 foot to 4 foot depth.

Field quality-control samples were collected as specified and defined in the Laboratory's ER Generic Quality Assurance Project Plan (QAPJP) for RCRA Facility Investigations (LANL 1991a), LANL-ER-SOP-01.05, Field Quality Control Samples (LANL 1992a), and the TA-36 Site Specific Quality Assurance/Quality Control Plan (ICF KE 1993b).

Sampling Not Conducted or Completed in 1994

As the contamination and thickness of the ash/debris are anticipated to vary significantly throughout MDA AA, sufficient boreholes need to be drilled and sampled in order to adequately characterize the site and determine if a release from the waste had occurred.

Because of limited access, weather constraints, and scheduling difficulties, sampling objectives at MDA AA were not completed during the 1994 field season. Delineation of the trenches must be completed, with biased samples collected from each trench. Analytical results from the 1994 season as well as additional sample data to be collected during the 1995 field season will used to determine the presence or absence of contamination.

PRS 36-002, Sump

The PRS 36-002, Sump is located approximately 70 feet northwest of Building 36-48 in TA-36. To determine if contamination existed within the fill material of the sump, excavation of the material was necessary. A backhoe was used to dig out the sump's cobble and liner (corrugated pipe). The excavated material, including the culvert, was placed in a bermed area adjacent to the sump. The bermed area was constructed of a heavy-mil plastic liner overlying 6 inch diameter PVC pipe.

Six samples were collected at discrete intervals from the sump in accordance with the sampling approach outlined in Section 4.1 (Exhibit 1, Figure 4-2). When a sample interval was reached, the backhoe operator would place the bucket, with the excavated material, in the bermed area. The excavation sampling was performed in accordance with LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b).

Following the excavation, the hole was covered with heavy-mil plastic, held down by blocks of wood, to prevent moisture or debris from getting in. An aluminum grate was placed on top of the plastic to prevent an accidental fall-in, and two wooden pallets were placed on top of the aluminum grate for extra protection. The excavated material (excluding the culvert), was contained in the bermed area and covered with plastic tarps to prevent transport of potential contamination from the material. Access to the excavation, including the excavated material, was restricted by barrier tape. The excavated material will be disposed of when analytical results are received; either by returning it to the excavated area, or drumming and disposing of it as waste.

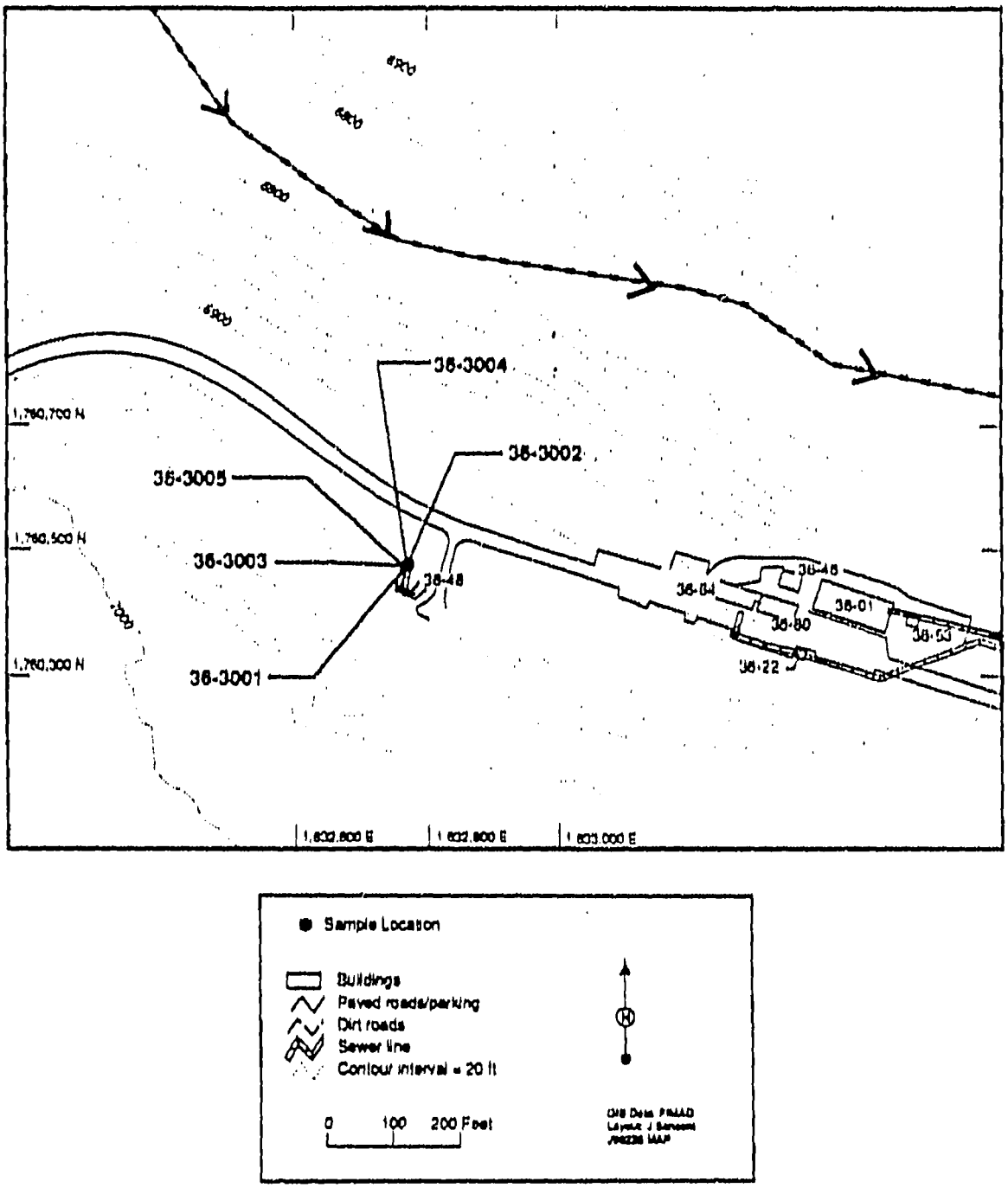


Figure 4-2. Sample Locations Within PRS 36-002: Sump

If analytical results from the excavation sampling show potential contaminants of concern above screening action levels, a hollow stem auger drill rig with a core barrel will be used to determine extent and location of contaminant migration. If however, analytical results indicate that concentrations of potential contaminants of concern are below screening action levels, No Further Action (NFA) will be proposed.

Quality Control Samples

One field duplicate, sample number AAB1804 (duplicate of AAB1803), was collected at the sump. This sample was collected at the third depth below the inlet pipe (5.5 feet to 6.5 feet).

Sampling Not Conducted or Completed in 1994

All proposed sampling for PRS 36-002, Sump was completed in 1994.

PRS 36-003(a), Septic System

Samples were collected to determine if potential contaminants were present at levels above screening action levels within fluids and sludges in the septic tank, the environmental media surrounding the septic tank, and drainlines of the leachfield.

Septic Tank

Fluid and sludge sample collection activities at PRS 36-003(a) during 1994 were performed in accordance with LANL-ER-SOP-06.14, Sediment Material Collection (LANL 1992c). A scoop sampler was used to collect fluid and sludge samples from the septic tanks. This sampler consists of a 500-ml polyethylene sample bottle cut on a diagonal at the neck to serve as the scoop. The container was inserted into a metal cage attached to a long handle. The scoop sampler was lowered into the tanks and allowed to fill with the fluid or sludge. The sampler was drawn up and the collected material was then transferred directly to the appropriate sample containers. Six samples were collected from the PRS 36-003(a), Septic Tank—three sludge (sample numbers AAB1873 through AAB1875) and three fluid (sample numbers AAB1876 through AAB1878) (Figure 4-3).

Leachfield

The drilling activities at the 36-003(a), Leachfield were performed in accordance with LANL-ER-SOP-04.01, Drilling Methods and Drilling Site Management (LANL 1992d). Boreholes were drilled at the locations specified in the RFI Work Plan.

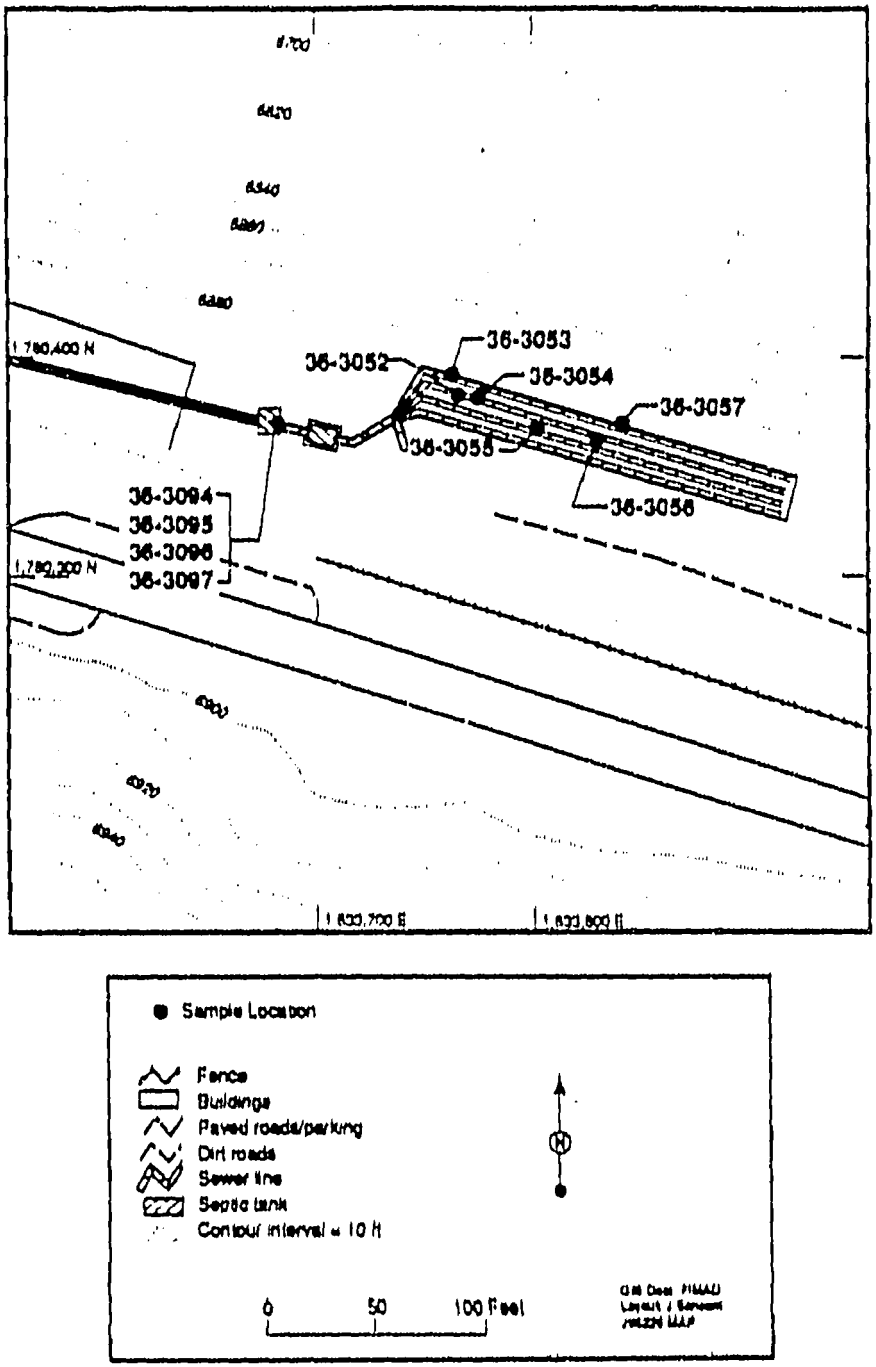


Figure 4-3. Sample Locations Within PRS 36-003(a): Septic System

At PRS 36-003(a), Septic Tank and Leachfield, the RFI Work Plan required collecting a sample from each of the following depths:

- pipe tile depth;
- soil/tuff interface;
- 2 ft into tuff.

The same drill rig and drilling techniques used at PRS 36-001, MDA AA, were also used at PRS 36-003(a), Leachfield. (See PRS 36-001, MDA AA for equipment used in these drilling techniques.) At this location, the tile depth and soil/tuff interface were the same depth. Therefore, only two samples were collected from each borehole; one sample at the soil/tuff interface, and the second approximately 2 ft into the tuff. See Exhibit 1.

Samples were collected from the borehole using a stainless steel split-spoon sampler in accordance with LANL-ER-SOP-06.24, Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers (LANL 1993c).

The distribution box sample was not collected as the box could not be penetrated; the sample was collected in the drainline just north of the distribution box.

Samples were collected from three of the four drainline trenches at the soil/tuff interface and two feet into the tuff. The fourth drainline could not be located.

Fourteen samples (AAB1892-1895, 1897, 1898, 1900, 1901, 1903, 1904, 1906, 1907, 1909, 1910) were collected from PRS 36-003(a), Septic Tank Leachfield.

Sampling of the septic tank was completed in July of 1994 with samples collected of fluid and sludge. Sampling of the drainlines on the leachfield was completed in November 1994. Analytical results from the septic tank and leachfield samples will determine if further action is required.

Quality Control Samples

Two field duplicate samples were collected from septic tank; one sludge and one fluid, sample numbers AAB1875 (duplicate of AAB1874) and AAB1878 (duplicate of AAB1877).

Two duplicate samples were collected from leachfield activities; sample numbers AAB1893, collected from BH-2, 24 in to 32 in deep (duplicate of AAB1897); and AAB1895, collected from BH-4, 30 in to 40 in deep (duplicate of AAB1904).

Sampling Not Conducted or Completed in 1994

All proposed sampling for PRS 36-003(a) was completed during the 1994 field season.

PRS 36-003(b), Septic System

Samples were collected from PRS 36-003(b), Septic Tank to determine if PCOCs are present at levels above SALs. Offsite migration of contaminants from the septic tank will be evaluated from the results of the samples collected from the septic tank outfall drainage channel.

Septic Tank

Fluid and sludge sample collection activities at 36-003(b) Septic Tank were performed in accordance with LANL-ER-SOP-06.14, Sediment Material Collection (LANL 1992c).

Five samples were collected—two fluid and three sludge (sample numbers AAB1879 through AAB1884) (Figure 4-4). An additional aqueous sample AAB1883 was not collected due to insufficient fluid in the tank.

Fluid and sludge samples were collected in July 1994. Analytical results will decide whether further action at the septic tank is needed.

Outfall

Because the outfall pipe opening was not positively located, the sample to be taken at the end of the pipe could not be collected. Five surface soil samples were collected in the drainage channel below (downgradient) of the estimated location of the outfall (sample numbers AAB1885 through AAB1889). These sample locations were biased on geomorphic surveys and site history.

Surface soil samples were collected in accordance with LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b).

Analytical results from samples collected in drainage channel sediment catches will determine if contaminant release from the septic tank has occurred and if concentrations exceed SALs.

Quality Control Samples

Two field duplicate samples were collected from the septic tank; one sludge, sample number AAB1881 (duplicate of AAB1880) and one liquid, sample number AAB1884 (duplicate of AAB1882).

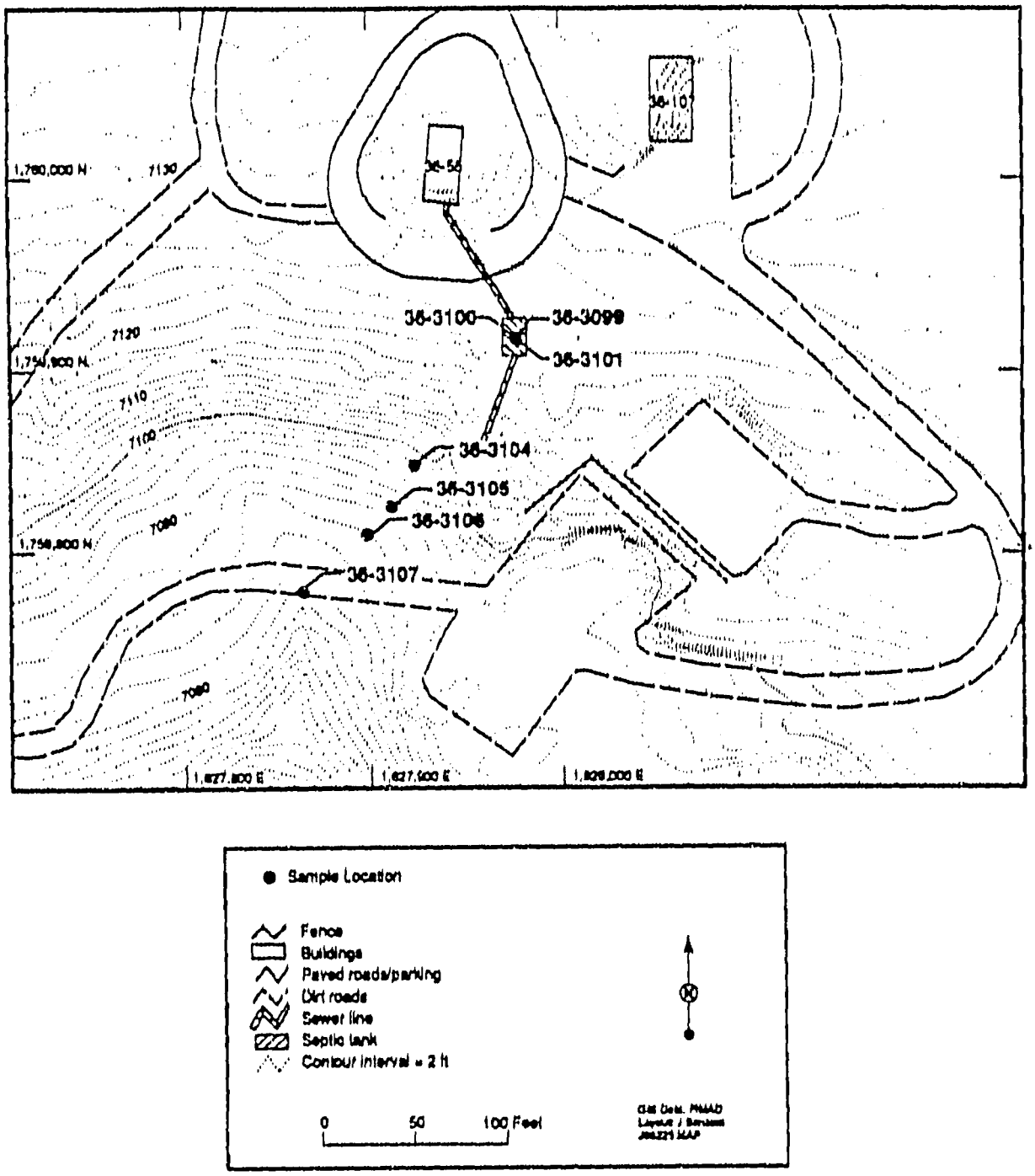


Figure 4-4. Sample Locations Within PRS 36-003(b): Septic System

One duplicate sample was collected from the drainage channel, sample number AAB1886 (duplicate of AAB1885).

Sampling not Conducted or Completed in 1994

One of three proposed liquid samples from the septic tank was not collected, sample number AAB1883, due to an insufficient volume of liquid within the tank.

Because the actual septic tank outfall terminus was not specifically located, the proposed sample from the sediment trap directly below the outfall could not be collected. Instead, the allocated sample was relocated at the furthest upstream (north) drainage channel (sample number AAB1885).

PRS C-36-003, Photo Outfall

Surface soil and sediment samples were collected on the slope below the outfall to determine if silver, cyanide, and organic solvent contaminants are present at levels exceeding screening action levels. If contaminants of concern are identified, further investigations may be needed to assess the extent of contamination.

To ascertain if contaminants exist in the outfall pipe, the location of the photo lab inside Building 36-1 was determined and water was released into the floor drain. When water exited photo outfall, two aqueous samples (sample numbers AAB1918 and AAB1919) were collected.

Liquid samples were collected by the dipped bottle method in accordance with protocols established in LANL-ER-SOP-06.13, Surface Water Sampling (LANL 1992e).

Samples were biased judgmentally on potential contaminants within outfall pipe based on the site history and use.

Six sample locations were selected within the drainage channel below the outfall pipe (Figure 4-5). A geomorphic survey was conducted to identify surface water migration pathways and sediment traps. The results of this survey were used to bias surface sample locations.

The first sample, AAB1911, was collected from the sediment trap directly below the outfall; the second sample, AAB1913, was collected in the sediment trap 15 ft down drainage from AAB1911; the third sample, AAB1914, was collected in the sediment trap 17 ft down drainage from AAB1913; the fourth sample, AAB1915, was collected in the sediment trap 21 ft down drainage

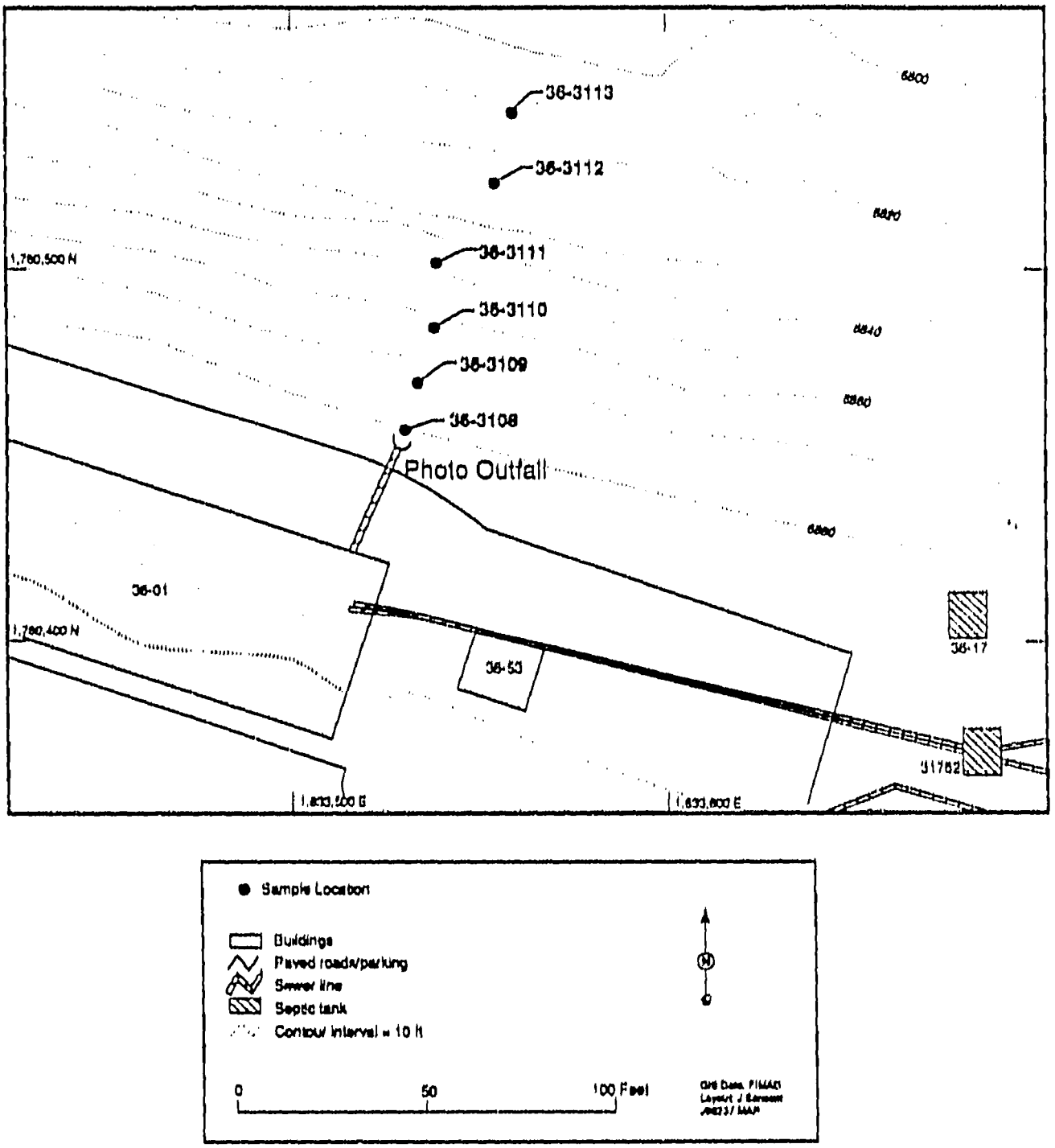


Figure 4-5. Sample Locations Within PRS C-36-003: Photo Outfall

from AAB1914; the fifth sample, AAB1916, was collected in the sediment trap 26 ft from AAB1915; and the final location, AAB1917, was collected 22 ft from AAB1916.

All surface sample collection activities at C-36-003 were performed in accordance with LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b).

Sampling activities at PRS C-36-003 were completed in July of 1994. A total of nine samples were collected; two liquid and seven surface soil (including one field duplicate). Liquid samples of effluent from the outfall pipe will determine if contaminants exist within the pipe. Surface soil samples collected will determine whether contaminants in soils and sediments downstream from the outfall are present at concentrations exceeding screening action levels.

If contaminants of concern are identified, further investigations may be needed to accurately assess the extent of contamination.

Quality Control Samples

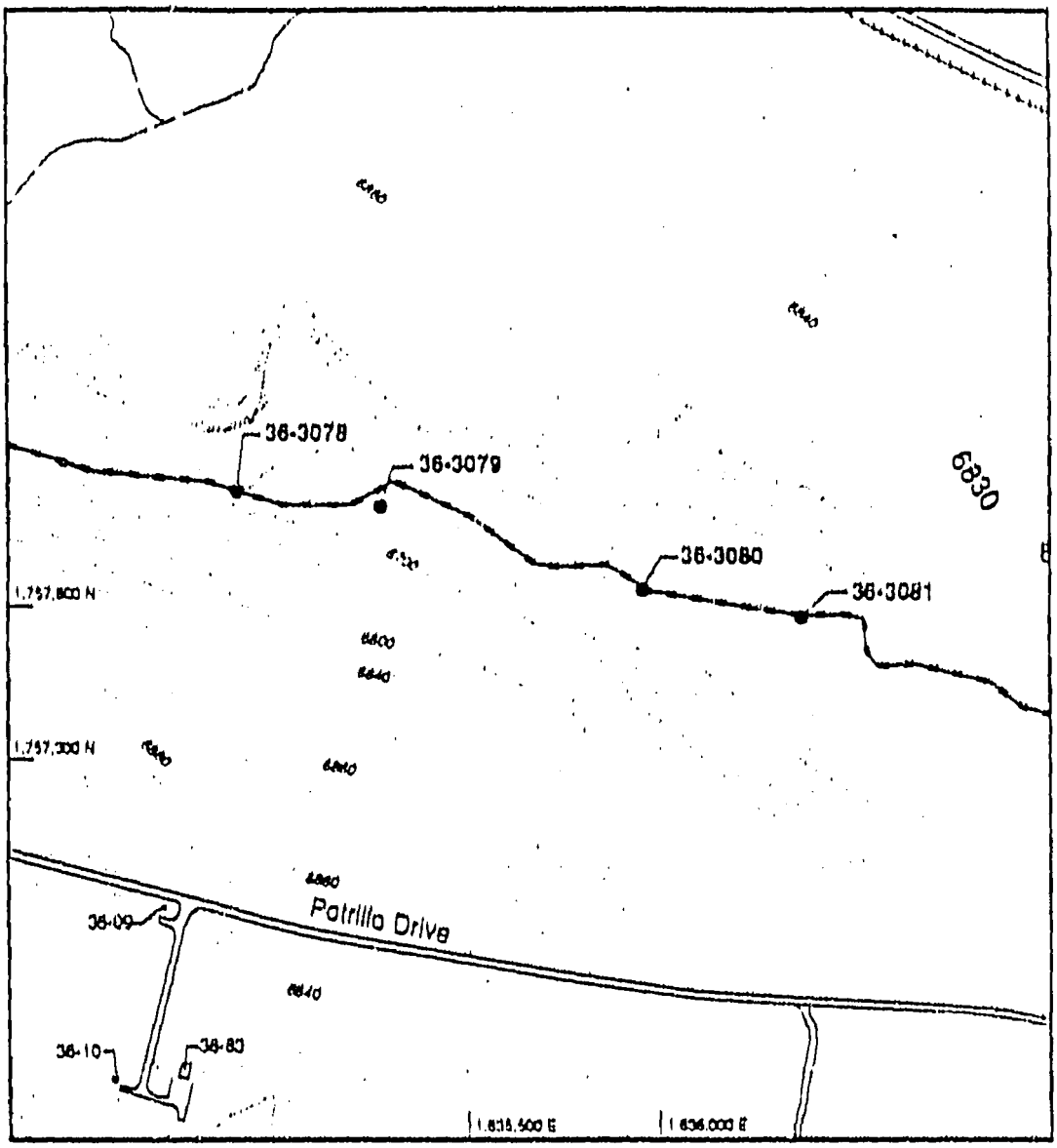
Two field duplicate samples were collected: one soil sample, sample number AAB1912 (duplicate of AAB1911), was collected from the sediment directly below the outfall; and one liquid sample, sample number AAB1919 (duplicate of AAB1918), was taken of water discharged from the outfall pipe.

Sampling Not Conducted or Completed in 1994

All proposed sampling at PRS 36-003 was completed in July and November of 1994.

PRS 36-004, Firing Sites

Field activities at PRS 36-004 included the investigation of "offsite" migration of contaminants via major drainage channels. "Offsite" was defined as any area outside the hazard radii prescribed for each active firing site (Eenie, Meenie, Minee, and Lower Slobbovia). Potrillo Canyon was defined in two sections: 1) Upper Potrillo-outside hazard radii of Eenie, Meenie and Minee (downgradient) as well as IJ firing site; and 2) Lower Potrillo-outside hazard radii of Lower Slobbovia firing site and Skunk Works. Fence Canyon fell outside and below (downgradient) Meenie and Minee firing sites. Water canyon was outside and below Minee. Sediment catchment areas having substantial accumulations of fine particles were identified, and sediments from each were sampled (Figures 4-6 through 4-9). Samples were collected from the surface to a depth of 6 inches within a diameter



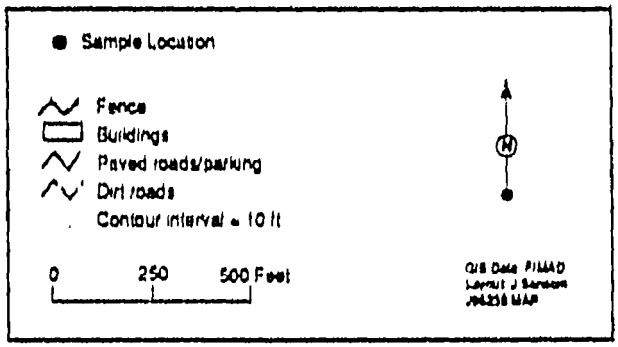


Figure 4-6. Sample Locations Within PRS 36-004: Upper Potrillo Canyon

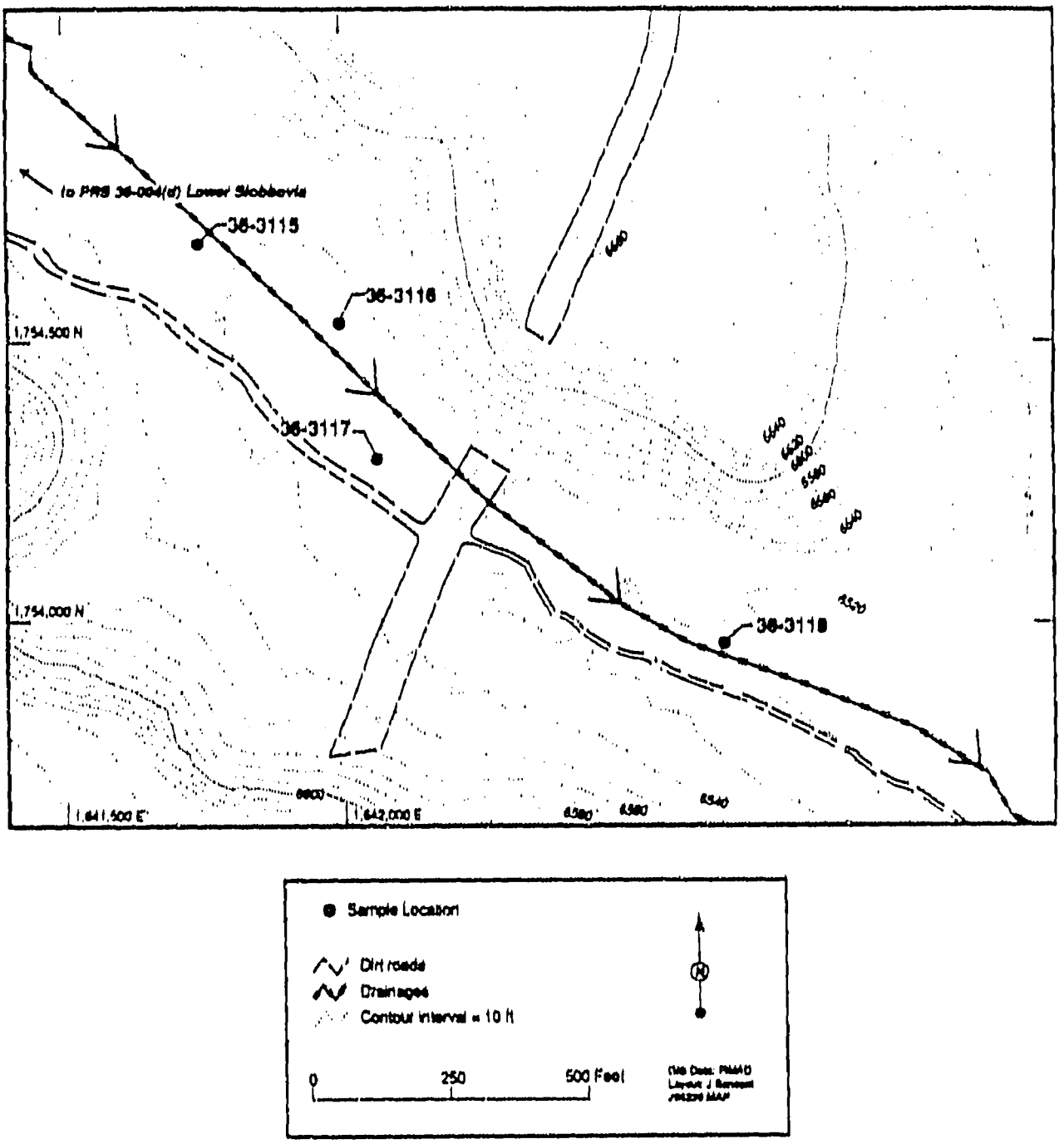


Figure 4-7. Sample Locations Within PRS 36-004: Lower Potrillo Canyon

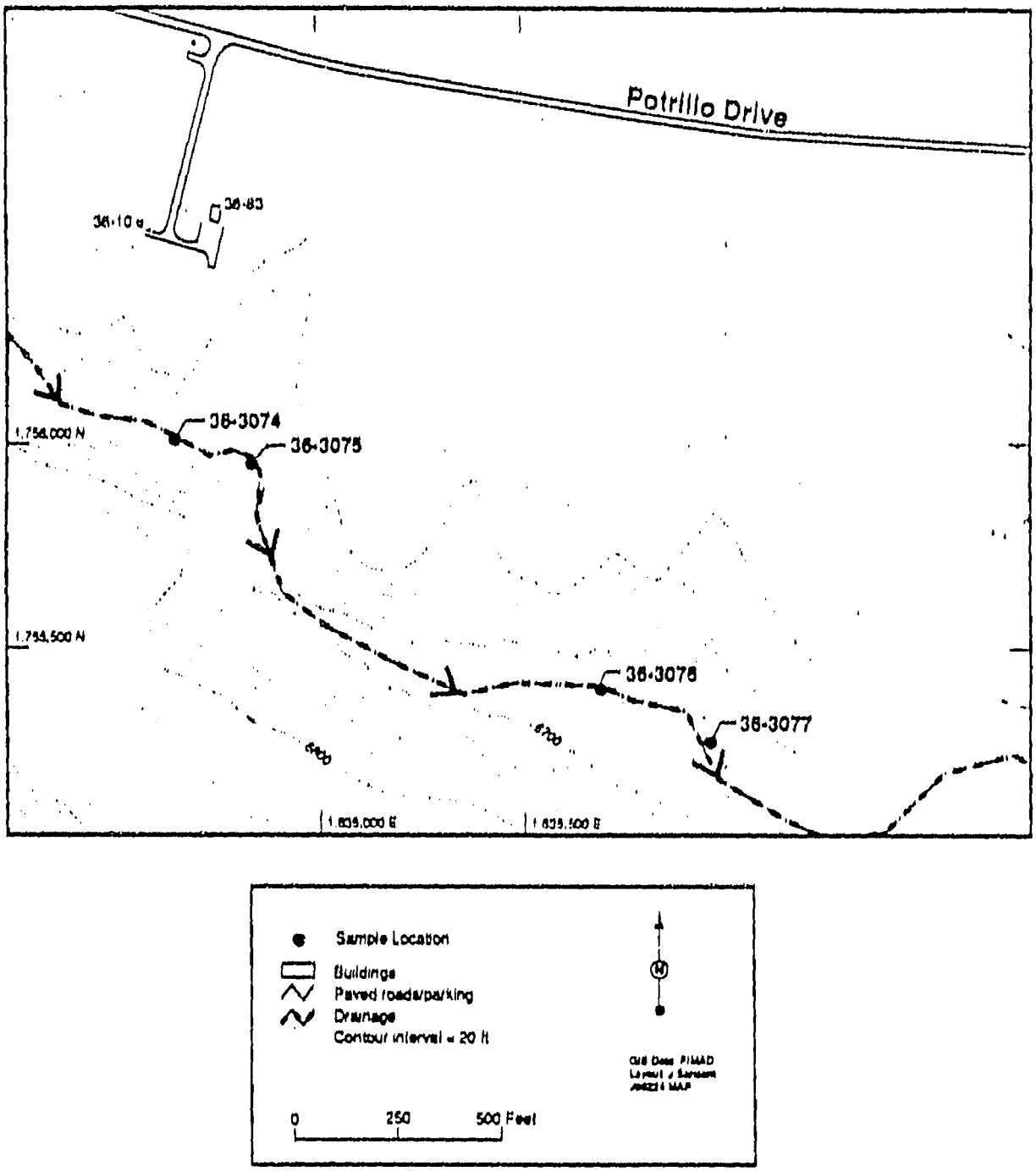
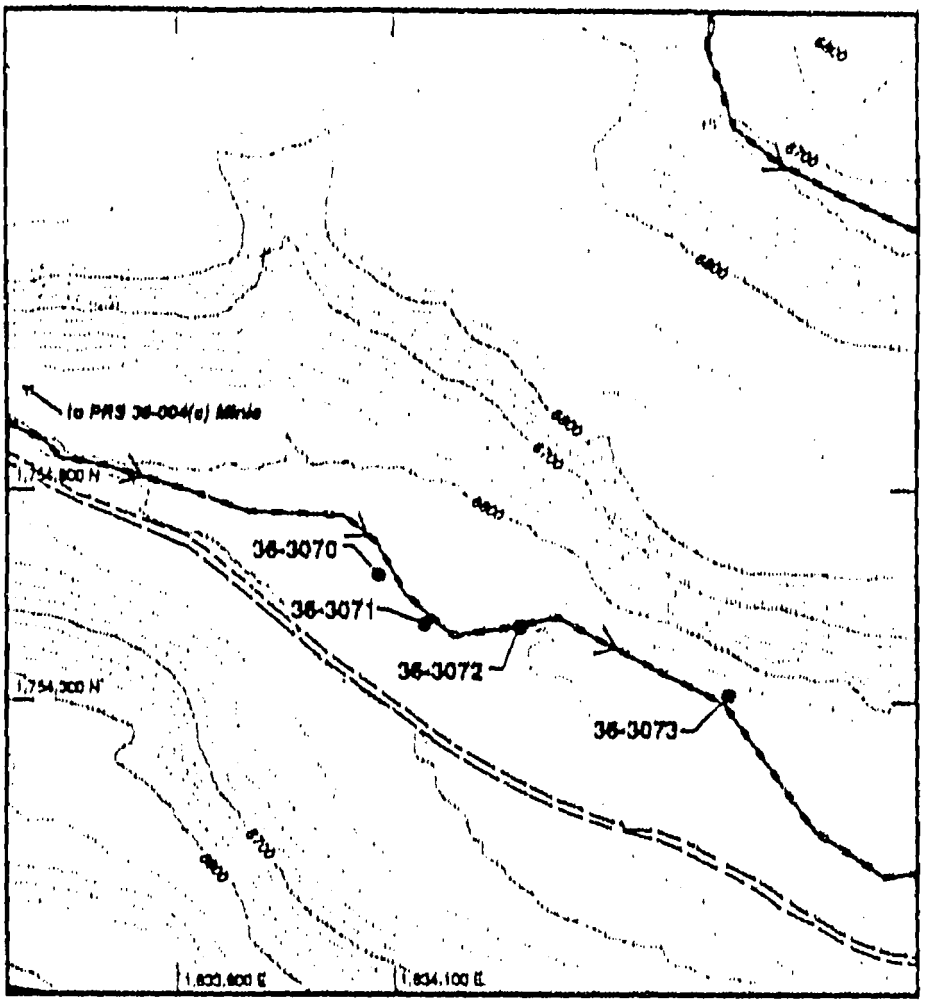


Figure 4-8. Sample Locations Within PRS 36-004: Fence Canyon



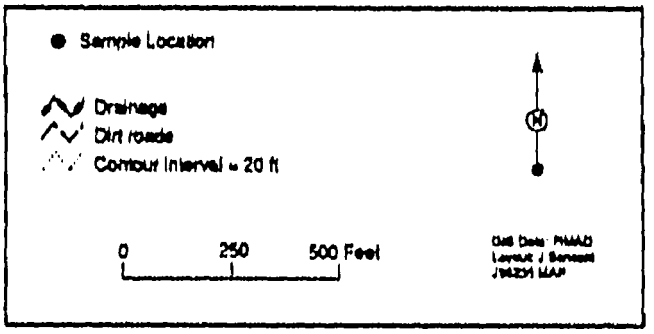


Figure 4-9. Sample Locations Within PRS 36-004: Water Canyon

of approximately 6-8 inches. Water samples were collected during periods of high runoff at locations near sediment sample locations.

Sediment samples were collected within the main drainage channel of each canyon as follows:

Potrillo Canyon	Four locations - Upper Potrillo
	Four locations - Lower Potrillo
Fence Canyon	Four locations
Water Canyon	Four locations

Sediment sample collection activities at PRS 36-004 firing sites were performed in accordance with LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b).

Surface water sampling stations were adjacent to sediment sampling locations in each of the drainage channels. Each station had three 2-L polyethylene bottles covered with 1/4-in screen to prevent rodents and debris from entering. The sample bottles were buried in the stream beds but the amount of the run-off was so great that some bottles were completely covered with sediment or washed downstream. As a result, only two water samples were collected. These samples were obtained from Water Canyon (Figure 4-10).

Surface water runoff sampling at PRS 36-004 firing sites were performed in accordance with LANL-ER-SOP-06.13, Surface Water Sampling (LANL 1992c).

Sediment and surface water results will be used to compare the largest observed concentrations of each constituent with its screening action level. If the screening action levels are exceeded for any constituent(s), a risk assessment will be performed. If Phase I data are insufficient to conduct a risk assessment, a Phase II investigation will be initiated.

Quality Control Samples

One field duplicate sediment sample was collected during PRS 36-004, Firing Sites, sampling activities, sample number AAB1817 (duplicate of AAB1816).

Sampling Not Conducted or Completed in 1994

All proposed sediment samples for PRS 36-004, Firing Sites, were collected during 1994 field season.

The surface water sampling efforts will be continued during the 1995 sampling season, using a different sampling technique.

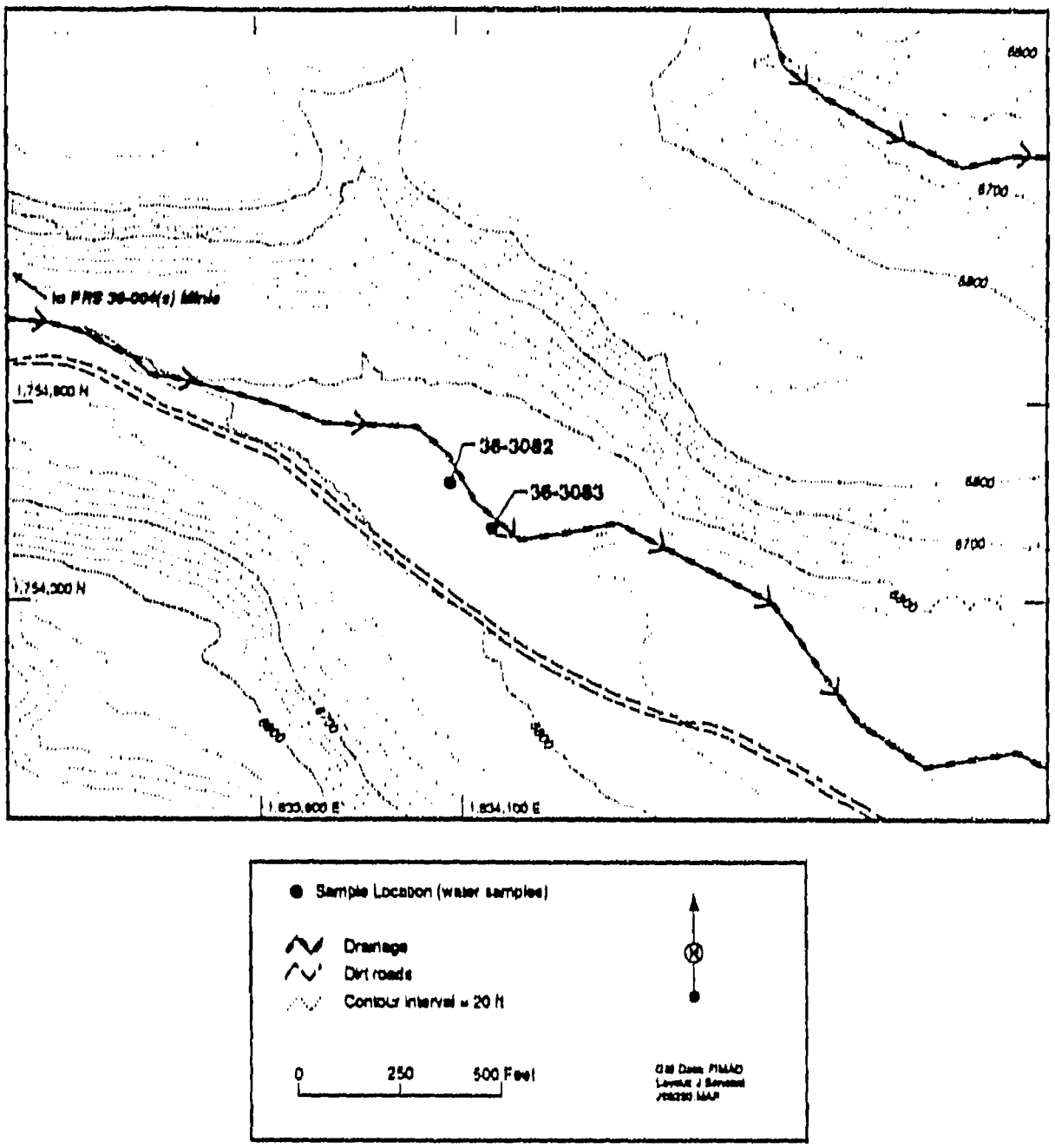


Figure 4-10. Water Sample Locations Within PRS 36-004: Water Canyon

PRS 36-004(d), Burn Pits, were not sampled during the 1994 field season. The 1993 geophysical surveys (EM and MAG) were unsuccessful in delineating the Burn Pits due to surface metal interferences. Further archival research also proved disappointing in identifying the site location. Therefore, as there were numerous PRSs where the probable locations of PCOCs were known, field activities at the Burn Pits were deferred pending additional research to determine their approximate locations. This allowed the sampling team to make best use of time during the field season. A radiation survey of the general area was conducted during the 1994 field season. Results from the survey will be utilized following additional efforts to locate the Burn Pits.

PRS 36-005, Boneyard

Sampling activities at this location will determine if contaminants of concern are present in surface soils within the four-acre Boneyard and in sediments within runoff channels leading to the main drainage.

Sediment samples were collected from within the drainage channel downgradient from the Boneyard storage area. Sediment catchments having substantial accumulations were identified and samples were collected within these catchments.

Sampling activities included the following at PRS 36-005:

Eighteen surface soil samples were collected within the Boneyard storage area. Nine surface soil samples (numbers AAB1861 through AAB1869, including one duplicate) were collected using the randomization protocol described in Section 3.2.1 (Figure 3-4).

Eight surface soil samples, sample numbers AAB1852 through AAB1860 (including one duplicate) were collected using the criteria for manmade structures described in Section 3.1.5 (Figure 4-11).

One surface soil sample was collected using visual walkthrough survey. A soil stain was found within Boneyard storage area during a visual walkthrough survey. One surface soil sample was collected at this area, sample number AAB1843 (Figure 4-11).

Three additional surface samples (including one duplicate) were collected off the Boneyard storage area but within Meenle/Minle hazard radii, using the randomization protocol described in Section 3.5.1 (Figure 3-4).

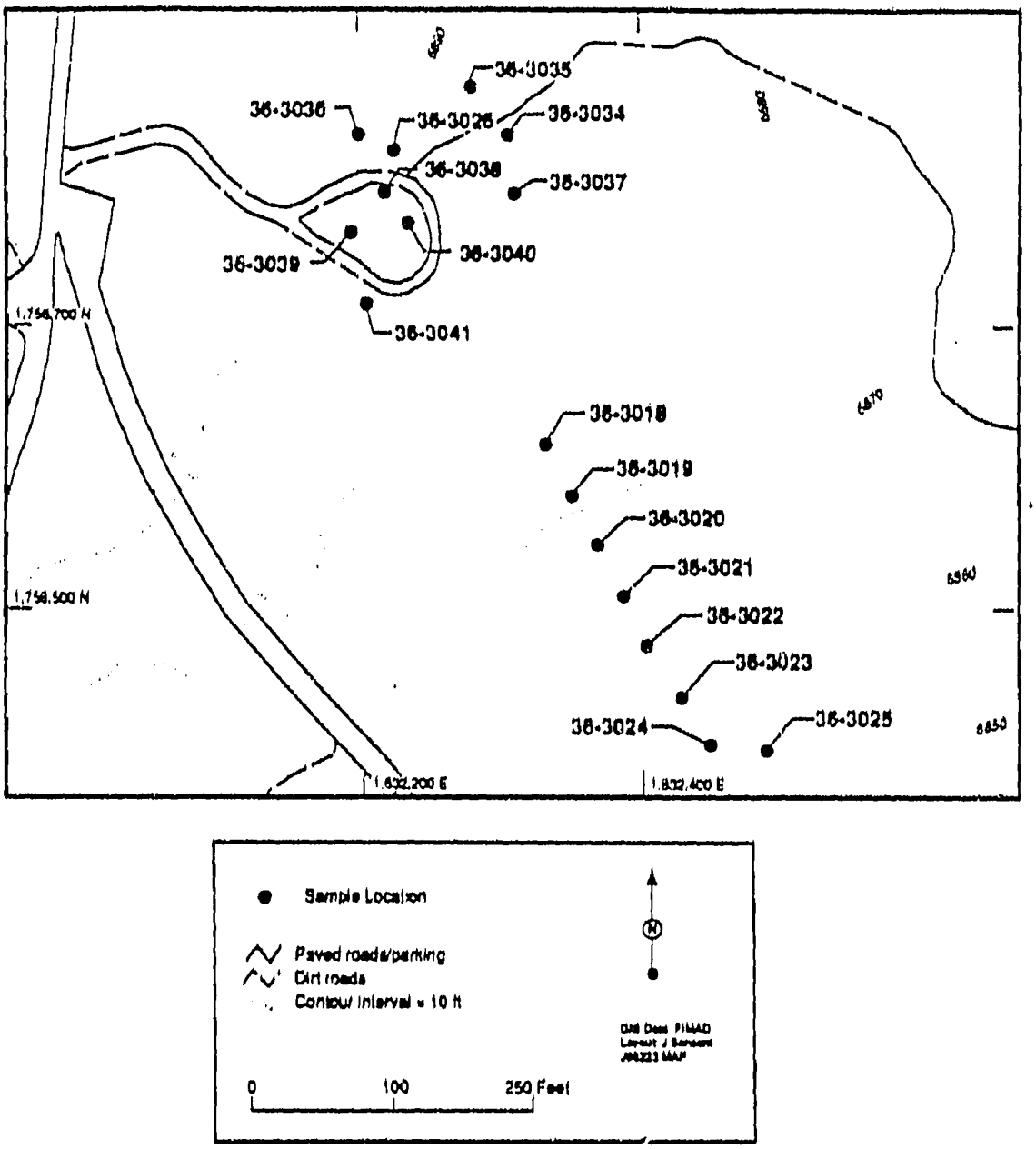


Figure 4-11. PRS 36-005: Boneyard Biased Sampling Locations

Nine soil or sediment samples were collected within the drainage channel below (downgradient) the Boneyard surface storage area (sample numbers AAB1834 through AAB1842). Sample locations were identified during the geomorphic survey. Two samples were located in the main drainage arroyo below (downgradient) Minie firing site. The seven remaining samples (including one duplicate) were collected from within the drainage channel below (downgradient) the actual Boneyard storage area (Figure 3-4).

All sampling activities at PRS 36-005, Boneyard, were performed in accordance with LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b).

Samples locations were selected on visual walkthrough surveys, manmade structures, geomorphic surveys, randomization techniques and site history.

Sampling activities at PRS 36-005, Boneyard, were completed in August 1994. Thirty-one surface soil and sediment samples were collected.

Results from the analysis will be used to compare the largest observed concentration of each constituent with its screening action levels. If these levels are exceeded, a risk assessment of the site will be performed. If Phase I data are insufficient to conduct a risk assessment, a Phase II investigation will be initiated.

Quality Control Samples

One field duplicate sample was collected from within the drainage channel, sample AAB1835 (duplicate of AAB1834). Sample number AAB1853 (duplicate of AAB1852) was collected from within the Boneyard storage locations and sample number AAB1862 (duplicate of AAB1861) was collected from sampling using the randomization protocol. Another field duplicate sample, AAB1871 (duplicate of AAB1870), was collected from the off Boneyard sampling.

Sampling Not Conducted or Completed in 1994

All proposed samples for PRS 36-005 Boneyard were collected except the seven that were to be of elevated radiation locations, sample numbers AAB1845 through AAB1851. These samples were not collected because the radiation survey for PRS 36-005 is only 80 percent complete. The survey will be completed during the 1995 sampling season.

Section 5

5.0 HEALTH AND SAFETY MONITORING DURING SAMPLING ACTIVITIES

The health and safety monitoring was conducted by Site Safety Officers (SSO) supplied by Morrison Knudsen Corporation of Los Alamos, New Mexico. The health and safety monitoring program for the sampling activities was designed to protect the health and safety of field team members, and consisted of direct-reading monitoring and integrated industrial hygiene sampling. A comprehensive health and safety report is located in Appendix 5.

5.1 Administrative Health and Safety Requirements

The SSO was responsible for enforcing all health and safety requirements as stated in the Site-Specific Health and Safety Plan (SSHASP). The SSHASP is located in Appendix 5, Attachment 1. The SSO conducted tailgate safety meetings every sampling day; Tailgate Safety Meeting Forms (Appendix 5, Attachment 2) document these meetings. The SSO also briefed visitors on health and safety issues, conducted health and safety monitoring, and ensured that all health and safety 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 used during sampling activities. Modified Level D PPE consisted of:

- steel-toe work boots;
- chemical-resistant boots (where needed);
- cotton coveralls;
- one pair of inner and outer chemical-resistant gloves or two pairs of inner gloves, depending on role of sampling team member;
- safety glasses; and
- Hard hats and hearing protection when working with or near the drilling equipment.

Three work zones were established prior to the initiation of field operations to assure that hazardous substances were not spread from the potentially contaminated areas:

- The exclusion zone (EZ)—the contamination area where samples were collected,
- The contamination reduction zone (CRZ)—the decontamination area, and
- The support zone (SZ)—the area where administrative and operations support work was performed.

5.2 Direct Monitoring of Hazardous Substances or Conditions

Direct-reading monitoring was conducted in accordance with the frequency and locations specified in the SSHASP. The following direct-reading instruments were used:

- HNu, PI-101, Trace Gas Analyzer with a 10.2 eV lamp, to perform direct-reading monitoring for organic vapors;
- GasTech, Model 1214S, Combustible Gas/O2 Indicator, to perform direct-reading monitoring for combustible gas/oxygen;
- MIE, MINIRAM Personal Monitor, Model PDM-3, to perform direct-reading monitoring for airborne particulates;
- Quest, M-27, Noise Logging Dosimeter, to perform noise surveys;
- Davis, Weather II, Portable Meteorological Station, to monitor weather conditions (e.g., ambient temperature, relative humidity, wind speed and direction).

The results of the direct-reading monitoring are presented in Appendix 5, Attachment 3. Action levels for airborne contaminants, as specified in the SSHASP, were at no time reached or exceeded.

Daily instrument calibration checks were performed and recorded by the SSO in accordance with manufacturer recommendations. Daily calibration records are located in Appendix 5, Attachment 3.

5.3 Dose Monitoring

Integrated industrial hygiene sampling is conducted to determine if airborne contaminants (for particular constituents) have exceeded the action levels. The SSHASP required periodic integrated personal sampling for metals during drilling activities. The personal pump and primary calibrator used to collect these sample were:

- Gillian HI Flow sampler Model HFS 113A
- Mini Buck electronic bubble meter used to calibrate the samplers.

Four integrated industrial hygiene samples were collected during the drilling activities and were analyzed for lead and beryllium using NIOSH Analytical Method No. 7300. Two samples were collected on 9/27/94 and two samples collected on 9/29/94; the samples were analyzed by West Coast Analytical Services, Inc. of Santa Fe Springs, California. Because the remote drilling operation produced low direct-reading monitoring results, additional sampling was not necessary.

The results of the integrated industrial hygiene sampling showed that the action levels for airborne contaminants, as specified in the SSHASP, were never reached or exceeded. See Appendix 5, Attachment 3 for the results of this sampling.

5.4 Radiation Monitoring

Radiation monitoring, for the 1994 field sampling activities, was conducted by Health Physics Technicians (HPT's) supplied by Environmental Dimensions, Inc. (EDI) of Albuquerque, New Mexico. The radiation monitoring program for the sampling activities was designed to protect the health and safety of field team members and consisted of radiation screening of sample locations and soil samples, radiation frisking of personnel prior to exiting controlled areas, and radiation surveys of decontaminated equipment and samples for release. A comprehensive radiation monitoring summary report is located in Appendix 6.

Radiation screening was conducted by the HPT to assess the radiological hazards for the task being performed. This monitoring consisted of an initial screening (direct reading) of the surface soil at the sample location prior to sampling and a second screening (bowl reading) of the homogenized soil prior to placing the material in sample containers.

Results of the radiation screening for all sample locations and samples were less than the set action levels of 5000 counts per minute (cpm) beta-gamma and 500 cpm alpha. Results of both screenings were recorded on the field Sample Collection Log for each sample and in the HPT field logbook. The Sample Collection Logs are presented in Appendix 2, and a copy of the HPT field logbook is presented in Appendix 6, Attachment 1.

Radiation frisking was conducted by the HPT to detect the potential for radiation contamination. At a minimum, the gloves, boots, soiled areas of PPE, and exposed areas (i.e. face and neck) of all workers were frisked prior to leaving the EZ. Where wet personnel decontamination (decon) was required, (i.e. during drilling and excavation activities) the HPT smeared the gloves and boots prior to decon as an initial means of determining the proper storage, handling and labeling of decon water.

Following personnel decon and doffing of PPE, the HPT again frisked the hands, boots and face of all workers prior to exiting the CRZ. All personnel washed their hands and face at the washing facility as the final step in personnel decon. Hands and faces were washed as a precaution in case any contamination may have been missed during the direct frisking.

A Control Area Access Register Form was filled out and maintained by the HPT on a daily basis. Time of entry and exit of the EZ for each worker was recorded as well as the radiation frisking results. Copies of the Control Area Access Register Forms are presented in Appendix 6, Attachment 2.

5.5 Equipment Release Procedures

Radiation surveys were conducted by the HPT to ensure that equipment released from the site met the requirements for conditional or unconditional release. Equipment and materials used for soil sample collection in the EZ (e.g., drill rig, steam cleaner, augers, spoons, bowls, sample containers), were surveyed for radiation prior to conditional or unconditional release from the site.

In order to ensure that equipment or materials used for the sampling activities did not introduce radioactive contamination to the site or when equipment release survey results could not be obtained, the HPT performed an incoming radiation survey. This incoming survey also provided reliability and consistency for the release surveys. All vehicles (e.g., support truck and Ryder truck), and heavy equipment (e.g., drill rig and steam cleaner) were surveyed before and after use at the site.

Results of the radiation surveys for all equipment and materials were less than the levels set in the Laboratory's Radiological Control Manual.

An Equipment and Item Removal Log was filled out and maintained by the HPT for each survey performed. The date of the survey, person performing the survey, facility and item surveyed, direct and smear survey results, and instruments used were recorded. Copies of the Equipment and Material Removal Forms are presented in Appendix 6, Attachment 3.

Section 6

6.0 EQUIPMENT DECONTAMINATION

Equipment decontamination was done in accordance with the OU 1130 Field Implementation Plan (Appendix 7), Field Decontamination of Drilling and Sampling Equipment. Decontamination of reusable equipment was a critical part of data quality assurance. All sampling equipment was carefully decontaminated before reuse. Specific procedures used for the decontamination of manual sampling equipment and drilling equipment are described in Sections 6.1 and 6.2 respectively.

6.1 Decontamination of Manual Sampling Equipment

Sampling equipment, such as hand tools and plastic tubs, was decontaminated after each use. Decontamination procedures consisted of washing the equipment with a solution of Alconox™ and water, rinsing in water, and rinsing again with deionized water. The decontamination liquid was containerized and transferred into a 55-gallon steel drum with a Poly Vinyl Chloride (PVC) liner.

6.2 Decontamination of Drilling Equipment

The split-spoon samplers and auger flights were decontaminated after each use. The split-spoon samplers were decontaminated in tubs using a solution of Alconox™ and water, rinsed with clean water, and rinsed again with deionized water. The auger flights were decontaminated using a high pressure steam cleaner in the decontamination tank set up on a flat bed trailer. All decontamination liquid was containerized and transferred into a 55-gallon steel drum with a PVC inner liner.

Section 7

7.0 WASTE MANAGEMENT

All wastes generated during sampling activities at TA-36 were managed in accordance with the approved Site-Specific Waste Management Plan (Appendix 8, Attachment 1). This plan complies with the Laboratory's AR 10-1 Radioactive Liquid Waste (LANL 1992f), AR 10-2 Low-Level Radioactive Solid Waste (LANL 1991b), AR 10-3 Hazardous and Mixed Waste (LANL 1993d), AR 10-9 Waste Profile Form (LANL 1993e), and LANL-ER-SOP-01.06 Management of RFI Generated Waste (LANL 1992g). Waste minimization techniques (as required by the Laboratory's AR 10-8 Waste Minimization [LANL 1991c]) were incorporated into the plan. This greatly reduced the amount of waste that needed to be stored and managed.

7.1 Satellite Waste Storage Areas

Wastes that are pending analyses are currently stored in two temporary satellite waste storage areas at TA-36. One satellite area is located in the southeast corner of the north half of Building 36-48, approximately 600 ft west of the east entrance to TA-36. The other satellite area is located in the east half of Building 36-53 approximately 175 ft northeast of the east entrance to TA-36 and east of Building 1. Table 4 contains a listing of all waste drums located in both waste storage areas.

Table 4
Waste Drums at TA-36 Waste Management Areas

Location	Drum #	Contents	Quantity
Building 36-48	1	Decontamination liquids	~40 gallons
	2	Smear filters	<1 gallon
Building 36-53	1	Decontamination liquids	~40 gallons
	2	Smear filters	<1 gallon

All drums of waste at the satellite waste storage areas are labeled with information identifying their contents. The label information includes dates of sample collection and sample identification numbers of the samples that will be used to characterize the wastes. Examples of drum labels showing all sample identification numbers associated with generated waste stored at both satellite areas are found in Appendix 8, Attachment 2. The drums are also marked "Pending Analysis—Potentially Hazardous".

Steel drums with rigid plastic liners provide primary waste containment. The waste drums are stored inside a secondary containment system constructed of heavy-mil plastic liner overlying the curbs made of PVC pipe. The 55-gallon drums are set on wooden pallets inside the curbed areas. The storage areas have been inspected weekly.

The solid waste generated during 1994 sampling activities at TA-36 consisted of the HPT's smear filters. The smear filters were disposed of in resealable polyethylene bags and transferred into a 55-gallon drum with a rigid plastic liner. A label describing the waste was affixed to each bag as well as to the outside of each drum. This waste is contained in one drum at each of the satellite waste storage areas.

Liquid wastes generated during 1994 sampling activities at TA-36 were composed of decontamination wash and rinse waters. Decontamination liquid generated from the 1994 sampling activities is stored in one steel drum located at each of the satellite waste storage areas. A label describing the waste contents was affixed to the outside of each drum.

7.2 Less-Than-90-Day Storage Areas

When field work ceases for the 1994 season the satellite waste storage areas will be converted to less-than-90-day storage areas. The less-than-90-day storage areas will be clearly posted and the storage area will be inspected weekly, as required by 40CFR.262 (EPA 1993).

7.3 Waste Characterization

Full suite samples were collected from both drums containing liquid. The liquids will be classified for disposal based on the sample results. The smears will be characterized based on the analytical results of the associated environmental samples.

7.4 Waste Disposal

The drums will remain at the storage areas until the waste is disposed of appropriately. Proper disposal of these liquids will be determined when analytical results are received; proper disposal of the smears will be determined when the environmental sample results are received.

Section 8

8.0 CONCLUSION

The 1994 Phase I RFI sampling at TA-36 is complete except at the following locations:

- PRS 36-001, MDA AA
- PRS 36-002, Sump
- PRS 36-004, Firing Sites (surface water sampling)
- PRS 36-004 (d), Burn Pits

These locations will be completed during the 1995 sampling activities. All 1994 sampling activities were performed in accordance with ER SOPs and the RFI Work Plan. Health and safety monitoring was performed in accordance with the Site-Specific Health and Safety Plan. Decontamination and waste management were conducted in compliance with the Site-Specific Waste Management Plan and the Laboratory's Administrative Requirements.

Section 9

9.0 EXHIBITS

This section contains exhibits that are referenced in the preceding sections but were too large to include with the text.

Exhibit 1

Exhibit 1
Summary of 1994 Sampling at TA-36

PRS	PRS Type	Sample ID	Location ID	Sample Location Selection	Date	Sample Type	Matrix	Sampling Technique	Ending Depth
36-001	MDA AA	AAB2109	36-3144	Biased-Structure	9/28/94	Subsurface	Soil	Split-spoon	216 inches
36-001	MDA AA	AAB1952	36-3125	Biased-Structure	9/30/94	Subsurface	Soil	Split-spoon	84 inches
36-001	MDA AA	AAB1953	36-3125	Biased-Structure	10/3/94	Subsurface	Soil	Split-spoon	120 inches
36-001	MDA AA	AAB1954	36-3125	Biased-Geohydrological	10/3/94	Subsurface	Soil	Split-spoon	168 inches
36-001	MDA AA	AAB1950	36-3126	Biased-Structure	10/6/94	Subsurface	Soil	Split-spoon	48 inches
36-001	MDA AA	AAB1951	36-3126	Biased-Structure	10/6/94	Subsurface	Soil	Split-spoon	48 inches
36-001	MDA AA	AAB1955	36-3126	Biased-Structure	10/6/94	Subsurface	Soil	Split-spoon	96 inches
36-001	MDA AA	AAB1956	36-3126	Biased-Structure	10/11/94	Subsurface	Soil	Split-spoon	120 inches
36-001	MDA AA	AAB1957	36-3126	Biased-Geohydrological	10/11/94	Subsurface	Soil	Split-spoon	264 inches
36-002	Sump	AAB1801	36-3001	Biased-Structure	9/13/94	Subsurface	Soil	Spade/scoop	60 inches
36-002	Sump	AAB1802	36-3002	Biased-Structure	9/14/94	Subsurface	Soil	Spade/scoop	66 inches
36-002	Sump	AAB1803	36-3003	Biased-Structure	9/14/94	Subsurface	Soil	Spade/scoop	78 inches
36-002	Sump	AAB1804	36-3003	Biased-Structure	9/14/94	Subsurface	Soil	Spade/scoop	78 inches
36-002	Sump	AAB1805	36-3004	Biased-Structure	9/14/94	Subsurface	Soil	Spade/scoop	102 inches
36-002	Sump	AAB1806	36-3005	Biased-Structure	9/14/94	Subsurface	Soil	Spade/scoop	114 inches
36-003(a)	Septic Tank	AAB1873	36-3094	Biased-Structure	7/21/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(a)	Septic Tank	AAB1874	36-3095	Biased-Structure	7/21/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(a)	Septic Tank	AAB1875	36-3095	Biased-Structure	7/21/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(a)	Septic Tank	AAB1876	36-3096	Biased-Structure	7/21/94	Subsurface	Liquid	Scoop sampler	N/A
36-003(a)	Septic Tank	AAB1877	36-3097	Biased-Structure	7/21/94	Subsurface	Liquid	Scoop sampler	N/A
36-003(a)	Septic Tank	AAB1878	36-3097	Biased-Structure	7/21/94	Subsurface	Liquid	Scoop sampler	N/A
36-003(a)	Leachfield	AAB1892	36-3052	Biased-Structure	11/18/94	Subsurface	Soil	Split-spoon	38 inches
36-003(a)	Leachfield	AAB1894	36-3052	Biased-Structure	11/18/94	Subsurface	Soil	Split-spoon	40 inches
36-003(a)	Leachfield	AAB1897	36-3053	Biased-Structure	11/14/94	Subsurface	Soil	Split-spoon	32 inches
36-003(a)	Leachfield	AAB1893	36-3053	Biased-Structure	11/14/94	Subsurface	Soil	Split-spoon	32 inches
36-003(a)	Leachfield	AAB1898	36-3053	Biased-Structure	11/14/94	Subsurface	Soil	Split-spoon	42 inches
36-003(a)	Leachfield	AAB1900	36-3054	Biased-Structure	11/15/94	Subsurface	Soil	Split-spoon	32 inches
36-003(a)	Leachfield	AAB1901	36-3054	Biased-Structure	11/15/94	Subsurface	Soil	Split-spoon	38 inches
36-003(a)	Leachfield	AAB1903	36-3055	Biased-Structure	11/15/94	Subsurface	Soil	Split-spoon	30 inches
36-003(a)	Leachfield	AAB1904	36-3055	Biased-Structure	11/15/94	Subsurface	Soil	Split-spoon	40 inches
36-003(a)	Leachfield	AAB1895	36-3055	Biased-Structure	11/15/94	Subsurface	Soil	Split-spoon	40 inches

Exhibit 1
Summary of 1994 Sampling at TA-36 (continued)

PRS	PRS Type	Sample ID	Location ID	Sample Location Selection	Date	Sample Type	Matrix	Sampling Technique	Ending Depth
36-003(a)	Leachfield	AAB1906	36-3056	Biased-Geohydrological	11/17/94	Subsurface	Soil	Split-spoon	60 inches
36-003(a)	Leachfield	AAB1907	36-3056	Biased-Geohydrological	11/17/94	Subsurface	Soil	Split-spoon	72 inches
36-003(a)	Leachfield	AAB1909	36-3057	Biased-Geohydrological	11/18/94	Subsurface	Soil	Split-spoon	72 inches
36-003(a)	Leachfield	AAB1910	36-3057	Biased-Geohydrological	11/18/94	Subsurface	Soil	Split-spoon	84 inches
36-003(b)	Septic Tank	AAB1879	36-3099	Biased-Structure	8/5/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(b)	Septic Tank	AAB1880	36-3100	Biased-Structure	8/5/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(b)	Septic Tank	AAB1881	36-3101	Biased-Structure	8/5/94	Subsurface	Sludge	Scoop sampler	N/A
36-003(b)	Septic Tank	AAB1882	36-3102	Biased-Structure	8/5/94	Subsurface	Liquid	Scoop sampler	N/A
36-003(b)	Septic Tank	AAB1884	36-3101	Biased-Structure	8/5/94	Subsurface	Liquid	Scoop sampler	N/A
36-003(b)	Septic Tank-Outfall	AAB1885	36-3104	Biased-Structure	8/8/94	Surface	Soil	Spade/scoop	6 inches
36-003(b)	Septic Tank-Outfall	AAB1886	36-3104	Biased-Structure	8/8/94	Surface	Soil	Spade/scoop	6 inches
36-003(b)	Septic Tank-Outfall	AAB1887	36-3105	Biased-Structure	8/8/94	Surface	Soil	Spade/scoop	6 inches
36-003(b)	Septic Tank-Outfall	AAB1888	36-3106	Biased-Structure	8/8/94	Surface	Soil	Spade/scoop	6 inches
36-003(b)	Septic Tank-Outfall	AAB1889	36-3107	Biased-Structure	8/8/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1911	36-3108	Biased-Geomorphic	7/14/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1912	36-3108	Biased-Geomorphic	7/14/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1913	36-3109	Biased-Geomorphic	7/14/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1914	36-3110	Biased-Geomorphic	7/14/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1915	36-3111	Biased-Geomorphic	7/14/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1916	36-3112	Biased-Geomorphic	11/21/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1917	36-3113	Biased-Geomorphic	11/21/94	Surface	Soil	Spade/scoop	6 inches
C-36-003	Photo Outfall	AAB1918	36-3108	Biased-Structure	7/25/94	Surface	Liquid	Dipped bottle	N/A
C-36-003	Photo Outfall	AAB1919	36-3108	Biased-Structure	7/25/95	Surface	Liquid	Dipped bottle	N/A
36-004	Firing Sites	AAB1808	36-3070	Biased-Geomorphic	8/22/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1809	36-3071	Biased-Geomorphic	8/22/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1810	36-3072	Biased-Geomorphic	8/22/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1811	36-3073	Biased-Geomorphic	8/22/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1812	36-3074	Biased-Geomorphic	8/11/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1813	36-3075	Biased-Geomorphic	8/11/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1814	36-3076	Biased-Geomorphic	8/11/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1815	36-3077	Biased-Geomorphic	8/11/94	Surface	Soil	Spade/scoop	6 inches

Exhibit 1
Summary of 1994 Sampling at TA-36 (continued)

PRS	PRS Type	Sample ID	Location ID	Sample Location Selection	Date	Sample Type	Matrix	Sampling Technique	Ending Depth
36-004	Firing Sites	AAB1816	36-3078	Biased-Geomorphic	8/12/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1817	36-3078	Biased-Geomorphic	8/12/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1818	36-3079	Biased-Geomorphic	8/12/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1819	36-3080	Biased-Geomorphic	8/12/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1820	36-3081	Biased-Geomorphic	8/12/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1939	36-3115	Biased-Geomorphic	8/16/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1940	36-3116	Biased-Geomorphic	8/16/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1941	36-3117	Biased-Geomorphic	8/16/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1942	36-3118	Biased-Geomorphic	8/16/94	Surface	Soil	Spade/scoop	6 inches
36-004	Firing Sites	AAB1821	36-3082	Biased-Geomorphic	10/17/94	Surface	Liquid	Water station	N/A
36-004	Firing Sites	AAB1822	36-3083	Biased-Geomorphic	10/17/94	Surface	Liquid	Water station	N/A
36-005	Boneyard	AAB1834	36-3018	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1835	36-3018	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1836	36-3019	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1837	36-3020	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1838	36-3021	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1839	36-3022	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1840	36-3023	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1841	36-3024	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1842	36-3025	Biased-Geomorphic	8/3/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1843	36-3026	Biased-Visual	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1852	36-3034	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1853	36-3034	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1854	36-3035	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1855	36-3036	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1856	36-3037	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1857	36-3038	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1858	36-3039	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1859	36-3040	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1860	36-3041	Biased-Structure	7/28/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1861	36-3042	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches

Exhibit 1
Summary of 1994 Sampling at TA-36 (concluded)

PRS	PRS Type	Sample ID	Location ID	Sample Location Selection	Date	Sample Type	Matrix	Sampling Technique	Ending Depth
36-005	Boneyard	AAB1862	36-3042	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1863	36-3043	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1864	36-3044	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1865	36-3045	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1866	36-3046	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1867	36-3047	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1868	36-3058	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1869	36-3059	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1870	36-3050	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1871	36-3050	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches
36-005	Boneyard	AAB1872	36-3051	Random	8/4/94	Surface	Soil	Spade/scoop	6 inches

Exhibit 2

Exhibit 2

Standard Operating Procedures Used During 1994 Sampling Activities at TA-36

STANDARD OPERATING PROCEDURES			
Procedure	**Procedure Title**	**ER**	**Other**
Survey/Sampling Instructions			
Channel Mapping	Geomorphic Characterization	3.08	
Magnetic	General Surface Geophysics	3.02	
Electromagnetic	General Surface Geophysics	3.02	
Radiation	Measurements of Gamma-Ray Fields Using a NaI Detector	6.23	
Explosives	Field Spot Test for Explosives		27.05.011
Hollow-stem Auger Drilling	Drilling Methods and Drill Site Management	4.01	
Surface Soil Sampling/Sediment Sampling from Stream	Spade and Scoop Method for Collection of Soil Samples	6.09	
Surface Water Sampling	Surface Water Sampling	6.13	
Sludge Sampling from Tank	Sediment Material Collection	6.14	
Tuff Sample from Drill Hole	Sample Collection from Split Spoon Samplers and Shelby Tube Samplers	6.24	
General Instructions			
Procedure	**Procedure Title**	**ER**	**Other**
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	
Health and Safety in the Field			
Procedure	**Procedure Title**	**ER**	**Other**
	Guidance on Tailgate Safety Meetings	2.05	
	Radiation Safety and Monitoring for Environmental Restoration	2.01	
	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 Sump	2.15	
	Exposure Monitoring Strategy	2.16	
Waste Management			
Procedure	**Procedure Title**	**ER**	**Other**
Handling of Liquid Wastes	Management of RFI-Generated Waste	1.06	
Handling of Solid Wastes	Management of RFI-Generated Waste	1.06	

Exhibit 3

Exhibit 3

Quality Control Samples Taken During the 1994 Sampling Season

QA/QC Type	Date Collected	Sample Matrix	Related Sample	Sample #
Field Duplicate	07/14/94	Surface soil	AAB1911	AAB1912
Field Duplicate	07/21/94	Sludge/liquid	AAB1874	AAB1875
Field Duplicate	07/21/94	Sludge/liquid	AAB1877	AAB1878
Field Duplicate	07/25/94	Groundwater	AAB1918	AAB1919
Field Duplicate	07/28/94	Surface soil	AAB1852	AAB1853
Field Duplicate	08/03/94	Surface soil	AAB1834	AAB1835
Field Duplicate	08/04/94	Surface soil	AAB1861	AAB1862
Field Duplicate	08/04/94	Surface soil	AAB1870	AAB1871
Field Duplicate	08/05/94	Sludge/liquid	AAB1880	AAB1881
Field Duplicate	08/05/94	Sludge/liquid	AAB1882	AAB1884
Field Duplicate	08/08/94	Surface soil	AAB1885	AAB1886
Field Duplicate	08/12/94	Surface soil	AAB1816	AAB1817
Field Duplicate	09/14/94	Subsurface soil	AAB1803	AAB1804
Field Duplicate	10/06/94	Subsurface soil	AAB1950	AAB1951
Field Duplicate	11/14/94	Subsurface soil	AAB1897	AAB1893
Field Duplicate	11/15/94	Subsurface soil	AAB1904	AAB1895
Performance Evaluation	08/08/94	Soil	—	—
Performance Evaluation	08/12/94	Soil	—	—
Performance Evaluation	09/20/94	Soil	—	—
Equipment Rinsate	11/21/64	Water	—	—

References

REFERENCES

EPA 1989: Environmental Protection Agency, "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1, Soils and Solid Media," 1989.

EPA 1993: 40CFR.262, Standards Applicable to Generators of Hazardous Waste, 1993

ICF KE 1993a: Summary of 1993 Survey Activities at TA-36, OU 1130, 1993

ICF KE 1993b: TA-36 Site-Specific Quality Assurance/Quality Control Plan, 1993.

LANL 1991a: Los Alamos National Laboratory Environmental Restoration Generic Quality Assurance Project Plan, 1991.

LANL 1991b: Los Alamos National Laboratory Administrative Requirement 10-2, "Low-Level Radioactive Solid Waste," 1991.

LANL 1991c: Los Alamos National Laboratory Administrative Requirement 10-8, "Waste Minimization," 1991.

LANL 1992a: Los Alamos National Laboratory No. ER-SOP-01.05, "Field Quality Control Samples," 1992.

LANL 1992b: Los Alamos National Laboratory No. ER-SOP-06.09, "Spade and Scoop Method for Collection of Soil Samples," 1992.

LANL 1992c: Los Alamos National Laboratory No. ER-SOP-06.14, "Sediment Material Collection," 1992.

LANL 1992d: Los Alamos National Laboratory No. ER-SOP-04.01, "Drilling Methods and Drill Site Management," 1992.

LANL 1992e: Los Alamos National Laboratory No. ER-SOP-06.13, "Surface Water Sampling," 1992

LANL 1992f: Los Alamos National Laboratory Administrative Requirement 10-1, "Radioactive Liquid Waste," 1992.

LANL 1992g: Los Alamos National Laboratory No. ER-SOP-01.06, "Management of RFI-Generated Waste," 1992.

LANL 1993a: Los Alamos National Laboratory RFI Work Plan OU 1130, 1993.

LANL 1993b: Los Alamos National Laboratory No. ER-SOP-01.04, "Sample Collection and Field Documentation," 1993.

LANL 1993c: Los Alamos National Laboratory No. ER-SOP-06.24, "Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers," 1993.

LANL 1993d: Los Alamos National Laboratory Administrative Requirement 10-3, "Hazardous and Mixed Waste," 1993.

LANL 1993e: Los Alamos National Laboratory Administrative Requirement 10-9, "Waste Profile Form," 1993.

Appendix 1

APPENDIX 1

FIELD LOG

LOS ALAMOS NATIONAL LABORATORY

ENVIRONMENTAL RESTORATION

FIELD LOG BOOK NO. 111

O.U. 1130 has received the authority from the R.P.F. (Renee Archeluta) to transfer LANL E.R. Field Log Book № 111 to account book S 149, with pre-numbered pages.

July 8, 1994 Michael Henke
Michael Henke

OU 1130 Field Log Book
TA-36 and 18
Field Team Leader: M Henke
Site Safety officer: K McFadden

MICHAEL HENKE Michael Henke MHH

FEB 13

Date; 7/14/94
Author; MICHAEL HENKE
Location; TA-36 PRS-C-36-003
Weather; Clear, calm Temp; ~75°
Personnel;
M. Henke - Field Team Leader
P. Gram - Alt. FTL
K. McFadden - Site Safety Officer
J. Taylor - Radiation Control Technician
N. Ness - ~~Documenter~~ Computer
B. Trujillo - Documenter
J. Bingham - Sampler
V. Hesch - Observer

Text: Arrived at DX-11 access control office 0830. Arrived at TA-36-1, 0855. Began set up of exclusion zone and contamination reduction zone at 0905. 0930 George Marino and Wendall Salas arrive at site. 0945 accessed building 1 to try to turn on water flow to photo-outfall PRS-C-36-003. All plumbing is disconnected however we determined that water poured down the floor drain in room 6 comes out the outfall. Tailgate meeting started at 10:40 SSHASP changes orders were discussed, emergency access, hazards at sample location, level D2 PPE, special equipment, location of First Aid Kit, Fire Extinguisher an Eye

7/14/94 continued:

wash and route to hospital. 11:05 Jeff Bingham exited building 1 area to go to building 48 storage area for sample bottles. 11:10 Jeff Bingham returns to building TA-36-1 area. 11:33 team is dressed out and entering the sampling area. The sample log will contain the sample numbers and collection times. Sample team exits sample area into CRZ 1230. 1241 Jim Kearns DX11 photographer arrives at site, 13:08 Jim Kearns and Mike Henke exit area.

1140 Marino Salas exit area.

7/21/94

1310 WE WILL CONTINUE TO BREAK DOWN SITE AND DO SAMPLE DOCUMENTATION AND PACKAGING CLEAN

1350 SAMPLE DOC/PACKAGING COMPLETED

1045

1345 SITE BREAKDOWN AND CAMP SETUP COMPLETED. WE HAVE CLEARANCE TO DEPART SITE - WE WILL PROCEED TO TA-36 SITE ACCESS CONTROL AND THEN DELIVER SAMPLES TO THE RAD VAN.

1400 DEPART TA-36 SITE ACCESS CONTROL FOR THE RAD VAN

1430 DELIVERED SAMPLES TO RAD VAN

Signature Michael Henke / [illegible]

Bingham
3 storage
m returns
sed out
mple log
times.
1230.
rives at
[redacted]

nd do
conc

1230.

control
down

and vac

7/21/94

Date: 7/21/94
Author: MICHAEL HENKE
Location: TA-36 PRS 36-003 (a)
Weather: P cloudy, calm. Temp 73°
Personnel:
M. Henke - Field Team Leader
P. Gram - Alt. FTL.
K. McFadden - SSO
J. Taylor - RCT
N. Ness - Computer
J. Bingham - Sampler
D. Cordi - Documenter

Text: Arrived at DX-11 access control office 1000. Arrived at TA-36-1, 1030. Began set up of equipment 1040.

1045 MIKE HENKE (FTL) CLEANED MANIFOLD AND TOOK PICTURES OF LATTA MANIFOLD AT BUILDING 1 SEP.

WE WILL SAMPLE THE PRS 36-003(a) SEPTIC TANK TO DAY. - THE SAMPLES WILL BE ATB 1873 THROUGH ATB 1878 INCLUDING 2 WATER SAMPLES AND A DUPLICATE AND 2 SLUDGE SAMPLES AND A DUPLICATE

FIELD WATER QUALITY CONTROL DATA WILL NOT BE COLLECTED DURING PUMPING IN ORDER TO AVOID CONTAMINATING THE INSTRUMENTS

7/21/94 (CONTINUED)

0955 - IT IS KNOWN THAT THIS TANK ~~DOES~~ CONTAINS FLUID AND FLOTTABLES

1100 - WE WILL CONTINUE SITE PREP WORK AND OUTFALL WORK.

1205 NOTE: KEN AND TOM HAVE RECEIVED CALIBRATION TO THEIR HNU ~~AND~~ AND HP INSTRUMENTS

1145 MEET HOME OFFICE SITE TO MEET WITH PEOPLE DEPLOYING THE WIRELESS SECURITY TRANSMITTER

1156 KEN CONDUCTS HIS FIRST GATE MONITOR-
- THIS IS TABLE 7 FROM HIS PLAN.
CHEMICALS W/ USE - ALCONOX, HCL
PPE LEVEL - D.3

1215 Team is dressed out and entering the sampling area. The sample log will contain the sample numbers and collection times.

1220 Sampling begins.
1340 Sampling team exits sampling area to CRZ.

SIGNATURE: ROBERT E. M. GRAY, [signature]

7/21/94 (co
Re
an
Att
Sy
Sy
Sy
wa
no
to
1445 De
1500 ~~1405~~ Ex
1530 Co
Di
1545 De
1610 St
to

7/21/94 (continued)
Regarding "samples from inactive septic systems and lagoons". LANL-ER-SOP-1.03, R1 Attachment C page 12 of 15. OU 1130 RFI workplan 5.3.2.1.1 (page 5-27) states that, "this sanitary system was recently disconnected from the septic system and connected to the laboratory's sanitary waste line". Based on the RFI workplan for OU 1130 no new waste or new pathogens have been added to this septic system, therefore the samples are not ~~infectious~~. infectious. 8/5/94 M Henke

1445 Decon crew exits, scanning completed
1500 ~~1405~~ Begin takedown of exclusion zone and CRZ
1530 Complete site breakdown and waste storage. Depart site to access control at DX-11.
1545 Depart TA-36.
1610 Store samples at ICFKE to be delivered to rad van 7/22/94 AM.

Signature: MICHAEL HENKE Michael Henke

Date 7/25/94
Author; MICHAEL HENKE
LOCATION; TA-36 PRS C-36003 (water)
Weather; Clear, calm Temp 71°
Personnel;
M. Henke - Field Team Leader
P. Gram - Alt. FTL
K. McFadden - SSO
J. Taylor - RCT
N. Ness - Computer
B. Trujillo - Documenter
J. Bingham - Sampler
V. Hesch - Escort
C. Abeyta - Runner

Text; Arrive DX-11 access control office 0920. Arrive at TA-36-1 0940, begin setup of exclusion zone and CRZ at 0945.
. 0955 V Hesch leaves area to escort C. Abeyta in with water test equipment and pump.
1035 P. Gram calibrates water quality instruments.
1039 Tailgate meeting started.
1046 End tailgate meeting.
1050 Team enters exclusion zone.
The sample log will contain the sample numbers and sample collection times as well a water quality data and flow rate.
Signature: MICHAEL HENKE Michael Henke

7/25/94
1110
1115
1125
1146
1150
1155
1205
1240
1255
1305

	7/25/94	continued.
	1110 ~~1115~~	samples taken. - metals.
(water)	1115	Water quality data taken.
	1125	Team exits exclusion zone.
	1146	Decon completed.
	1150	Decon person exits CRZ.
	1155	start takedown of CRZ.
	1205	CRZ dismantled.
	1210	Ryder truck loaded - crew departs TA-36-1 area
	1255	Arrive DX-11 access control office
	1305	Leave DX-11 access control to exit site

1 office
im setup
45.
t C. Abeyta
ump.
ruments.

s and
quality

Signature: Michael Henke

Blank
11/16/94
CM Henke

1205
1155
1125
1115

Date 7/28/94
Author; MICHAEL HENKE / V. HESCH
Location; TA-36 PRS 36-005
Weather; clear, calm Temp; 78°
Personnel;
M. Henke - Field Team Leader
P. Gram - Alt. FTL.
K. McFadden - SSO
J. Taylor - RCT
N. Ness - Computer
B. Trujillo - Sampler
V. Hesch - Escort/runner
D. Cordi - Escort - rad survey
M. Powell - Rad survey

Text: Arrived at DX-11 access control offic
0935. Arrived at TA-36-KAPPA-7 0950. Began
set up of equipment at 1010.

1115 Tailgate meeting started.
1125 Tailgate meeting ended.
1155 SAMPLING TEAM ENTERED CRZ & EXCLUSION ZONE TO COMMENCE SAMPLING AT "BONE-YARD", FOR RAD SCREENING.
1205 SAMPLING TEAM FOR ANALYTICAL SAMPLES ENTERED CRZ & EXCLUSION ZONE
SIGNATURE: [illegible]

7/28/94 CON'T.

1342 ANALYTICAL SAMPLING TEAM EXITED EXCLUSION ZONE & ENTERED CRZ TO REST & GET OUT OF RAIN.

1413 ANALYTICAL SAMPLING TEAM WENT BACK OUT TO SAMPLING AREA TO CONTINUE SAMPLING PRS 36-005

1500 SAMPLING CREW FINISHED SAMPLING OPERATION, RETURNED TO CRZ.

1505 STARTING DECONING SAMPLING EQUIPMENT & SAMPLES.

1525 STARTED BREAKING DOWN EXCLUSION & CRZ'S.

Note: Samples were surface soil samples in areas showing evidence of staining or use.

0952
1002
1010
1032
1155
1240

SIGNATURE: Walter Veach

Date 8/3/94
Author; MICHAEL HENKE
Location; TA-36 - PRS 36-005
Weather; clear, calm Temp 77°F
Personnel;
M. Henke - FTL
P. Gram - Alt. FTL
K. McFadden - SSO
J. Taylor - RCT
N. Ness - Computer
B. Trujillo - Sampler
J. Bingham - Sampler
C. Abeyta - Runner
D. Cordi - Escort - rad survey
M. Powell - Rad survey

Text; Arrive at DX-11 access controll office .0830. Arrive at TA36-KAPPA-7 0900. Began equipment set up 0900.

0952 Tailgate meeting started.
1002 Tailgate meeting ended.
1010 D. Cordi and M Powell start rad survey work. Approximately 15% of Boneyard needs rad survey
1032 Sampling team enters exclusion zone from CRZ. Team entered CRZ to suit up at 1010
1155 Check temp 82°F
1240 Sampling team returns to CRZ.

Signature: Michael Henke

8/3/94 continued

Surface soil samples from the Boneyard drainage channel were taken. Samples numbers 1834 to 1842. (8 samples plus 1 duplicate)

1250 C Abeyta entered CRZ to do decontamination

1300 Sampling team exits CRZ.

1346 C Abeyta leaves CRZ - Decontamination complet

1349 Begin dismantling Exclusion Zone and CRZ.

1407 Exclusion zone and CRZ dismantled.

1445 Support zone dismantled, all equipment loaded

Depart Boneyard area.

1500 Depart DX-11 access control.

0840

0855

0920

0955

1005

8/4/94 MH 1025

255 ~~1055~~

8/4/94 MH

255 ~~1055~~

8/4/94 MH

1330 ~~1300~~

Signature: Michael Henke

Date 8/4/94
Author; MICHAEL HENKE
Location; TA-36 PRS 36-005
Weather; clear, calm Temp. 76°F at 0951
Personnel;
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
N Ness - computer
B Trujillo - Sampler
J Bingham - Sampler
D Cordi - Escort

Text; Leave Kaiser at 0815 for TA-36.
0840 Leave DX-11 access control.
0855 Arrive TA-36 - KAPPA-7 Begin setup.
0920 Support zone, CRZ and Exclusion Zone setup.
0955 Start tailgate safety meeting.
1005 Complete tailgate safety meeting
8/4/94 MH 1025 Sampling team enters exclusion zone.
1255 ~~1055~~ 8/4/94 MH Sampling team exits exclusion zone and CRZ.
1255 ~~1055~~ 8/4/94 MH D. Cordi enters CRZ to perform decontamination.
1330 ~~1300~~ D Cordi exits CRZ.
Signature: [illegible]

8/4/94 cont.

1330 Sampling team re-enters CRZ
1336 Sampling team enters Exclusion Zone.
1435 Sampling team exits Exclusion Zone
1435 D Cordi enters CRZ to perform decontamination
1445 Sampling team leaves CRZ
1520 D Cordi exits CRZ.

Boneyard samples AAB 1861 thru 1872 and AAB1843. Surface soil samples, to be analyzed for Alpha, Beta, Gamma (Rad Van), Total Uranium, metals, VOCs, SVOCs, H.E. and Gamma spec. 13 sample locations total.

1545 Team departs TA-36-KAPPA-7

0905
0915
0930
0940
0950

0957
1018 ~~1030~~ MW 8/5/94
1045

1058
1100 ~~1110~~ 8/5/94 MW Henke

Signature: Michael Henke

[redacted]

[redacted]

8/5/94.
Author; MICHAEL HENKE
Location; TA-36-55 (I.J. Site) PRS-36-003(b)
Weather; Partly Cloudy. Temp 80°F, light wind
Personnel;
M. Henke - FTL
P. Gram - Alt. FTL
K. McFadden - SSO
J. Taylor - RCT
N. Ness - computer
B. Trujillo - sampler
R. Cordi - Escort/decon.

Text: Leave Kaiser at 0845 for TA-36.

0905 Arrive at DX-11 access control.
0915 Leave DX-11 access control.
0930 Arrive at TA-36-55 (I.J. Site)
0940 Begin setup of Exclusion Zone and CRZ
0950 Initial septic tank atmosphere monitoring showed no organic vapors above background, 0% LEL and 21% O^2.
0957 Exclusion Zone and CRZ setup completed.
1018 ~~1030~~ MH 8/5/94 Conduct tailgate safety meeting.
1045 Sampling team enters CRZ and dresses for sampling PPE level D3
1058 Sampling team enters exclusion zone.
1100 ~~1110~~ 8/5/94 MH/Henke Perform Field Spot Test for explosives. - Negative.
Signature [illegible]

8/5/94 cont.

1207 Sampling team exits Exclusion Zone.

1220 Sampling team exits CRZ with the exception of P. Gram who is performing decontamination

1305 P. Gram exits CRZ.

1310 MIKE HOWLE DEPARTS CAMP TO GO TO OU1130 AUDIT CLOSE OUT MEETING SITE BREAKDOWN WORK CONTINUES

1315 SAMPLING DATA SUMMARY FOR PDS 36-003(b)

SAMPLE AAB#	SITE ID #	COLLECTION TIM
1879	36-3099	
1880	36-3100	
1881	36-3100	
(1881 IS FIELD DUPLICATE OF 1880)		
1882	36-3101	
1883	——	NOT COLLECTED
1884	36-3101	
(1884 IS FIELD DUPLICATE OF 1882)		

SAMPLE AAB 1883 WAS NOT COLLECTED DUE TO THE LACK OF SLUDGE ON THE BOTTOM OF THE TANK; ONLY TWO SLUDGE SAMPLES COULD BE RECOVERED (ONE PRIMARY AND ONE DUPLICATE SAMPLE)

1325 ALL SAMPLES FROM THE SEPTIC TANK WILL BE MARKED →

Peter F. W. Gram

1325 (10

1330

1331

1344

1345

1355

1325 (CONT.) AS ~~SAFETY~~ 8/5/94 POTENTIALLY INFECTIOUS IN ACCORDANCE WITH LANL-ER-SOP-1.03, R1, ATTACHMENT C PAGE 12 OF 15 DUE TO THE LACK OF CONCLUSIVE INFORMATION ON THE STATUS OF THE I-J SITE SEPTIC SYSTEM.-

1330 NOTE: ALL PRS 36-003(b) SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE ADDENDUM TO THE FIELD IMPLEMENTATION PLAN CONCERNING SAMPLING FROM TANKS. TWO SAMPLES ERRONEOUSLY WERE NOT COLLECTED FOLLOWING THE COLLUMBIA SOP.-

1331 DEPART I-J SITE TO GO TO THE R-48 SAMPLING STATION MOA AND DISPOSE OF ALL GENERATED WASTES.- 8/5/94

1344 DEPART ~~SAFETY~~ 8/5/94 R-48 FOR SITE ACCESS CONTROL OFFICE.-

1345 NOTE: ALL PRS 36-003(b) SAMPLES WILL BE ANALYZED FOR METALS, U TOTAL, α, β, γ (AND VAN), SVOCs, AND VOCs.-

1355 DEPART SITE ACCESS OFFICE - WE WILL GO TO TA-33

Signature [illegible]

~~1355~~ 8/1/94
1355 (CONT) TO PRESERVE SAMPLE CONTAINERS AND FLOW
DESTROY SAMPLES TO THE RAD VAN AND CST-9

0835
0900
0915
0940

1015
1042
1046
1050
1055
1102

Signature: Michael Hemke

8/8/94
Author; MICHAEL HENKE
Location; TA 36-55 (I.J. Site) PRS-36-003 (b)
Weather; High lightclouds Temp. 76°F
Personnel;
M Henke - FTL
P Gram - Alt FTL - Sampler
K McFadden - SSO
J Taylor - RCT
N Ness - computer
J Bingham - Sampler
B Trujillo - Documenter
R Cordi - Escort/decon.

Text:

0835 Depart Kaiser
0900 Arrive DX-11 access control
0915 Arrive TA36-55 (I.J. Site
0940 Investigate sample area to determine sample locations since outfall pipe end could not be found.
1015 Set up CRZ and Exclusion zone.
1042 CRZ and exclusion zone set up completed.
1046 Start tailgate safety meeting.
1050 End tailgate safety meeting.
1055 Sampling team enters CRZ.
1102 Sampling team enters exclusion Zone.

Signature; Michael Henke

8/8/94 cont.

1203 Sampling team exits exclusion zone. 1318 cont

1219 Sampling team exits CRZ, except J Taylor.

1220 R. Cordi enters CRZ to perform decontamination.

1230 J. Taylor exits CRZ.

1256 Exclusion zone size reduced to CRZ to allow personnel to ~~survey locations of~~ MAP sample locations and allow decontamination to continue in CRZ. P. Gram and B Trujillo perform sample location ~~survey~~ mapping.

1308 R Cordi ~~exc~~ exits CRZ. Sample decon complete

1309 Begin takedown of CRZ.

1316 P Gram and B Trujillo return from mapping sample locations

1318 Sample data summary for PRS-36-003 (b)

Sample AAB #	Site I.D. #	Collection time
1885	36-3104	
1886 dup of 1885	36-3104	
1887	36-3105	1345
1888	36-3106	
1889	36-3107	1345

Site I.D. # 36-3104 (AAB 1885 & 1886) are located in relation to surveyed corner stake 3143-C-5. X = -25 ft.
Y = +37 ft.

Signature: Michael C Henlee

8/8/94 cont.

1318 cont Site I.D. # 36-3105 (AAB 1887) is located in relation to surveyed corner stake 3143-C-5. X = -33ft.
Y = +15ft.

Site I.D. # 36-3106 (AAB 1888) is located in relation to surveyed corner state 3143-C-5. X = -46ft,
Y = 0ft

Site I.D. # 36-3107 (AAB 1889) is located in relation to surveyed corner stake 3141-A-5. X = +25ft
Y = -33ft

All of the above listed samples are surface soil samples. All samples will be analyzed for metals (U total), mercury, Alpha, Beta, Gamma, (Rad Van) VOCs, and SVOCs.

mrt 8/8/94

1345 Site dismantled and loaded in Ryder truck. Personnel rad. monitored. Departing I.J. site for DX-11 access control.

1345 In the sampling area (downstream from the I.J. Septic tank) Rad readings (Beta Gamma) are slightly elevated. On average approximately 175cpm. There were no elevated organic vapor readings.

Signature [illegible]

8/8/94 cont.

1318 cont Site I.D. # 36-3105 (AAB 1887) is located in relation to surveyed corner stake 3143-C-5. X = -33ft.
Y = +15ft.

Site I.D. # 36-3106 (AAB 1888) is located in relation to surveyed corner state 3143-C-5. X = -46ft,
Y = 0ft

Site I.D. # 36-3107 (AAB 1889) is located in relation to surveyed corner stake 3141-A-5. X = +25ft
Y = -33ft

All of the above listed samples are surface soil samples. All samples will be analyzed for metals (U total), mercury, Alpha, Beta, Gamma, (Rad Van) VOCs, and SVOCs.

1345 Site dismantled and loaded in Ryder truck. Personnel rad. monitored. Departing I.J. site for DX-11 access control.

1345 In the sampling area (downstream from the I.J. Septic tank) Rad readings (Beta Gamma) are slightly elevated. On average approximately 175cpm. There were no elevated organic vapor readings.

Signature [illegible]

8/10/94
Author; Michael Henke
Location; TA-36-83 MOE Magazine used as a staging area to reach Fence and Potrillo canyons to select sample locations. NO SAMPLES WERE TAKEN.
Weather; high light clouds Temp ~ 80°F.
Personnel;
M Henke - FTL
P Gram - Alt. FTL
K McFadden - SSO
J Taylor - RCT
N Ness
B Trujillo
J Bingham
R Cordi
Text;
0835 Leave Kaiser
0905 Arrive DX-11 access control
0912 Arrive Bldg 48 - store ice.
0939 Arrive MOE Magazine area.
0954 Enter Fence canyon and select 4 sample locations between the Mine hazard circle/Fence canyon intersection and the lower Slobbovia hazard circle/Fence canyon intersection, in the canyon bottom.
1145 Exit Fence canyon.
Signature: Michael Henke

1240 E
1420 L
1440 L

5/10/94 cont.

1240 Enter Potrillo canyon and select 4 sample locations between the Meenie hazard circle/ Potrillo canyon intersection and the Lower Slobbovia hazard circle/ Potrillo canyon intersection, in the canyon bottom.

1420 Exit Potrillo canyon.

1440 Leave DX-11 access control.

Signature [illegible]

8/11/94
Author; MICHAEL HENKE
Location; TA-36 - MOE Magazine area used as a staging area to set up CRZ and exclusion zone for PRS-36-004 (Fence canyon)
Weather; Mostly cloudy 30% chance of rain.
Temp: 70°F No wind.
Personnel; MHH 8/11/94
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
N Ness - computer
J Bingham - sampler
B Trujillo - documenter
R Cordi - escort/decon.
Text
0825 Leave Kaiser
0850 Arrive DX-11 access control
0905 Arrive TA-36 MOE Magazine area. Start set up of CRZ and exclusion zones.
1000 Start tailgate safety meeting.
1007 Finish tailgate safety meeting.
1020 Sampling team
1215 Sampling team exits exclusion zone, to CRZ.
1222 Sampling Team exits CRZ
1223 R. Cordi enters CRZ to perform decontamination.

1315
1916
1430

8/11/94 con't.

1315 Decon completed. CRZ dismantled. Crew moves to ~~DX~~ Bldg 48 to prepare computer generated labels and replenish supplies. MH 8/11/94

1416 Leave Bldg 48 for DX-11 access control.

1430 Leave DX-11 access control.

Sample summary data for Fence Canyon PRS-36-004 (JS) MH 8/11/94

AAB#	Site I.D. #	Collection time
1812	36-3074	
1813	36-3075	
1814	36-3076	
1815	36-3077	

All samples will be analyzed for Alpha, Beta, Gamma (Rad Van), Total Uranium, Plutonium, Metals, Mercury, SVOCs, VOCs, and HE.

He spot test was performed at all sample locations with negative results.

No elevated rad or organic vapor readings at any sample location.

Signature: Michael Hawke

20

8/12/94
Author; MICHAEL HENKE
Location; Potrillo canyon PRS-36-004
Weather; clear, light wind. Temp. 76°F.
Personnel;
M Henke - FTL.
P Gram - Alt. FTL.
K McFadden - SSO.
J Taylor - RCT.
N Ness - computer
J Bingham - ~~sampler~~ documenter.
R Cordi - escort/decon. Sampler.

Text

0815 Leave Kaiser
0855 ~~0845~~ Arrive DX-11 access control.
1000 Arrive at potrillo canyon general sampling area. This is a remote area and required off road travel to be reached. Begin set up of CRZ and Exclusion zone.
1040 ~~1028~~ Start tailgate safety meeting.
1043 End tailgate safety meeting. Sampling team enters CRZ and dresses in level D2 protection.
1046 Sampling team enters exclusion zone.
1152 Sampling team exits exclusion zone.
1203 Sampling team exits CRZ. N. Ness enters CRZ to perform decontamination.
1245 Decontamination completed. N. Ness

Signature: Michael Henke

1305

1335

1340

8/12/94 cont.
leaves CRZ. Take down CRZ and load into Ryder truck.

1305 Depart general sample location for TA-36-48. Stop at paved road to Rad monitor.

1335 ~~Arrive at TA-36-48~~ Radiation monitor vehicles. No above background results. Depart on paved road to TA-36-48.

1340 Arrive at TA-36-48. Generate computer data. Store waste in satellite storage area.

Sample summary for Potrillo canyon
PRS-36-004

AAB #	Site I.D. #	Collection time
1816	36-3078	
1817	36-3078 (dup of 1816)	
1818	36-3079	
1819	36-3080	
1820	36-3081	

All of the above listed samples are surface soil samples. All Alpha, Beta, Gamma (Rad Van), Total Uranium, Plutonium, Metals, Mercury, SVOCs, VOCs and HE.

HE spot test was performed at each sample location with negative results.

There were no elevated Radiation or organic vapor readings at any sample location.

Signature [illegible]

8/12/94 cont.
We collected our second Performance Evaluation Sample (AAB-1934) consisting of a rad spiked soil matrix prepared I.N.E.L. and a metals spiked soil matrix prepared by Inorganic Ventures, Lot #3.
1435 Depart TA-36-48.
1445 Depart DX-11 access control.

0820
0840
0905
0940

1000
1030
1035
1045

1151

Signature: Michael Henke

[redacted]

...ice
...nsisting
...ered
...matrix
...t #3.

8/16/94
Author; MICHAEL HENKE
Location; Potrillo canyon - PRS-36-004 (below Lower Slobbovia)
Weather; clear, light wind, Temp 72°
Personnel;
M Henke - FTL
P Gram - AH. FTL.
K McFadden - SSO
J Taylor - RCT
N Ness - Computer
J Bingham - sampler
B Trujillo - documenter
R Cortez - escort/decon
R Stamb - Alt SSO

Text:

0820 Depart Kaiser
0840 Arrive DX-11 access control
0905 Arrive Lower Slobbovia firing site.
0940 Arrive at Lower Slobbovia/Potrillo canyon hazard circle intersection.
1000 Begin setup of CRZ and exclusion zone.
1030 Begin tailgate safety meeting.
1035 End tailgate safety meeting.
1045 Sampling team enters Exclusion zone, departs to collect samples.
1151 Sampling team returns to CRZ.

Signature: [illegible]

5/10/94 cont.

1200 N. Ness enters CRZ to perform decon.

1205 Sampling team exits CRZ.

1227 N. NESS EXITS CRZ. DECON. FINISHED

1230 BEGIN TO TAKE DOWN CRZ

1245 CRZ TAKEN DOWN AND PACKED

1250 Depart sampling area.

1320 Arrive at TA-36-48 after radiation monitoring vehicles and personnel at Lower Slobbovia firing site area.

1325 Store waste in TA-36-48 satellite storage area.

Sample summary for Potrillo Canyon - PRS-36-004 (below lower slobbovia)

AAB #	Site I.D. #	Collection time
1939	3115	
1940	3116	
1941	3117	
1942	3118	

All of the above listed samples are surface soil samples.

All samples will be analyzed for Alpha, Beta, Gamma, (Rad. Vam) Total Uranium, Plutonium, Metals, Mercury, SVOCs, VOCs and HE.

HE spot test was performed at each sample location with negative results.

There were no elevated radiation or organic readings at any sample location.

Signature: Michael Heube

1405

1415

8/16/94 cont.

1405 Depart TA-36-A8 for DX-11 access control.

1415 Depart DX-11 access control.

Signature:

8/22/94
Author; MICHAEL HENKE
Location; Water Canyon, PRS-36-004,
(below Minie Hazard circle)
Weather; clear, light wind. Temp 72°
Personnel;
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
J Bingham - Sampler MH 8/22/94
B Trujillo - ~~Decontaminator~~ Decontamination.
C Acoyta - Runner
Text:
0800 M Henke picks up Water Canyon gate key at DX-DO.
0805 M Henke departs DX-DO for Water canyon to meet rest of crew.
0840 Crew arrives at Water canyon gate.
0910 Crew arrives at general sample area and begins selection of sample location.
0945 Sample locations selected and marked with flags. Begin set up of CRZ and exclusion zone. Prepare sample collection bottles etc.
1032 Start tailgate safety meeting.
1038 End tailgate safety meeting. Sampling-team enters CRZ.
Signature Michael Henke

1045 Sa
1214 Sa
1230 Sa
1232 R
1325 D
1330 D
1405 D
1450

8/22/94 cont.

1045 Sample team enters exclusion zone.

1214 Sample team returns to CRZ.

1230 Sample team exits CRZ

1232 B. Trujillo enters CRZ to perform decontamination of samples.

1325 Decontamination complete. B Trujillo exits CRZ. Dismantle CRZ and load into Ryder Truck.

1330 Depart general sample location

1405 Depart lower end of Water canyon. Travel to Kaiser to generate sample labels and label samples.

1450 Arrive Kaiser. (We were caught in a road-block at TA-18)

Sample summary for Water Canyon - FRS-36-004 (below Minie Hazard Circle).

	AAB#	Site I.D.#	Collection time
MH 8/22/94	~~1821~~ 1808	36-3070	1100
MH 8/22/94	~~1822~~ 1809	36-3071	
MH 8/22/94	~~1823~~ MH 8/22/94		
MH 8/22/94	~~1823~~ 1810	36-3072	
MH 8/22/94	~~1824~~ 1811	36-3073	1200

All of the above samples are surface soil samples.

All samples will be analyzed for Alpha, Beta, Gamma, (Rad Van), Total Uranium, Plutonium,

Signature: [illegible]

8/22/94 con't.
Metals, Mercury, SVOCs, VOCs and HE.
HE spot test was performed at each sample location with negative results.
There were no elevated radiation or organic readings at any sample location
Sample numbers originally listed (1821 thru 1824) were for liquid samples, replacement sample numbers are soil samples (1808 thru 1811).
Waste was taken to Kaiser to generate appropriate labels and will be removed to the satellite storage area at TA-36-48.
On 8/18/94 M Henke spoke with R Travis of BUS ~~Ø~~ MH 6 regarding transport of potentially hazardous waste from lower Water canyon to our satellite storage area at TA-36-48. 1030 1115
Because any radioactivity present will be lower than regulated by DOT and we perform an explosives field spot test to screen for explosives, R Travis says there is no problem with moving our potentially hazardous waste on a public access highway. 1200 1250 1257 1310
1545 Samples depart Kaiser. 1329

Signature Michael Henke

HE.
n
s.

location
621 thru
cement
stars

ed to
48.
Travis of
potentially
canyon
A-36-48.
will be
we
st to
There is
ntially
ess

9/13/94
Author; MICHAEL HENKE
Location; PKS-36-002, Sump (Near TA36-48)
Weather; Partly cloudy. Temp 74°. Calm.
Personnel:
M Henke - FTL
P Gram - Alt FTL - ~~sampler~~ MH 9/13/94
K McFadden - SSO
J Taylor - RCT
J Bingham - sampler
B Trujillo - documenter
N Ness - computer
R Cordi - decontamination
A Coriz - Backhoe operator.
Text:

1030 sign in at DX-11 access control.
1115 Arrive at TA-36-48 and begin visual survey of sump area and organization of equipment.
1200 Begin set up of contamination reduction zone and positioning of equipment
1256 CRZ and exclusion zones established. Backhoe and steam cleaner positioned.
1257 Begin tailgate safety meeting.
1310 End tailgate safety meeting. Crew enters CRZ and begins dressing.
1324 Crew enters exclusion zone. Begin excavation with backhoe. Field spot test for explosives
Signature: [illegible]

9/13/94 continued

1329 was negative.

1405 First section of sump liner (corrugated pipe) removed.

1416 First sample taken just below sump inlet pipe, approximately 5 feet below surface of ground level. This is approximately 1 foot below inlet pipe. Explosives spot test was taken with negative results.

1452 Sampling team exits ~~CRZ~~ MM 9/13/94 exclusion zone, enters CRZ. Excavation covered with 4X4 timbers supporting aluminum grating

1510 All personnell out of CRZ.

1520 Excavated material covered with tarp. Excavation covered with plastic.

1539 Secured site and departed for DX-11 access control.

1549 Depart DX-11 access control.

0850

0910

0946

0953

0957

1007

Signature: Michael Hewke

ed pipe)

ump inlet
rface of
1 foot below
taken

, enters
numbers

crp.

access

9/19/94
Author; MICHAEL HENKE
Location; PRS-36-002. Sump (Near TA36-48)
Weather; Partly cloudy. Temp 66° Calm
Personnel;
M Henke - FTL
P Gram - Alt. FTL
K McFadden - SSO
J Taylor - RCT
J Bingham - Sampler
B Trujillo - Documenter
N Ness - computer
K Cordi - decontamination/photographer
A Coriz - backhoe operator
C Abeyta - runner
Text;

0850 Sign in at DX-11 access control.
0910 Arrive at TA36-48 and begin set up and preparation to continue excavation.
0946 Begin tailgate safety meeting.
0953 Complete tailgate safety meeting.
CRZ and exclusion zone were established 9/13/94 and left set up overnight.
0957 Sampling team enters CRZ and begins donning PPE.
1007 Sampling team enters exclusion zone and uncovers excavation and excavated material in preparation for continuing excavation.
Signature: Michael Henke

9/14/94 continued.

1012 Continue excavation.

1017 End of inlet pipe to sump (~4" vitrified clay pipe) approximately 2 feet long is removed from excavation. Explosives Field Spot Tests were performed on sample material from the area at the end of the inlet pipe where it entered the sump and on material from the inside of the end of the vitrified pipe. Both samples were negative for the Explosives Field Spot test. The inlet pipe was approximately 6 1/2 feet below grade.

1205 Excavation was completed to soil tuff interface at 9 1/2 feet. Not all gravel was removed but it will be if samples come back with positive results. Explosives Field Spot Test was performed with negative results.

1337 Sampling team exits CRZ. Decon backhoe.

1410 Backhoe removed from exclusion zone. Culvert from sump and inlet pipe decontaminated prior to taking radiation survey swipes.

1457 Decontamination completed.

1530 Depart TA36-40 for DX-11 access control.

1541 Arrive DX-11 access control (Backhoe).

1545 Leave DX-11 access control.

Sample summary for PRS-36-002. (Sump) Including 1 sample from 9/13/94

Signature;

Date/Time	
9/13/94	
9/14/94	
9/14/94	
9/14/94	
9/14/94	
9/14/94	

Fied cla
) is rem
ld Spo
materia
nlet pip
n mater
vitrifi
for th
let pip
grade
interface
ved but
itive resu
med wi

backhoe
one.
recontam
es.

ntrol

up)

9/14/94 continued.

AAB #	Site I.D. #	Collection time
1801	36-3001	1419
1802	36-3002	1019
1803	36-3003	1039
1804	36-3003	1039
1805	36-3004	1151
1806	36-3005	1210

All of the above samples are subsurface soil samples.
All samples will be analyzed for Alpha, Beta, Gamma, (Rad Van), Total Uranium, Metals, Mercury, SVOCs, VOCs and HE.
There were no elevated radiation or organic readings at any sample location.

Signature: [illegible]

9/20/94
Author; MICHAEL HENKE
Location; Potrillo canyon, PRS-36-004
Weather; High light clouds, wind 3-5mph. Temp.
Personnel;
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
N Ness - Computer
J Bingham -
B Trujillo -
R Cordi

Photo #10

Photo #11

1150

Text:

0920 Arrive at DX-11 access control.

0945 Arrive at Potrillo canyon general sampling area. This is a remote area that requires off road travel to be reached. Begin setup of CRZ and Exclusion zones.

1205

1215

1022 Begin tailgate safety meeting.

1029 End tailgate safety meeting

1230

1030 Team enters CRZ and dons PPE.

1040 Team exits CRZ to exclusion zone. The team will not take samples; however they will place 2 liter poly bottles with screened openings in stream bed to collect water for water samples.

1255

Roy Lucht was contacted to discuss digging in

Signature: Michael Henke

9/20/94 continued.

the stream bed and gave his o.k. and that of the explosives review committee to dig with a shovel. We will perform an explosives field spot test at each location. 3-2 liter poly bottles will be buried at each location for future water sampling.

Photo #10 Photos taken at location 36-3093, 1130 (time) Top 2" of soil ~~spread~~ MM 9/20/94 spread on plastic and HE spot test being performed.

Photo #11 2 liter poly bottles in place in stream bed.

1150 Team exits CRZ, to support zone

Location summary for locating water collection bottles.

Sample collection bottles are identified by stake numbers 36-3090, 36-3091, 36-3092 and 36-3093.

1205 Dismantle exclusion zone and CRZ

1215 Depart Potrillo canyon general sampling area for lower Potrillo canyon general sampling area.

1230 Arrive at lower Potrillo canyon general sampling area and begin setup of CRZ and exclusion zones. We will not do another tailgate safety meeting, this mornings meeting applies to this sight.

1255 Team exits CRZ to exclusion zone. The team will not take samples; however they will place 2 liter poly bottles with screened openings in the stream

Signature

9/21/94
Author; MICHAEL HENKE
Location; TA-36 - MOE Magazine used as a staging area to set up CRZ and exclusion zone for PRS-36-004 (Fence Canyon)
Weather; Clear with distant high clouds. Up to 30% chance of rain predicted. No wind. Temp. 65°
Personnel;
M. Henke - FTL
P. Gram - Alt FTL
J. Taylor - RCT
K. McFadden - SSO
N. Ness - computer
J Bingham - FIELD
B Trujillo - FIELD
R Cordi - PHOTOGRAPHER
C Abeyta - ASSIST
Text;
0850 Arrive at DX-11 access control
0910 Arrive at MOE magazine area
0915 Begin set up of CRZ and exclusion zone.
0950 Begin tailgate safety meeting.
0955 Complete tailgate safety meeting. Team enters CRZ.
1000 Team departs CRZ. The team will not take samples; however they will place 2 liter poly bottles with screened openings in the dry stream bed
Signature: Michael Henke

9/21/94 continued

to collect water for future water samples. Roy Lucht was contacted to discuss digging in the dry stream bed with a shovel. He gave his OK. and the O.K. of the explosive review committee. We will perform an explosives field spot test at each location. Sample collection bottle locations are identified by stake numbers 36-3086, 36-3087, 36-3088 and 36-3089.

1194 Crew returns to CRZ from setting sample collecting bottles.

1220 Crew out of CRZ. Decontamination completed. Begin dismantling exclusion zone and CRZ.

1243 Arrive at TA36-48 to store waste.

1304 Depart TA-36-48 for DX-11 access control.

1311 Arrive at DX-11 access control.

1318 Depart DX-11 access control.

Explosives field spot tests were performed at each location with negative results.

Signature, Michael Hewke

samples.
s digging
He gave
review
xplosives
mple
ntified by
3088 and

mple

mpleted.
nd CRZ.

ol.

rformed at
its.

9/22/94

AUTHOR: RICHARD CORDI

LOCATION: LOWER WATER CANYON TO INSTALL WATER COLLECTION POLY BOTTLES IN STREAM BED. PRS 36-004 AGGREGATE.

WEATHER: CLEAR, COOL, WINDY. COLD FRONT IS REPORTEDLY TO PASS THRU SOMETIME TODAY. TEMP. 60°F

PERSONNEL:

R. CORDI – FTL
P. GRAM – ALT. FTL
J. TAYLOR – RCT
K. McFADDEN – SSO
J. BINGHAM – TEAM MEMBER
B. TRUJILLO – TEAM MEMBER
N. NESS – RECORDS

TEXT:

0915 ARRIVED AT DX-DO TO OBTAIN KEY TO WATER CANYON

1030 ARRIVED WATER CANYON AND SET UP CRZ AND EXCLUSION ZONES.

1100 BROKE FOR LUNCH BEFORE ENTERING EXCLUSION ZONE TO INSTALL COLLECTION BOTTLES.

1120 BEGIN TAILGATE SAFETY MEETING.

CHEMICAL – HE RESIDUALS, Ba, Be, Pb, Hg
PHYSICAL – HE, SLIPS/TRIPS/FALLS, BIOLOGICAL
RADIOACTIVE – DEPLETED URANIUM
PPE – LEVEL D.2

SIGNATURE: Richard Cordi

9/22/94 CONTINUED

1125 COMPLETE TAILGATE SAFETY MEETING. TEAM ENTERS CRZ.

1132 TEAM LEAVES CRZ. THE TEAM WILL NOT TAKE SAMPLES BUT WILL INSTALL 2 LITER POLY BOTTLES WITH SCREEN OVER OPENINGS IN THE DRY STREAM BED. THIS STREAM BED IS MOSTLY LARGE STONES AND COBBLES. IT IS SOMEWHAT DIFFICULT SINKING THE BOTTLES TO PROPER DEPTH. THE TEAM WILL PERFORM AN EXPLOSIVES FIELD SPOT TEST AT EACH LOCATION. SAMPLE COLLECTION BOTTLE LOCATIONS ARE IDENTIFIED BY STAKE NUMBERS 36-3082, 36-3083, 36-3084 AND 36-3085. WHEN SAMPLES ARE LATER TAKEN FROM THE POLY BOTTLES THEY WILL BE NUMBERED AAB1821 → AAB1824.

1225 TEAM RETURNS FROM SETTING SAMPLE COLLECTION BOTTLES. EXPLOSIVE FIELD-SPOT TEST WERE PERFORMED AND RESULTS WERE NEGATIVE AT ALL LOCATIONS.

1250 TEAM OUT OF THE CRZ. DECONTAMINATION COMPLETED. BEGAN DISMANTLING CRZ.

1330 EXITED WATER CANYON AND CREW RETURNED TO KAISER.

1420 DEPOSITED WASTE FROM OPERATION IN SATELLITE STORAGE AT BLDG. 48.

1440 RETURNED KEY FOR WATER CANYON GATES.

SIGNATURE: Richard Corli

9-27-94

AUTHOR: RICHARD CORDI

WEATHER: CLEAR AND VERY WARM. 0930 HRS - 70°F.

LOCATION: TA-36 AT LOWER SLOBBOVIA TO BEGIN CORE SAMPLE DRILLING AT MDA AA. THIS WAS A PAST MATERIAL DISPOSAL AREA THAT NOW REQUIRES CHARACTERIZATION.

THE DRILLING RIG IS A "META-DRILL" THAT HAS THE CAPABILITY TO BE RUN IN A VIBRATORY OR ROTARY DRIVE CONFIGURATIONS.

THE DRILL RIG, STEAM CLEANER AND THE CRZ AND EXCLUSION ZONES WERE SET UP ON THE AFTERNOON OF 9-26-94. THE EQUIPMENT AND ZONES WILL BE ALLOWED TO REMAIN STANDING IN PLACE UNTIL THE DRILLING IS COMPLETED.

DRILLING PROCEDURE:

THERE ARE FOUR BURIED TRENCHES THAT ARE TO BE SAMPLED. EACH TRENCH WILL HAVE FOUR (4) CORE HOLES DRILLED. THE FIRST OF EACH FOUR CORE HOLES WILL HAVE FOUR SAMPES TAKEN:

1 - OVERLYING BACKFILL MATERIAL
2 - ASH/DEBRIS LAYER
1 - BELOW THE TRENCH

FOR THE REMAINING THREE BORE HOLES/TRENCH THREE SAMPLES WILL BE TAKE:

2 - ASH/DEBRIS LAYER; 1 - BELOW THE TRENCH

9-27-94 (CONTINUED)

THERE WILL ALSO BE ONE DUPLICATE TAKEN PER THIS SCHEDULE:

OVERFILL LAYER — TRENCH ONE

ASH/DEBRIS LAYER — TRENCH TWO

UNDERLYING LAYER — TRENCH THREE

NO DUP WILL BE TAKEN IN TRENCH FOR R.

ONE DUP WILL BE TAKEN FROM THE S DIMCAM TRAP.

THE BORE HOLES WILL BE ~12 FT. DEEP.

PERSONNEL:

R. CORD — FTL

P. GRAM — ALT. FTL / DRILLING

J. TAYLOR — RCT

K. McFADDEN — SSO

N. NESS — COMPUTER

J. BINGHAM — DRILLING

0900 ARRIVED AT LOWER SLOBBOVIA. BEGIN TO ASSEMBLE DRILL RIG COMPONENTS. THE FIRST CORE HOLE WILL BE LOCATED AT THE CALCULATED CENTER OF THE SOUTHERN-MOST TRENCH. THIS CORE WILL BE A STRAIGHT-THROUGH HOLE TO THE UNDERLYING LAYER TO EVALUATE THE STRATA CONFIGURATION OF THE TRENCH. ALSO IT WILL BE A CHECK WHETHER WE ARE IN THE RIGHT LOCATION, IE, WITHIN A TRENCH.

1042 TAILGATE SAFETY MEETING: DRILLING TASK #14 AT MDA AA TRENCHES PRS 56-001. WORK IS TO BE PERFORMED UNDER CHANGE ORDER 026.05

SIGNATURE: [illegible]

1100

1245

1316

1520

1537

1546

1600

ICATE TAKEN

ONE
TWO
THREE
NCH FOUR.
THE SEDIMEN

T. DEEP.

G

BEGIN TO
. THE FIRST
THE CALCULATE
ENCH. THIS
HOLE TO THE
THE STRATA
SO IT WILL
THE RIGHT

NG TASK # 14
1. WORK IS
026.05

9-27-94 (CONTINUED)

TO THE FIELD OPERATIONS WORK PLAN (H&S PLAN)

1100 CREW ENTERS ~~CRZ~~ 9-27-94 RDE EXCLUSION TO BEGIN DRILLING OPERATIONS.

1245 CREW EXITS EXCLUSION ZONE AND CRZ FOR LUNCH BREAK. SONIC DRILL WAS USED TO A DEPTH OF 3½ FEET. SONIC DRILLING WAS STOPPED WHEN AN OBJECT TO HARD FOR THE SONIC DRILL TO PENETRATE. AFTER THE LUNCH BREAK DRILL HEADS WILL BE CHANGED TO THE ROTARY HEAD AND THE HOLLOW STEM AUGER WILL BE TRIED IN THE SAME HOLE LOCATION.

1316 CREW RETURNS TO CRZ AND EXCLUSION ZONE TO CHANGE DRILL HEADS AND RESUME DRILLING.

1520 CREW EXITS EXCLUSION ZONE TO CRZ. DRILLING TERMINATED. UNABLE TO DRILL BEYOND APPROX. 3½ FEET DUE TO HARD OBJECT. WILL PROBABLY MOVE RIG TO ANOTHER LOCATION BEFORE DRILLING IS RESUMED.

1530 TEAM EXITS CRZ.

15A: Depart Lower Slobbovia, MDA-AA sampling area.

160: Depart DX-11 access control.

No samples were taken today.

Signature [illegible]

9-28-94

AUTHOR: RICHARD CORDI

WEATHER: CLEAR AND WARM. LIGHT BREEZE.

LOCATION: TA-36, MDA AA, PRS 36-001.

THE FIELD TEAM WILL MOVE THE DRILL RIG AND BORE ANOTHER TEST HOLE.

PERSONNEL:

R. CORDI – FTL.

P. GRAM – ALT. FTL.

J. TAYLOR – RCT

K. McFADDEN – SSO

C. ABEYTA – ASSIST/DECON

N. NESS – COMPUTER

B. TRUTILLO – CREW/DECON

J. BINGHAM – CREW

0900 ARRIVE AT LOWER SLOBBOVIA.

0937 BEGIN TAILGATE MEETING. WILL CONTINUE TODAY UNDER SAME REQUIREMENTS AND CONSTRAINTS AS 9-27-94. DRILLING TASK #14, PPE LEVEL D4.

0955 COMPLETE TAILGATE SAFETY MEETING. THERE ARE VISITORS FROM DX-11 (ROGER LOWDON) AND DOE (BOB ERZ). THEREFORE, THE EXCLUSION ZONE AND DRILL RIG WILL BE MANNED BY THE RCT. IF RESULTS ARE NEGATIVE, THE EXCLUSION ZONE TAPE WILL BE DROPPED TO AFFORD THE VISITORS THE OPPORTUNITY TO VISIT AND OBSERVE THE DRILL RIG SET-UP.

SIGNATURE: Richard Cordi

1005

1015

1030

1105

1330

1410

1445

1520

1537

9-25-94 (CONTINUED)

1000 EXCLUSION ZONE IS OPENED FOR VISITATION BY DX-11 AND THE DOE.

1015 DECISION HAS BEEN MADE TO ATTEMPT TO PENETRATE THE CORE HOLE OBSTRUCTION USING A SOLID STEM AUGER BEFORE MOVING DRILL RIG.

1030 CREW ENTERS RE-ESTABLISHED CRZ AND EXCLUSION ZONES TO COMMENCE DRILLING.

1105 THE SOLID STEM AUGER HAS BREACHED THE OVERFILL AND HAS BROUGHT TO THE SURFACE DEBRIS FROM THE TRENCH BELOW. THIS IS STILL TO REMAIN AN EXPLORATORY HOLE — NO SAMPLES ARE TO BE TAKEN.

1330 CORE HOLE WAS BACKFILLED WITH CORE CUTTINGS AND THE HOLE PLUGGED WITH ONE (1) 50# BAG OF COARSE BENTONITE (SIZE 3/8" OR > IN DIAMETER). SAMPLES WERE TAKEN FROM THE DRILL CUTTINGS PRIOR TO FILLING THE HOLE. SAMPLE NO. AAB2009

1410 CREW DEPARTS EXCLUSION ZONE AND PREPARES TO LEAVE THE CRZ. SAMPLES ARE BEING DECONNED. EXCLUSION ZONE WILL BE BROKEN DOWN TO ALLOW THE ENTIRE CREW TO ASSIST IN MOVING THE DRILL RIG.

1445 DRILL RIG MOVED ~5 FT. WEST OF ORIGINAL CORE HOLE.

1520 Depart Lower Slobbovia For DX-11 access control.

1537 Depart DX-11 access control.

SIGNATURE: [illegible]

9/29/94
Author; Michael Henke & RICHARD CORDI
Location; TA-36 MDA-AA (Lower Slobbovia)
Weather; Clear, smoke in the area from a forest service controlled burn. No Wind
Temperature; ~65°
Personnel;
M Henke - FTL
P Gram - Alt. FTL
K McFadden - SSO
J Taylor - RCT
N Ness - Computer
J Bingham - Field
B Trujillo - Field
R Cordi - Photographer / ASSISTANT FTL.

Text;
845 Arrive at DX-11 access control.
855 Depart DX-11 access control
905 Arrive at MDA-AA
910 Begin tailgate safety meeting.
920 End tailgate safety meeting.

TEXT:
TODAY A VIBRATORY CORE HOLE WILL BE ATTEMPED TO COLLECT SAMPLES FROM ONE OF THE TRENCHES. THIS TRENCH WILL BE CONSIDERED TRENCH #1, BOREHOLE #1 THE SAMPLE IDs WILL BE AS FOLLOWS:

SIGNATURE: Richard Cordi

9/29/94 (CONTINUED)

AAB #s	SITE ID NOs.
1950	36-3125 INTIAL OVERLYING FILL
1951	DUPLICATE OF 1950
1952	36-3125 SAMPLE IN ASH DEBRIS
1953	36-3125 SAMPLE IN ASH DEBRIS
1954	36-3125 SAMPLE IN UNDERLYING TUFF

0935 CREW ENTERS CRZ TO PREPARE TO ENTER THE EXCLUSION ZONE.

0945 CREW ENTERS EXCLUSION ZONE TO BEGIN DRILLING.

1015 DRILLING BEGINS. INITIAL 3.0 FT. DRILLED QUICKLY THEN THE RATE DRASTICALLY SLOWED DOWN. HOWEVER, PENETRATION CONTINUED.

1040 DRILLING WAS STOPPED TO ADJUST THE AMPLITUDE OF THE VIBRATION. IT WILL BE INCREASED TO SEE IF THIS WILL INCREASE THE DRILLING RATE. THE DEPTH OF PENETRATION AT THIS POINT IS ~39". M 9/29/94

1115 ADJUSTMENT COMPLETED. AUDIO INDICATES THAT THE VIBRATION HAS INCREASED. PENETRATION SEEMS TO HAVE INCREASED, BUT STILL VERY SLOW. DRILLING STOPPED. THE CORE IS BEING REMOVED TO CHECK IF ANYTHING CAN BE SEEN TO HINDER THE PENETRATION. THE SOIL AT THE BOTTOM END OF THE CORE SAMPLE IS HIGHLY COMPACTED AND MAY HINDER THE CORE MATERIAL FROM MOVING UP THE CORE TUBE. THE CORE MATERIAL IS REMOVED FROM THE SPLIT SPOON SAMPLER, SAMPLER IS DECONNED, AND THE SPLIT SPOON IS REINSTALLED ON THE DRILL RIG FOR

Richard Ondi

9-29-94 (CONTINUED)

FURTHER DRILLING ATTEMPT.

1155 Drilling resumed to ~ 4 ~~1/2~~ FEET. limit of travel is reached on mast. An additional 5 foot tube will be added and drilling resumed. Refusal occured alm immediately after adding 5 foot drive tube, at 4 1/2 f

1219 Begin pulling tubes from hole.

1235 Tubes pulled from hole. Change from vibratory drill head to rotary drill head. Install hollow core drill

1254 Crew exits exclusion zone, enters CRZ, begins decon tamination for lunch break.

1306 Crew finishes decontamination and exits CRZ. Begin lunch break.

1335 Crew re-enters CRZ. End lunch break. Temp 84°

1345 Crew re-enters exclusion zone to resume drilling.

1350 Resume drilling with hollow stem auger.

1400 Change to solid stem auger.

1410 Bore hole to 5 feet with solid stem auger. 0855

1420 Remove solid stem auger and replace hollow stem auger. 0915

1511 Cease drilling for the day. 0935

1530 Crew exits CRZ after Decon. 0943

1540 Depart MDA-AA (Lower Slobbovia) area for DX-11 access control. 1005

1601 Depart DX-11 access control.

We took no samples today.

SIGNATURE Michael Henke

9/30/94
Author; MICHAEL HENKE & RICHARD CORDI
LOCATION; TA-36 MDA-AA (Lower Slobbovia)
Weather; High clouds, smoke in the area from a forest service controlled burn. Light wind.
Temp. ~ 62°
Personnel;
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
N Ness - computer
J Bingham - Field
B Trujillo - Field
R Cordi - Photographer
C Abeyta - documenter
Text;

0855 Arrive at DX-11 access control.
0915 Arrive at MDA-AA (Lower Slobbovia). Proceed to set up equipment.
0935 Begin tailgate safety meeting.
0943 End tailgate safety meeting.
1005 CREW ENTERS EXCLUSION ZONE TO BEGIN DRILLING. THE HOLLOW STEM AUGER IS REMOVED THAT SAMPLED FROM ~ 4.5 - 6.5 FT. ANOTHER SPLIT SPOON SAMPLER WILL BE INSERTED TO DRILL 6.5 - 8.5 FT. IF NOTHING IMPEDS THE DRILLING PROCESS.

SIGNATURE: Richard Cordi

9-30-94 (CONTINUED)

1037 STOPPED DRILLING TO EXAMINE THE EXTRUDED DIRT. TH
DEPTH OF HOLE IS ~ 7.0 FEET AT THIS POINT. THE DIRT
INDICATES MOISTURE AT ~7.0 FEET. NOTHING ELSE,
LIKE DEBRIS, IS EVIDENT. NO HNu OR RAD READINGS
ABOVE BACKGROUND. DRILLING RESUMES.

RCC 4/30/94

1045 REFUSAL OCCURED AT ~ 7.0 FEET. SPLIT-SPOON SAMPLE
IS REMOVED WITH ~~6.5-7.0 FOOT~~ 6" SAMPLE SECTION, TH
WAS TAKEN AT DEPTH OF 6.5-7.0 FOOT DEPTH.
SAMPLE APPEARANCE INDICATES TRENCH PENETRATI
HAS BEEN ACHIEVED. INDICATORS ARE IRON STAINING
RUST, ASH, VERY MOIST WITHOUT ODOR. HNU AND RAD
SHOW NO ABOVE BACKGROUND INDICATIONS.
THE HOLLOW-STEM SPLIT-SPOON SAMPLER SHOW. RUST O
THE SURFACE. THIS MUST BE CONSIDERED WHEN
ANALYZING THESE SAMPLES. HE SPOT TEST-NEGATIVE.

1110 SAMPLES WILL BE TAKEN FROM THESE SPLIT-SPOON SECTI

AAB #'s	SITE ID #'s	
1952	36-3125	ASH DEBRIS SAMPL

1130 ADDITIONAL SECTIONS ARE ADDED FOR MORE PENETRATIO

1200 RESUME DRILLING - IMMEDIATELY A METALLIC
GRINDING SOUND IS HEARD - THEN IT CEASES. DRILL
IS NOW WITH HOLLOW-STEM AUGER WITH SPLIT-
SPOON SAMPLER INSIDE.

1205 METALLIC SCRAPING SOUND RESUMES. DRILLING
HALTED TO CHECK DEBRIS BROUGHT TO SURFACE.
DEBRIS THE SAME PLUS SOME SMALL TUFF CHIPS.
SIGNATURE: Richard Cordi

1210 D
1215 S
1245 C
1350 S
1400 S
1520 C
1540 C
1545 C
1550 /
1600 1

FD DIRT. THE
T. THE DIRT
NG ELSE,
READINGS
S.
SPOON SAMPLE
SECTION, THE
DEPTH.
PENETRATION
LROD STAINING
UL AND RAD
.
HOWS RUST O
D WHEN
R-NEGATIVE.
IT-SPOON SECTI
DEBRIS SAMPL
E PENETRATION
METALLIC
EASES. DRILL
ITH SPLIT-
DRILLING
SURFACE.
UFF CHIPS.

9-30-94 (CONTINUED)

1210 DRILLING RESUMED TO ATTEMPT TO BREAK THRU REFUSAL THAT HAS DEVELOPED. NO LUCK.

1215 STOPPED DRILLING TO REPLACE SETUP WITH SOLID-STEM AUGER TO INCREASE HOLE DEPTH, THEN REINSTALL HOLLOW-STEM AUGER AND SPLIT-SPOON SAMPLER. APPROX. DEPTH IS 8 FEET.

1245 CREW LEAVES EXCLUSION ZONE AND CRZ TO BREAK FOR LUNCH.

1350 SOME OF THE CREW RETURNS TO CRZ AND EXCLUSION ZONE TO CLEAN UP AND DECON AREA AND EQUIPMENT.

1400 SAMPLE WILL BE DECONED. AUGER PARTS TO BE STEAM CLEANED. RK 9-30-94

1520 CREW EXITS CRZ IN PREPARATION FOR EXITING THE DRILL SITE. 3 crew members remain in exclusion zone to containerize steam cleaning water in 5 gallon collapsible containers.

1540 crew exits exclusion zone.

1545 crew exits CRZ and departs for DX-11 access control.

1555 Arrive at DX-11 access control.

1600 Depart DX-11 access control.

SIGNATURE: Richard Cordi [illegible]

10-3-94
AUTHOR: RICHARD CORDI
LOCATION: TA-36 MDA-AA (LOWER SLOBBOVIA)
WEATHER: CLEAR, WARM, BREEZY.
TEMP: 62°F
PERSONNEL:
R. CORDI – FTL
M. HENKE – ASST. FTL.
P. GRAM – ALT. FTL.
K. McFADDEN – SSO
J. TAYLOR – RCT
J. BINGHAM – FIELD
B. TRUJILLO – FIELD
C. ABEYTA – ASSIST
N. NESS – COMPUTER

TEXT:

0832 ARRIVE AT DX-11 ACCESS CONTROL.
0850 ARRIVE AT MDA-AA (LOWER SLOBBOVIA). PROCEED TO SET UP EQUIPMENT. CORE DRILLING WILL CONTINUE.
0942 BEGIN TAILGATE SAFETY MEETING.
0952 END TAILGATE SAFETY MEETING.
1000 CREW ENTERS CRZ AND EXCLUSION ZONE TO START DRILLING OPERATIONS. THE IMMEDIATE PLAN OF THE DAY IS TO CHANGE TO THE VIBRATORY HEAD AND TO TAKE A SPLIT-SPOON SAMPLE AT THE BOTTOM OF THE HOLE THAT WAS AUGER DRILLED ON 9-30-94

SIGNATURE: Richard Cordi

10-3-94 (CONTINUED)

THE DEPTH OF THE HOLE IS 7.5 FEET. THE SPLIT SPOON SAMPLE WILL BE TAKEN OVER THE INTERVAL OF 7.5 → 9.5 FEET.

1045 WASTE WATER FROM LAST WEEK'S DRILLING DECON OPERATIONS WILL BE TAKEN TO BLDG. 1 IN THAT BUILDING'S TEMPORARY WASTE STORAGE AREA.

1125 THE SPLIT-SPOON SAMPLE HAS BEEN TAKEN. THE SAMPLE WAS TAKEN 7 → 10 FEET. THE ACTUAL SAMPLE WILL BE TAKEN AS A COMPOSITE OF 8 → 10 FOOT LEVEL.

SAMPLE: AAB 1953 36-3125

SHOWS DISCOLORATION AND STAINING, NAILS, DEBRIS.

1200 SOLID-STEM AUGER IS REINSTALLED AND WILL DRILL DOWN TO 12 FEET. VIBRATORY SET-UP IS NOW INSTALLED AND A SAMPLE FROM 12 TO 14 FEET WILL BE TAKEN.

SAMPLE: AAB 1954 36-3125

1235 CREW LEAVES LRZ FOR LUNCH BREAK. THE SPLIT-SPOON SAMPLER WAS INSTALLED AND THE SAMPLE WILL BE TAKEN AFTER LUNCH.

1310 CREW RETURNS TO DRILLING RIG TO TAKE SPLIT-SPOON SAMPLE FROM 12 TO 14 FEET. THE SAMPLE SHOWS AN UNDISTURBED SOIL HORIZON AT 13'4". THERE IS STAINING AND DEBRIS ABOVE THIS HORIZON. BELOW THE HORIZON THE MATRIX IS SOIL, MAYBE WITH SOME TUFF PARTICULATES. THIS MATERIAL IS DEFINITELY NOT PURE TUFF. FURTHER SOLID STEM AUGERING WILL

SIGNATURE: Richard Cordi

120-41TA

10-3-94 (CONTINUED)

BE DONE FOR FURTHER DEPTH. IDEALLY WE WANT TO SAMPLE BELOW THE TRENCH.

1440 SOLID STEM AUGER HAS REACHED 26 FEET, OUR LIMIT DUE TO LACK OF ADDITIONAL AUGER SECTIONS. THE SOIL BROUGHT UP IS STILL CLAY TYPE- NO TUFF AS OF YET.

1450 THIS HOLE WILL BE ABANDONED DUE TO THE FAC - THE TUFF HAS NOT BEEN REACHED. THE HOLE WILL BE BACKFILLED WITH REMOVED SOIL AND BENTONITE PLUGGED. ONE(1) BAG OF BENTONITE WAS USED.

1530 SAMPLES ARE DECONNED.

1547 CREW EXITS CRZ

1604 ARRIVE AT DX-11 ACCESS CONTROL.

1606 DEPART DX-11 ACCESS CONTROL.

SIGNATURE: Richard Cordi

EALT WE
NCH.
ET, OUR LIMIT
CTIONS.
PE— NO TUFF

FACT THE
BLE WILL BE
BENTONITE
WAS USED.

10-5-94

AUTHOR: RICHARD CORDI/MICHAEL HENKE

LOCATION: TA-36 MDA-AA (LOWER SLOBBOVIA)

WEATHER: PARTLY CLOUDY, COOL, HUMID.

TEMP: 68°F

PERSONNEL:

R. CORDI - DOCUMENTOR
M. HENKE - FTL
P. GRAM - ALT. FTL
K. McFADDEN - SSO
J. TAYLOR - RCT
J. BINGAM - TEAM
B. TRUJILLO - TEAM
N. NESS - COMPUTER
C. ABEYTA - TEAM

0900 ARRIVE DX-11 ACCESS CONTROL

0915 ARRIVE MDA-AA SITE

0920 TAILGATE SAFETY MEETING

THIS WILL BE A SHORT DAY IN THE FIELD BECAUSE THE SSO WILL BE LEAVING AT NOON. THE MORNING WILL BE SPENT DECONNING THE AUGERS AND OTHER DRILL EQUIPMENT. ALSO THE DRILL RIG AND STEAM CLEANER WILL BE MOVED IN PREPARATION FOR DRILLING TOMORROW AT A DIFFERENT TRENCH SITE.

1140 R. Cordi, K. McFadden, N. Ness, C. Abeyta, all depart site.

MH 10/5/94 ~~1205~~ Begin relocation of drill rig, CRZ and exclusion zone.

SIGNATURE: Richard Cordi/Michael Henke

c2

10/5/94 continued.

1315 Drill rig relocated, levelled and prepared for drilling on 10/6/94. Rig was lubed. Steam cleaner was purged of water since freezing temperatures are expected tonight. Exclusion zone was reconfigured. Filled gasoline tanks on drill rig and steam cleaner. Depart for DX-11 access control.

1330 Depart DX-11 access control.

Signature; Michael Henke

red for
am cleaner
emperatures
was
on drill
DX-11 access

10/6/94
Author; MICHAEL HENKE, RICHARD CORDI
Location; TA-36, MDA-AA (Lower Slobbovia, Trenches)
Weather; Mostly clear, cool, light wind. Temp. 48°
Personnel;
M. Henke - FTL
P. Gram - Alt FTL
K. McFadden - SSO
J. Taylor - RCT
N. Ness - Computer
R. Cordi - Documentor
B. Trujillo - Field
J. Bingham - Field MH 10/11/94
Text;
0840 Arrive at DX-11 access control.
0855 Arrive at TA-36 MDA-AA (Lower Slobbovia-Trenches)
TEXT:
HIGH WINDS DURING THE NIGHT UPROOTED THE TENT COVERING THE CRZ. SOME OF THE ALUMINUM SUPPORT POLES WERE BROKEN OR BENT. WE WILL ATTEMPT TO REPLACE THEM WITH POLES FROM METZGERS. THE TENT TOP SURVIVED UNHARMED. 1004 tailgate safety meeting.
1020 Team enters contamination reduction zone. Drill rig engine will not start. There is a problem with the 50 foot electrical cable. we will operate today with the engine controls on the engine.
Signature [illegible]

10/6/94

1055 The drill rig engine controls have been moved to the original engine mount position.

1101 Commence drilling. Drill to 2 feet with 4 inch solid stem auger. Change to sonic head to sample from 2 to 4 feet. Sample AAB-1951 and duplicate AAB-1952.

1139 Drill with sonic head to take sample in split spoon sampler.

1148 Split spoon sampler reaches 4 feet depth. Begin sample retrieval from bore hole.

1158 Sample retrieved from bore hole. Begin changeover to rotary drill head.

1212 Resume drilling with 4" solid stem auger.

1225 Bore hole reaches 6 feet. Cuttings are being removed from bore hole in preparation for sampling from 6 feet to 8 feet and then 8 feet to 10 feet with sonic drill. 4 inch augers removed

1233 Crew enters CRZ in preparation for lunch break. Sample #s AAB-1951 and AAB-1952 are decontaminated. Samples are placed in cooler in Ryder van.

1250 Begin lunch break.

1318 Crew enters CRZ and exclusion zone. Begin changeover to sonic drill head and decontaminate split spoon sampler parts in preparation for taking 6 to 8 feet sample, sample number AAB-1955.

Signature: [illegible]

1410 Vi

1425 [illegible]

1433 [illegible]

1452 [illegible]

1455 Cr

1515 Cr

1530 De

1551 A

1600 D

S

10/6/94

1410 Vibratory drill reaches 8 feet.

1425 Sample retrieved from bore hole. 1 foot sample taken.

1433 Sample taken. Ash visible in bottom 3 inches of sample only. This indicates we are still drilling in the trench.

1452 Split spoon sampler introduced into hole. Sampling from 8 to 10 feet will be done tomorrow 10/7/94.

1455 Crew exits exclusion zone to CRZ.

1515 Crew exits CRZ.

1530 Depart TA-36 MDA-AA. Go to TA-36-48 with Blue ice for freezer and solid potential HAZ. waste.

1551 Arrive at DX-11 access control.

1600 Depart DX-11 access control.

Signature: Michael Hawkes

10/11/94

Author; MICHAEL HENKE / ~~RICHARD CORDI~~ 10/11/94

Location; TA-36, MDA-AA (Lower Slobbovia-Trenches)

Weather; Clear, no wind, Temperature 54°

Personnel;

M Henke - FTL

P Gram - Alt FTL

K McFadden - SSO

J Taylor - RCT

N Ness - Computer

R Cordi Documentor/Photographer

J Bingham - Field

B Trujillo - Field

Text;

0846 Arrive DX-11 access control.

0853 Depart DX-11 access control.

0910 Arrive at TA-36, MDA-AA (Lower Slobbovia, Trenches)

0930 Begin tailgate safety meeting

0942 End tailgate safety meeting

0949 Crew enters CRZ and begins donning PPE.

0955 Crew enters exclusion zone.

1000 Begin ~~ing~~ drilling with sonic drill head to take 8 to ten foot sample described 10/6/94.

1036 10-foot level reached, sampler being removed from hole. Only a small amount of sample material was recovered ~ 4" long. Direct rad reading was 169 CPM. Metals and rad samples for sample

Signature; Michael Henke

10/11/94

1036 cont. #AA

spot

This

to

1110 Samp

1127 Depth

very

1155 Sam

nail

gOH

10+

1220 Re

st

pp

lit

st

w

1232 Re

so

1234 B

1251 S

1255 S

d

S

S

s

s

10/11/94

1036 cont. #AAB-1956 are taken from this material. Field spot Test for explosives results were negative. This sample material is from approximately 8 feet to 8'6".

1110 Sampling resumed

1127 Depth reaches approximately 12 feet. Penetration very rapid.

1155 Sample retrieved. Sampler not full. Sampler contains nails, wood. We have hit a soft area and have gotten approximately 30% sample recovery from 10 to 12 feet.

1220 Resume drilling. Drill to 16 feet. Ground is still soft. We are adding another 5 feet of drill pipe to the rig, because we believe we have very little sample material and are presuming we are still in the trench and above the tuff soil interface.

1232 Resume drilling. Drill to 22 feet. Ground is still soft, as above. 10/11/94

1234 Begin sample retrieval.

1251 Sample section pulled from hole.

1259 Sample tubes opened. There is still evidence of debris. Sample will be taken from 20 to 22 feet. Sample # AAB-1957. Debris evidence was at 20 feet. Sample material near 22 feet appears undisturbed, silt sand clays layer.

Signature: [illegible]

10/11/94

AAB#	Site I.D.	Collection Time
1956	36-3126	1104
1957	36-3126	1257

The above samples are subsurface soil samples. The above samples will be analyzed for Alpha, Beta, Gamma, (Rad Van), Total Uranium, Metals, SVOCs, VOCs, and H.E.

1320 Cuttings were returned to borehole and the hole was plugged with approximately 1 bag of Bentonite.

1324 Crew exits exclusion zone, enters CRZ.

1333 Crew exits CRZ. Begin lunch break.

1400 Crew returns to CRZ in preparation for decontamination.

1417 Crew enters exclusion zone to begin decon

1510 Decontamination completed. Zones taken down to allow us to relocate the drill rig.

1551 Drill rig relocated, crew and vehicles are monitored to leave area for DX-11 access control.

1601 Arrive at DX-11 access control.

1608 Depart DX-11 access control.

Signature: Michael Kenke

10/1
A
L
W
P
M
P
T
J
N
R
J
B
T
0830 3
co
0835 3
(L
m
0915 R
co
0925 E
e
1000 B
1007 E
1015 C
1020 C
S

ion Time

oil samples.
Alpha,
n, Metals,

d the hole

:z.

on,
aken
drill rig.
e
ss control.

10/12/94
Author; Michael Henke / Richard Cordi
Location; TA-36, MDA-AA (Lower Slobbovia-Trenches)
Weather; Clear, no wind, Temp 58°
Personnel;
M Henke - FTL
P Gram - Alt FTL
K McFadden - SSO
J Taylor - RCT
N Ness - computer
R Cordi - Runner/documenter/photographer
J Bingham - Field
B Trujillo - Field
Text

0830 3 members of team arrive at DX-11 access control.

0835 3 members of team arrive at TA-36, MDA-AA (Lower Slobbovia-Trenches) to perform maintainance on equipment prior to drilling.

0915 Remainder of crew arrives at DX-11 access control then proceeds to TA-36, MDA-AA.

0925 Entire crew at TA-36 MDA-AA. Sets up equipment.

1000 Begin tailgate safety meeting.

1007 End tailgate safety meeting.

1015 Crew enters CRZ

1020 Crew enters exclusion zone and begins drilling.

10/12/94 continued

1042 Rotary drill reaches 8 feet, change to sonic drill head to sample. Sample will be taken from 8 to 10 feet.

1126 8 to 10 foot sample retrieved from hole. No samples taken from this material. It does not appear to be trench material; i.e. no debris, ashes, or other material previously seen when we did hit the trench.

1205 12 to 17 foot sample retrieved from hole. No samples taken from this material. This hole did not penetrate the trench. We will abandon this hole. Cuttings are being returned to hole. 1/3 bag of Bentonite was put in the top of the hole. Decontaminate equipment in preparation for moving drill rig and associated equipment to TA-15.

1318 Crew completes decontamination and exits CRZ for lunch break.

1340 Dismantlement of zones started. Radiation monitoring of equipment completed.

1550 ~~145~~ Equipment moved to DX-11 parking lot and TA-36-48. Crew leaves DX-11 access control.

Signature: Michael Hawke

to sonic
taken fro

c. No
es not
bris, ashes,
we did

o
hole did
andon
to hole.
op of the
paration
pment to

ites CRZ

tion

TA-36-98.

10-13-94

AUTHOR: RICHARD CORDI / MICHAEL HENKE

LOCATION: TA-15, FIRING SITE E-F.

WEATHER: CLEAR, VERY COOL, STRONG GUSTY WIND FROM THE SOUTHWEST. A FRONT IS PASSING THROUGH THE AREA.

PERSONNEL:

M. HENKE - FTL
R. CORDI - DOCUMENTOR / PHOTOGRAPHER
P. GRAM - ALT. FTL
K. McFADDEN - SSO
J. TAYLOR - RCT
N. NESS - COMPUTER
B. TRUJILLO - FIELD
J. BINGHAM - FIELD
R. GARNETT - SAMPLER FROM ASI
T. McFARLAND - FTL FOR ERM/GOLDER
E. TROLLINGER - FTM FROM ASI
R. SAATY - DATA MANAGEMENT FROM CST-7
D. FIPPIN - FTM FROM ESA-4
S. KINKEAD - FTM FROM CST-7

TEXT:

THE FIELD TEAM FROM ICF KAISER UNDER M. HENKE IS AT THIS SITE TO DO SAMPLE DRILLING FOR ERM/GOLDER AT THE TA-15 FIRING SITE E-F. WE ARE CONTROLLING ALL ASPECTS OF OPERATION EXCEPT SAMPLING CONTROL. REBECCA GARNETT

SIGNATURE: [illegible]

10/13/94

FROM ASI WILL BE IN CUSTODY OF SAMPLES
REC 10/13/94
ONCE THEY ARE REMOVED FROM THE SPLIT-
SPOON AUGERS.

1000 ARRIVE AT THE FIRING SITE, SET UP THE
SUPPORT, CRZ, AND EXCLUSION REC 10/13/94 ZONES. THE
DRILL RIG IS SET UP AT SAMPLE SITE 15-2248.

1100 WE ARE ON STANDBY AWAITING THE FINAL APPROVAL
OF A NECESSARY RWP FOR THIS SITE. THE HOLDUP
IS DUE TO ESH-1 NOT SIGNING THE DOCUMENT
AS PROMISED. IT WAS SUPPOSED TO HAVE BEEN
SIGNED AND DELIVERED BY THE AM TODAY.
ERM/GOLDER PERSONNEL ARE ATTEMPING TO
LOCATE SOMEONE IN AUTHORITY TO SIGN OR
GIVE A VERBAL OK.

1200 LUNCH BREAK. ERM/GOLDER HAVE THEIR LUNCH
BREAK AT THEIR TRAILER NEXT TO DX-11 ACCESS
CONTROL.

1330 A VERBAL OK ON THE RWP HAS BEEN RECEIVED, BUT
THE ALLOWABLE LIMIT IS STILL BELOW ACTUAL FIELD
RADIATION COUNTS ENCOUNTERED. ANYTHING ABOVE
5,000CPM STILL REQUIRES A WRITTEN RWP. THE
DECISION HAS BEEN MADE TO WAIT FOR THE SIGNED
WRITTEN RWP.

1400 DEPART AREA AND RETURN TO DX-11 ACCESS CONTROL.

1415 LEFT DX-11.

SIGNATURE: Richard Crali

0936 A
0942 D
0955 A
1036 DR
1100 SIG

10/14/94

AUTHOR; MICHAEL HENKE

LOCATION; TA 36-53 (SATELLITE STORAGE AREA FOR OU 1130)

WEATHER; HEAVY CLOUD COVER; RAINING, TEMP. ~ 50° F.

PERSONNEL;

M HENKE - FTL

P GRAM - ALT FTL

J TAYLOR - RCT

R CORDI - FIELD

C ABEYTA - FIELD.

TEXT;

DUE TO RAIN, WE WILL TAKE A DRUM SAMPLE FROM THE DECONTAMINATION LIQUID DRUM STORAGE AT THE OU-1130, TA 36-53 SATELLITE STORAGE AREA.

0936 ARRIVE AT DX-11 ACCESS CONTROL.

0942 DEPART DX-11 ACCESS CONTROL

0955 ARRIVE AT TA-36-53 TO TAKE DRUM SAMPLE

1036 DRUM SAMPLE TAKEN.

1100 SIGN OUT AT DX-11 ACCESS CONTROL

Sample AAB# 2115 DRUM CONTENT SAMPLE.

Sample will be analyzed for Alpha, Beta, Gamma (Rad Var) Gamma spec. Total Uranium, Metals, Mercury, Cyanide, SVOCs, VOCs and HE.

10/17/94

AUTHOR: RICHARD CORDI

LOCATION: COLLECTING WATER SAMPLES IN UPPER AND LOWER ~~PARK~~ POTRILLO CANYONS. RCC 10/17/94

SITE IDS

UPPER POTRILLO CANYON: 36-3090 TO 36-3093

LOWER POTRILLO CANYON: 36-~~3121~~ 3119 TO 36-3122 RCC 10/17/94

WEATHER: CLEAR WITH GUSTY WESTERLY WINDS.

TEMP. ~ 50°F

PERSONNEL:

R. CORDI - DOCUMENTOR

M. HENKE - FTL

P. GRAM - ALT FTL

C. ABEYTA - FIELD

N. NESS - COMPUTER

J. TAYLOR - RCT

K. McFADDEN - SSO

B. TRUJILLO - FIELD

J. BINGHAM - FIELD

TEXT:

DUE TO THE VERY WET GROUND CONDITIONS DRILLING WAS SUSPENDED AT FIRING SITE E-F TA-15 FOR TODAY. INSTEAD IT WAS DECIDED TO COLLECT THE WATER SAMPLE BOTTLES THAT HAD PREVIOUSLY BEEN INSTALLED IN UPPER AND LOWER POTRILLO CANYONS.

SIGNATURE: Richard Cordi

0850

0900

0915

0940

0945

0955

1100

1105

10/17/94 CONTINUED

0850 ARRIVED AT DX-11 ACCESS CONTROL.

0900 DEPART DX-11 ACCESS CONTROL.

0910 ARRIVED AT LOWER SLOBBOVIA, SET UP RYDER TRUCK COMPUTER SYSTEM.

0940 BEGIN tailgate SAFETY MEETING.

0945 END tailgate SAFETY MEETING.

0950 CREW OF SIX MEMBERS DEPART TO UPPER POTRILLO CANYON TO COLLECT WATER SAMPLES. THE WATER SAMPLES WILL BE ANALYZED FOR: GAMMA SPEC, HE, MERCURY, METALS, RAD VAN, SVOC's, AND VOC's.

SAMPLE AAB #'s FOR UPPER POTRILLO:

AAB1829 TO AAB1833

SAMPLE AAB #'s FOR LOWER POTRILLO:

AAB2116 TO AAB2119

1100 RETURN FROM UPPER POTRILLO WITH SAMPLE BOTTLES. THE BOTTLES ONLY CONTAINED SEDIMENT THAT WAS RETURNED TO THE STREAM BED AT THE LOCATION.

1105 PRECEDED TO LOWER POTRILLO. LEFT BOTTLES IN STREAM BED BECAUSE THEY WERE ONLY FILLED WITH RAIN WATER. THERE WAS NO INDICATION THAT STREAM FLOW HAD OVER-TOPPED THE BOTTLES HOWEVER, THE BOTTLES WERE RELATIVELY FREE OF SEDIMENT AND MAY STILL WORK TO COLLECT STREAM WATER.

SIGNATURE: Richard Cordi

10/17/94 CONTINUED

1130 FIELD RETURNS TO RYDER VAN.

1140 LUNCH BREAK.

1210 LEFT LOWER SLOBBOVIA FOR DX-11 ACCESS CONTROL.

1220 DEPARTED DX-11 ACCESS CONTROL FOR WATER CANYON. WE WILL EVALUATE WATER SAMPLING STATIONS IN WATER CANYON.

1300 ARRIVE AT ACCESS GATE TO WATER CANYON.

1315 DEPART TO EXAMINE WATER SAMPLING STATIONS.

1320 RCC 10-17-94 ~~36~~ - STATION 36-3085 WAS DESTROYED BY RUN-OFF. WE REMOVED THE STATION. STATIONS 36-3082 & 36-3083 WERE INTACT AND FILLED COMPLETELY WITH STREAM DISCHARGE. THESE STATIONS WERE COLLECTED AND WILL BE SAMPLED. STATION 36-3084 WAS INTACT BUT HAD NOT BEEN OVER TOPPED BY STREAM DISCHARGE. THEREFORE, THIS STATION WAS NOT SAMPLED BUT WILL BE LEFT IN PLACE AND CHECKED AGAIN FOLLOWING THE NEXT STORM EVENT.

1350 LEFT WATER CANYON.

1405 ARRIVED AT PAJARITO TRAILER TO PROCESS WATER SAMPLES FOR CHEM & RAD VAN.

SIGNATURE: Richard Cordova

1445 TE

1535 DE

FC

S

10/17/94 continued

1445 TO TA-18 TO ACIDIFY PARTICULAR SAMPLES

1535 DELIVERED SAMPLES TO CHEM AT CST-3 AND RAD VAN. FOR ANALYSIS.

-11

FOR

ATE

TATIONS.

BY

N.

RE

WITH

ONS

INTACT

STREAM

TION

EFT IN

OWING

CESS

SIGNATURE: Richard Cordi

10/18/94

AUTHOR: RICHARD CORDI

LOCATION: TA-15 FIRING SITE E-F (MOUNDS). OU 108

WEATHER: CLEAR AND COOL IN A.M. NO WIND. 46°F.

PERSONNEL:

R. CORDI - DOCUMENTOR / PHOTOGRAPHER

M. HENKE - FTL

P. GRAM - ALT. FTL

K. McFADDEN - SSO

J. TAYLOR - RCT

B. TRUJILLO - DRILLER

J. BINGHAM - DRILLER

R. GARNETT - SAMPLER FROM ASI

T. McFARLAND - FTL FROM ERM/GOLDER

E. TROLLINGER - FTM FROM ASI

D. PIPPIN - FTM FROM ESA-4

TEXT:

0830 ARRIVE AT DX-11 ACCESS CONTROL

0845 ARRIVE AT TA-15 FIRING SITE E-F. CRZ AND EXCLUSION ZONES ARE REESTABLISHED IN PREPARATION FOR DRILLING.

AS HAS BEEN PREVIOUS ESTABLISHED, THE ICF KAISER FIELD TEAM UNDER M. HENKE WILL PERFORM THE DRILLING. R. GARNETT OF ASI WILL HANDLE AND BE IN CUSTODY OF THE SAMPLES TAKEN. M. HENKE RCT AND SSO WILL BE IN CHARGE OF ALL RADIATION AND SAFETY ISSUES AT THE SITE.

SIGNATURE: Richard Cordi

10/18/

0900 MOR

0910 BEGI
THERE
FOR
WATE
FIRIN
M. H.
DRIL

0922 END

0925 CRE

0940 CRE

0950 DRI

1000 FIR
MA
SA
CUS
WI.
TH

1030 DI
FC
SA
CA
VI

1120 TI
SI

10/18/94 (CONTINUED)

0900 MORE PERSONNEL ARRIVE FOR LIMITED STAY.

R. SAATY – CST-7

S. KINKEAD – FTM FROM CST-7

0910 BEGIN TAILGATE SAFETY MEETING BY K. McFADDEN

THERE IS A RADIATION WORK PERMIT (RWP) IN FORCE FOR THIS WORK SITE. EATING OR DRINKING (EXCLUDING WATER IF NEEDED) WILL NOT BE ALLOWED IN THE E-F FIRING SITE.

M. HENKE IS APPOINTED AS OFFICIAL FTL FOR ALL DRILLING AND SAMPLE TAKING AT THE E-F FIRING SITE.

0922 END TAILGATE SAFETY MEETING.

0925 CREW ENTERS CRZ TO DRESS OUT IN PPE.

0940 CREW ENTERS EXCLUSION ZONE TO BEGIN OPERATIONS.

0950 DRILLING BEGINS. SAMPLE SITE NO. 15-2248.

1000 FIRST SPLIT-SPOON SAMPLE HAS BEEN TAKEN AND THE MATERIAL WILL BE TURNED OVER TO R. GARNETT FOR SAMPLE PREPARATION. GARNETT WILL HAVE COMPLETE CUSTODY OF SAMPLES. TRACY McFARLAND OF ERM/CALDER WILL HAVE A DETAILED LOG BOOK OF SAMPLE OPERATIONS THAT CAN BE REFERENCED FOR FURTHER INFORMATION.

1030 DRILL ASSEMBLY IS BEING TORN DOWN IN PREPARATION FOR MOVING TO SOUTH SIDE MOUND BASE. SAMPLE SITE NO. 15-2249. THE DRILLING OPERATION FOR THIS SAMPLING SITE IS OUT OF VISUAL VIEW OF THE SUPPORT ZONE.

1120 THE TRUCK PULLING THE DRILL RIG IS STUCK IN MUD

SIGNATURE: Richard Grell

10/18/94 (CONTINUED)

ON THE EAST SIDE OF THE MOUNDS. SUPPORT ZONE IS UNABLE TO SEE WHAT HAS HAPPENED. 1535

1225 THE VEHICLE HAS BEEN UNSTUCK FROM THE MUD. DECISION IS TO WAIT UNTIL THE GROUND FIRMS UP ON THE EAST AND SOUTH SIDE OF MOUNDS. THE ALTERNATE SAMPLE SITE WILL BE IN THE MIDDLE OF THE MOUNDS.

1230 FIELD CREW RETURNS TO CRZ FOR DECONNING AND LUNCH BREAK.

1300 CREW EXITS CRZ. LUNCH.

1310 SIGN OUT AT DX-11 ACCESS CONTROL

1335 SIGN IN AT DX-11 ACCESS CONTROL

1345 ARRIVE AT TA-15 FIRING SITE E-F (MOUNDS), OU108

1350 FIELD CREW ENTERS CRZ TO DON PPE IN PREPARATION TO DRILL SECOND SAMPLE HOLE. SAMPLE SITE NO. 15-2246. 10/18/94

1415 DRILLING BEGINS. THE WRONG SAMPLE SITE IS BEING DRILLED (15-2280). BECAUSE OF TIME CONSTRAINTS, THE DRILL RIG WILL BE MOVED TODAY AND CONTINUE TO DRILL TOMORROW.

1450 CREW RETURNS FROM EXCLUSION ZONE TO DECON.

1530 DECON COMPLETED. DECON WATER TAKEN TO OU108 <90 DAY STORAGE AREA.

1545 SIGN OUT AT DX-11 ACCESS CONTROL.

SIGNATURE: Richard Cordi

[redacted]

10/18/94 (CONTINUED)

1535 NOTE: THE DRILL RIG WAS INITIALLY SET OVER STAKE 15-2280 AT THE DIRECTION OF REBECCA GARNETT. THE LOCATION OF THE 2nd 10/18/94 SOUND BOREHOLE WAS DISCUSSED BOTH BEFORE LUNCH FOLLOWING GETTING THE RIG UNSTUCK AND AGAIN AFTER LUNCH IN PREPARATION FOR COLLECTING THE SECOND BATCH OF SAMPLES. ONLY AFTER DRILLING BEGAN WAS IT DETERMINED (BY INDIVIDUALS OUTSIDE THE EZ) THAT THIS WAS NOT THE DESIRED LOCATION. IN ADDITION, FOLLOWING RESETTING OF THE RIG AND PERSONNEL DECON. IT WAS SUGGESTED (BY TRACY McFARLAND THAT THE BORE HOLE LOCATIONS HAD BEEN SHOWN TO US BEFORE THE DRILLING BEGAN; ~~HOWEVER~~ 10/18/94 IN REALITY, ONLY THE TWO BOREHOLES ON THE EXTREME WEST AND EAST SIDES OF THE MOUND HAD BEEN SHOWN TO US PRIOR TO DRILLING.

SIGNATURE: Peter F. M. Swan

10/19/94

AUTHOR: RICHARD CORDI

LOCATION: TA-15 FIRING SITE E-F (MOUNDS) OU 1086

WEATHER: CLEAR, COOL, LIGHT BREEZE. 53°F

PERSONNEL:

R. CORDI – DOCUMENTOR / PHOTOGRAPHER
M. HENKE – FTL / DRILLER
P. GRAM – ALT. FTL
K. McFADDEN – SSO
J. TAYLOR – RCT
B. TRUJILLO – DRILLER
J. BINGHAM – DRILLER
R. GARNETT – SAMPLER – ASI
T. McFARLAND – FTL – ERM/GOLDER
D. PIPPIN – FTM FROM ESA-DE
E. TROLLINGER – FTM – ASI

TEXT: C. ABEYTA – DOCUMENTOR

0840 ARRIVE AT DX-11 ACCESS CONTROL

0850 ARRIVE AT TA-15 FIRING SITE E-F. DRILL TEAM AND SAMPLER DRESS IN PPE IN PREPARATION FOR ENTERING EXCLUSION ZONE AND RESUME DRILLING AND SAMPLING.

0900 BEGIN TAILGATE SAFETY MEETING.

0915 DRILL TEAM AND SAMPLER ENTER EXCLUSION ZONE SAMPLE SITE NO. 15-2246.

1115 FIRST SAMPLE POINT COMPLETED. THE DRILL RIG IS NOW MOVED TO SAMPLE SITE NO. 15-2217.

SIGNATURE: Richard Cordi

10/19/9

1150 D. PIP

1200 THE S

BREA

1400 DRILL

WILL C

1410 TEAM

1420 SAMP

GOLDE

1440 TEAM

1500 TEAM

1515 SIGNO

SIGN

10/19/94 (CONTINUED)

1150 D. PIPPIN, FTM, HAS LEFT THE SITE.

1200 THE SECOND SAMPLE HOLE WILL BE DRILLED BEFORE BREAKING FOR LUNCH.

1400 DRILLING IS HAULED FOR THE DAY. SAMPLING WILL CONTINUE TOMORROW ON SAMPLE SITE NO. 15-2N2.

1410 TEAM ENTERS CRZ FOR DECON.

1420 SAMPLES TAKEN TODAY ARE DECONNED. ERM/GOLDER TAKES POSSESSION OF SAMPLES.

1440 TEAM EXITS CRZ

1500 TEAM RETURNS TO DX-11 ACCESS CONTROL.

1515 SIGNOUT AT ACCESS CONTROL.

SIGNATURE: Richard Carlie

10/20/94

AUTHOR: MICHAEL HENKE / DOUG PIPPIN

LOCATION; TA-15, FIRING SITE E-F (MOUNDS) OU 1086

WEATHER; CLEAR, COOL, LIGHT BREEZE ~ 5MPH, TEMP. 51°F

PERSONNEL;

1055 TAIL GATE MTG. BY Bob STRAUB MH 10/20/94

PERSONNEL

D. Gram - FTL / ALTERNATE - Driller

M. Henke - FTL / Driller

J. Taylor - RCT

B. Straub - SSO

D. Pippin - FTL / ESA-OE

J. Bingham - Driller

B. Trujillo - Driller

B. Garnett - SAMPLER OU-1086

T. McFarland FTL / EPM Golder

B. Cole - RCT / EOI

E. Trollinger - FTM - ASI

TEXT: D. Pippin

0950 ARRIVE DX-11 ACCESS CONTROL

1000 ARRIVE TA-15 E-F SITE

DRILL TEAM AND SAMPLER DRESSED OUT IN PPE.

1055 BEGIN TAILGATE SAFETY MTG.

- Discussed Known Hazards
- Reviewed Procedure for entering & exiting OF EZ AND CRZ.
- Signature: Douglas Pippin

1103 D

1126 D

1142 D

1148 S

1220

1225 A

1300 D

1305 D

1322 R

1400 S

1430 S

1505 V

1520 C

10/20/94 (Continued) 10/20/94

1103 Drill TEAM ENTERED ~~TE~~ DWP THE EXCLUSION ZONE

OU 1086' 1126 Drilling STARTED @ 2247

PH, TEMP. 5.1 1142 DRILLING @ 2247 STOPPED

0/94 1148 SAMPLER Garnett entered EZ to collect Sample.

1220 Sample AAC 0346 from 21"–27" depth B/8 246 CPM

1225 Auger from 15-2247 Smeared - OK, Decomed.

1300 Drill bit ~~&~~ DWD 10/20/94 from 15-2247 Smeared - OK - Decomed.

1305 Drill Rig Shut down - Blown Hydraulic Line - Hydraulic oil being confined to deck of drill rig - No hydraulic oil came in contact with the soil. Rags used for clean up were collected, deposited in plastic bag - Screened and found to be ok -

1322 Restarted Drill rig - Installed Sonic head

1400 Sonic drill to 48 inches. Pull split tube sampler, to empty compacted clay plug. This is set aside as a contingency sample in case sonic drilling cannot proceed any deeper.

T IN 1431 Sonic drill to 63 inches. Pull split tube sampler, to empty compacted clay plug. Plug has evidence of debris, ash, gravel. We will continue to sonic drill.

1500 We have refusal at 63". A sample will be taken from the 48 to 63 inch material.

STING 1510 Crew secures drill rig for the night.

Signature [illegible]

10/20/94 continued

1529 Crew and sampler begin entering CRZ.

1543 Crew is in CRZ and doffing PPE.

1601 Crew exits CRZ.

1614 Depart TA-15 sample area.

1625 Depart DX-11 access control.

The bore hole has been filled, approximately one gallon of Bentonite was used.

Signature; Michael Berke

10/21/94

AUTHOR: RICHARD CORDI

LOCATION: TA-15 FIRING SITE E-F (MOUNDS) OU 1086.

WEATHER: CLEAR, COOL, LIGHT BREEZE. 49°F.

PERSONNEL:

R. CORDI - DOCUMENTOR

M. HENKE - FTL / DRILLER

K. McFADDEN - SSO

J. TAYLOR - RCT

P. GRAM - ALT. FTL

B. TRUJILLO - DRILLER

J. BINGHAM - DRILLER

C. ABEYTA - DOCUMENTOR / FIELD

R. GARNETT - SAMPLER FROM ASI

T. McFARLAND - FTL FROM ERM/GOLDER

TEXT:

0820 ARRIVE DX-11 ACCESS CONTROL.

0830 ARRIVE FIRING SITE E-F.

0848 BEGIN TAILGATE SAFETY MEETING.

0853 END TAILGATE SAFETY MEETING.

0855 DRILL TEAM/SAMPLER DRESS OUT IN PPE.

0900 TEAM ENTERS CRZ THEN EXCLUSION ZONE TO BEGIN MOVING DRILL RIG TO SAMPLE SITE NO. 15-2249.

0953 MIKE HENKE DEPARTED CRZ.

1007 M. HENKE LEAVES TA-15.

1014 K. McFADDEN ENTERS EXCLUSION ZONE.

SIGNATURE: Richard Cordi

10/21/94 (CONTINUED)

1025 R. GARNETT ENTERS CRZ TO SUIT UP IN PPE.

1043 DRILL CREW RETURNS TO CRZ. THE STARTER MOTOR ON THE DRILL RIG BROKE. IT APPEARS THE ENGAGING MECHANISM ON THE MOTOR/FLYWHEEL IS FAULTY. THE MOTOR ITSELF WORKS OK. THE CREW WILL TRY TO REMOVE THE MOTOR AND BRING IT BACK TO THE CRZ. MODEL GX360.

1054 R. GARNETT EXITS CRZ WITHOUT HAVING ENTERED THE EXCLUSION ZONE.

1100 E. TROLLINGER VISITS SUPPORT ZONE.

1105 CREW ENTERS CRZ FOR DEGOWNING.

1135 EXIT CRZ AND DEPART TO DX-11 ACCESS CONTROL.

1215 Sign back in at DX-11 access control. Depart for TA-15 drilling site.

1226 Arrive at TA-15 drilling site

1236 Team enters CRZ to attempt to diagnose and fix drill rig starter motor.

1400 TEAM REMOVED GAS ENGINE FROM DRILL RIG AND BROUGHT IT OUT OF EXCLUSION ZONE TO FIX IT.

1408 TEAM EXITS E.Z. AND ENTERS CRZ

1416 TEAM EXITS CRZ.

1500 Sign out of DX-11 access control.

1530 Deliver drill rig engine to EES-4.

Signature: Michael Lembke

0926

0945

0956

1038

1045

1210

IN PPE.
STARTER MOTOR
S THE
RE/FLYWHEEL
RKS OK.
= MOTOR AND
GX360.
NG ENTERED

S CONTROL.
rol. Depart

Diagnose

RIG
ONE

10/26/94

AUTHOR; MICHAEL HENKE/RICHARD CORDI

LOCATION; TA-15 FIRING SITE (E-F MOUNDS) OU-1086

Weather; Cool, Cloudy, light wind. Temp ~48°F

Personnel:

M HENKE - FTL/Driller
P GRAM - ALT FTL/Driller
K Mc FADDEN - SSO
J TAYLOR - RCT.
J BINGHAM - DRILLER
B TRUJILLO - DRILLER
R CORDI - DOCUMENTER/PHOTOGRAPHER
T Mc FARLAND - FTL from ERM/GOLDER
R GARNETT - SAMPLER from ASI
D PIPPIN - FTL from ESA-DE (OBSERVING)
E TROLLINGER - FTM from ASI
S KINKEAD - FTM

Text:

0926 Arrive at DX-11 access control.

0945 Arrive at EF mounds

0956 Carry repaired Honda drill rig engine to drill rig and install on drill rig trailer. MHH 10/26/94

1038 Drill rig engine remounted on rig. Ready to ~~commence~~ resume drilling in 28" deep existing hole, 15-2249.

1045 Drilling completed at 42" tuff soil interface. Samples taken. Hole filled with cuttings and 1 foot of Bentonite.

1210 Drill crew and sampler begin exiting exclusion

Signature: [illegible]

10/26/94 continued

zone to CRZ.

1235 Drill crew and sampler exit CRZ and prepare to leave EF mound area for lunch break.

1331 Return to EF mound area.

1345 CREW RETURNS TO EXCLUSION ZONE TO ATTEMPT TO MOVE DRILL RIG TO THE TOP OF THE SOUTH MOUND.

1355 THE TRUCK ALONE REACHED THE TOP WITH NO DIFFICULTY

1410 TRUCK WILL NOW ATTEMPT TO HAUL TRAILER TO TOP. AFTER FOUR ATTEMPTS, THE RIG GAINS THE MOUND SUMMIT. A LARGE VOLUME OF DUST OFF THE MOUND WAS GENERATED IN THESE MULTIPLE ATTEMPTS.

1425 DRILL RIG IS LEVELLED AND STABILIZED ON TOP OF MOUND AT SAMPLE SITE NO. 15-2245.

1507 DRILLING BEGINS USING SOLID-STEM AUGER. DRILL TO ~~EIGHT~~ ~~SEVEN~~ SEVEN FEET AND STOP FOR THE DAY. WILL INSTALL ~~HOLLOW-STEM~~ SPLIT SPOON ~~AUGER~~ TOMORROW TO COLLECT FIRST SAMPLE.

1522 CREW EXITS EXCLUSION ZONE AND ENTERS CRZ.

1550 CREW DECONS AND EXITS CRZ.

1605 Depart EF Mound area for DX-11 access control.

1615 ~~Told~~ Depart DX-11 access control.

0835

0845

0902

0906

0928

0956

1030

1045

SIGNATURE: Richard Cordi Michael Hawke

epare to

TO ATTEMPT
E SOUTH

4 NO DIFFICULTY
TOP.
MOUND
THE MOUND
TTEMPTS.
D ON TOP
1/5.
AUGER.
THE DAY.
N ~~ACROSS~~
LE.
TERS CRZ.

ontrol.

10/27/94.
Author: MICHAEL HENKE / RICHARD CORDI
LOCATION: TA-15 FIRING SITE (EF MOUNDS) OU-1086
Weather: Cool, High clouds, Light wind. Temp 40°F.
Personnel:
M Henke - FTL/Driller
P Gram - Alt FTL/Driller
K McFadden - SSO
J Taylor - RCT
J Bingham - Driller
R Cordi - Documenter/Photographer
T McFarland - FTL from ERM Golder
R Garnett - Sampler from ASI

0835 Sign in at DX-11 access control
0845 Arrive at EF mounds, set up equipment.
0902 Begin tailgate safety meeting.
0906 End tailgate safety meeting. Crew enters CRZ and begins dressing to enter exclusion zone.
0928 Crew and sampler enter exclusion zone. Drill head will be changed from the rotary to the sonic head and a sample (15-2245) will be taken from 8½ to 10½ feet approximately.
0956 DOE VISITORS ARRIVE.
1030 DOE VISITORS DEPART. Crew completes transition to sonic drill head.
1045 Sonic drill rig reaches 9½ feet. Withdraw to access sample. Lovejoy coupling on vertical

Signature: Michael Henke

10/27/94 continued

10/27/94 ~~coupling~~ actuator hydraulic motor fails. Crew is replacing Lovejoy coupling.

1200 Lovejoy coupling replaced. Crew will break for lunch before retrieving sample. Crew enters CRZ.

1216 Crew exits CRZ. Depart for DX-11 access control.

1225 Sign out at DX-11 access control. Begin lunch break.

1250 Sign in at DX-11 access control. End lunch break.

1255 Depart DX-11 access control for EF mounds.

1305 Arrive at ~~Ø~~ EF mounds area. Crew enters CRZ and begins donning PPE.

1352 DX-11 Jim Kearns arrives at sight to photograph sight. Jim has donned booties so that he can walk off road outside of the exclusion zone.

1415 Jim Kearns departs area after being monitored by our RCT.

1510 S. Kinkead and R Saaty arrive at site.

1530 Crew ends drilling for the day. Hole is 14 ft deep. Crew enters CRZ to decontaminate and doff PPE.

1550 Crew exits CRZ.

1555 Depart EF mound area for DX-11 access control.

1605 Depart DX-11 access control.

Signature: Michael Hodge

0900

0908

0911

0925

0950

1010

10/28/94
Author; MICHAEL HENKE / RICHARD CORDI
LOCATION; TA-15 FIRING SITE (EF MOUNDS) OU-1086
WEATHER; Clear, distant clouds, VERY LITTLE WIND, TEMP 52°

PERSONNEL:
M HENKE - FTL/DRILLER
P GRAM - ALT FTL/DRILLER
K McFADDEN - SSO
J TAYLOR - RCT
J BINGHAM - DRILLER
R. CORDI - DOCUMENTER/PHOTOGRAPHER
T McFARLAND - FTL FROM ERM GOLDER
R GARNETT - Sampler from ASI

TEXT;

0900 CREW ARRIVES AT TA-15 FIRING SITE (EF MOUNDS)
THE CREW WENT THROUGH DX-11 ACCESS CONTROL AT DIFFERENT TIMES THIS MORNING.
0908 BEGIN TAILGATE SAFETY MEETING.
0911 END TAILGATE SAFETY MEETING. CREW ENTERS CRZ AND BEGINS DONNING PPE.
0925 CREW ENTERS EXCLUSION ZONE.
0950 4" SOLID STEM AUGER IS PULLED FROM HOLE. ROTARY HEAD WILL BE CHANGED TO SONIC DRILL HEAD AND WE WILL ATTEMPT TO RETRIEVE A SAMPLE.
1010 SONIC HEAD IN PLACE, SAMPLER DOWN-HOLE. REFUSAL AT 14½ FEET, APPROXIMATELY.

Signature: Michael Henke

10/28/94 CONTINUED

1025 BEGIN PULLING SAMPLER FROM HOLE.

1050 SAMPLE PULLED, SAMPLE PROCESSED BY R. GARNETT.

1105 LARGE HERD OF ELK COMES THROUGH THE E-F FIRING SITE AREA. TWO 5-POINT BULLS, SIX OR MORE SPIKE BULLS, AND 30-40 COWS.

1115 DRILL CREW PREPARES TO MOVE DRILL RIG TO SAMPLE SITE NO. 15-2291, ALSO ON TOP OF SOUTH MOUND. THE DRILL RIG HAS A FLAT TIRE, PROBABLY FROM RUNNING OVER A PIECE OF SHARP METAL THAT ARE NUMEROUS ON THE MOUNDS. NO FLAT AFTER ALL!!

1127 DRILL RIG IS MOVED TO NEW SAMPLE SITE. NO PROBLEMS DOING THE MOVE. LEVELLING RIG CREATED SOME PROBLEMS DUE TO SLOPING TERRAIN, BUT IT WAS ACCOMPLISHED.

1155 NEW DRILL SITE SETUP COMPLETED. CREW ENTERS CRZ TO DECON FOR LUNCH BREAK.

THE DRILL HOLE AT SAMPLE SITE NO. 15-2245 WAS A TOTAL OF 14½ FEET. IT WAS COMPLETELY BACKFILLED WITH CUTTINGS.

1220 LUNCH BREAK AT ACCESS CONTROL AREA.

1300 RETURN FROM LUNCH BREAK. CREW ENTERS CRZ TO DON PPE.

1313 CREW ENTERS EXCLUSION ZONE TO BEGIN DRILLING. SOLID STEM AUGER TO DRILL TO SAMPLE DEPTH OF APPROX. 8'. ACTUAL DEPTH TURNS OUT TO BE 7 FEET. VIBRATORY HEAD WITH SPLIT-SPOON SAMPLER WILL

SIGNATURE: Richard Cook

10/28/94 (CONTINUED)

NOW BE INSTALLED FOR SAMPLE TAKING.

1430 SAMPLE EXTRACTED FROM SAMPLER. DEPTH OF SAMPLE TAKEN WAS APPROX. 10 INCHES OF MATERIAL; DEPTH OF 7 FEET TO 7 FEET 10 INCHES (7'10"). SAMPLES DECONNED BY GARNETT.

1445 SOLID STEM AUGER IS REINSTALLED TO DRILL TO NEXT SAMPLE DEPTH.

1515 DRILLING IS HAULTED AT DEPTH OF 10'6". DRILLING WILL RESUME MONDAY AM.

1520 CREW BEGINS ENTERING CRZ FOR DECONNING.

1550 CREW EXITS CRZ

1555 DEPART E-F FIRING SITE TO DX-11 ACCESS CONTROL.

1605 DEPART DX-11 ACCESS CONTROL.

SIGNATURE: Richard Cordi

10/31/94

AUTHOR: RICHARD CORDI / MICHAEL HENKE

LOCATION: TA-15 FIRING SITE (EF MOUND) OU-1086

WEATHER: CLEAR, COOL, LIGHT BREEZE.

TEMP. 48°F (IN RYDER VAN)

PERSONNEL:

R. CORDI - DOCUMENTOR

M. HENKE - FTL

P. GRAM - ALT. FTL

K. McFADDEN - SSO

J. TAYLOR - RCT

J. BINGHAM - DRILLER

C. ABEYTA - ASSISTANT

T. McFARLAND - FTL FROM ERM/GOLDER

R. GARNETT - SAMPLER FROM ASI

TEXT:

0830 ARRIVE DX-11 ACCESS CONTROL

0840 ARRIVE AT TA-15 FIRING SITE (EF MOUNDS)

0850 BEGIN TAILGATE SAFETY MEETING.

0900 END TAILGATE SAFETY MEETING. CREW ENTERS CRZ TO DON PPE. CREW WILL CONTINUE TO DRILL AT SAMPLE SITE NO. 15-2291.

0915 ALL CREW MEMBERS ARE ENTERING EXCLUSION ZONE. DRILLING BEGINS.

0928 Auger refused at 10 feet. We will change over to the sonic drill head. We will attempt to take a sample with the sonic head and split

Signature: Michael Henke / Richard Cordi

10/31/94 continued

Spoon sampler. Backfilled hole with cuttings and ½ bag Bentonite.

1004 Sonic head is in place and sampler is being placed down hole. SWMU 15-004f.

1040 Sample retrieved

1058 Doug Pippin arrives at site.

1130 Drill rig driven off south berm. Crew returns to CRZ to doff ~~clothing~~ PPE for lunch break.

1215 Crew exits CRZ. Depart EF mound area for DX-11 access control to take lunch break.

122. Arrive at DX-11 access control.

125. Depart DX-11 access control for EF mounds.

125. Arrive at EF Mounds

1304 Crew enters CRZ, begins donning PPE.

1316 Crew enters exclusion zone and will attempt to place drill rig on north EF mound.

1343 Drill rig successfully placed on north EF mound.

1403 Commence drilling with rotary head and 4 inch solid stem auger.

1448 Solid stem auger hole reaches 8 feet. Switch to vibratory (Sonic) head to take sample 15-2290 from 8 feet to 10 feet.

1515 Crew exits exclusion zone to CRZ to doff PPE.

1540 Crew exits CRZ and prepares to depart for DX-11 access control.

1555 Depart EF mound area for DX-11 access control.

1559 Depart DX-11 access control office.

Signature

11/1/94

AUTHOR: RICHARD CORDI

LOCATION: TA-15 FIRING SITE (EF MOUND) OU-1086

WEATHER: CLEAR, WARM, LIGHT BREEZE.

TEMP. 60°F (IN RYDER TRUCK)

PERSONNEL:

R. CORDI – DOCUMENTOR

M. HENKE – FTL

P. GRAM – ALT. FTL

K. McFADDEN – SSO

J. TAYLOR – RCT

J. BINGHAM – DRILLER

T. McFARLAND – FTL FROM ERM/GOLDER

R. GARNETT – SAMPLER FROM ASI

D. PIPPEN – FTL FROM ESA-DE (OBSERVING)

TEXT:

0835 ARRIVE AT DX-11 ACCESS CONTROL. THERE WAS A LONG DELAY AT THE MAIN GATE FOR CHECKING IN. ONLY ONE GUARD WAS ON DUTY.

0845 ARRIVE AT EF FIRING SITE (MOUNDS) TO RESUME DRILLING AT 15-2244 SAMPLE SITE ON TOP OF NORTH MOUND.

0855 BEGIN TAILGATE SAFETY MEETING.

0900 END TAILGATE SAFETY MEETING. CREW 'DON' PPE IN CRZ. SOME CREW MEMBERS ENTER EXCLUSION ZONE TO PREPARE DRILL RIG WHILE OTHERS CONTINUE TO SUIT UP IN PPE.

SIGNATURE: Richard Cordi

0925

1015

1040

1144

1211

1230

1310

1333

OU-1086
LE.
E)

LDER
I
SSERVING)

ERE WAS A
HECKING IN.

) TO RESUME
TOP OF

DOUS PPE
SION
ERS CONTINUE

11/1/94 (CONTINUED)

0125 ALL CREW MEMBERS ARE IN THE EXCLUSION ZONE, DRILLING AND SAMPLING CONTINUES.

1015 SAMPLE NO. 0325 AND 0335 WERE TAKEN AT THE 8 TO 9 FOOT DEPTH OF SAMPLE SITE NO. 15-2244. SOLID STEM AUGER IS REINSTALLED TO DRILL DOWN TO NEXT SAMPLE DEPTH AT THE SOIL-TUFF INTERFACE. IF REFUSAL IS REACHED BEFORE THIS DEPTH, A SAMPLE WILL BE TAKEN AT THAT POINT.

1040 SOLID-STEM AUGER REACHED REFUSAL AT 13½ FEET. THE VIBRATORY HEAD AND SPLIT-SPOON SAMPLER IS NOW INSTALLED TO TAKE A SAMPLE AT THIS DEPTH.

1144 DRILL RIG IS BEING MOVED TO SAMPLE SITE NO. 15-2241 ON NORTH MOUND. SAMPLE NO. 0334 WAS TAKEN FROM SAMPLE SITE NO. 15-2244 AT 13½ TO 14 FEET.

1211 CREW RETURNS TO CRZ FOR DECON AND BREAK FOR LUNCH. DRILL HOLE AT SAMPLE SITE NO. 15-2244 WAS BACKFILLED WITH CUTTINGS AND APPROXIMATELY 25 LBS. OF MEDIUM SIZED BENTONITE. ("B" SHOT AT 806)

1230 ACCESS CONTROL CALLED ABOUT A CLOSE SHOT AT 1400 HRS. CONSEQUENTLY, WE ~~A~~FINISHED HERE FOR THE DAY. ALSO, THERE PROBABLY WON'T BE A SCHEDULED SHOT TOMORROW, SO DRILLING CAN BE RESUMED AND HOPEFULLY FINISHED THEN.

1310 CREW EXITS FOR DX-11 ACCESS CONTROL.

1333 DEPART DX-11 ACCESS CONTROL.

SIGNATURE: Richard Cali

Blank

11/2/94
M Beube

Blank

11/2/94

M Henke

11/2/94

LOCATION; TA-15 FIRING SITE (EF MOUND) OU-1086

WEATHER; MOSTLY CLEAR, SOME HIGH LIGHT CLOUDS, LIGHT BREEZE, TEMP ~ 48°F.

PERSONNEL;

M HENKE - FTL/DRILLER

P GRAM - ALT FTL/ DRILLER

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - DRILLER

R GARNETT - SAMPLER FROM ASI

E TROLLINGER - FTM OU-1086

D PIPPEN - FTL OU-1086

W Bergquist - HSE TRAINING OFFICE - OBSERVING

D CORDI - DOCUMENTER/PHOTOGRAPHER (AFTER 9:00 MEETING) Arrived at site at 1206; MH 11/2/94

TEXT

0815 Depart guard station 502 for DX-11 access control.

0830 Crew enters CRZ to begin donning PPE.

0845 Begin tailgate safety meeting.

0855 End tailgate safety meeting. Crew enters exclusion zone. Decon drills and sampler prior to beginning drilling.

0900 Commence decon of drills and sampler.

0915 Decon completed using steam cleaner.

0930 Begin drilling location 15-2240.

Signature: Michael Henke

1013 D

1028 D

1100 S

1102 S

1145 Sa

1206 R

1245 C

1310 LE

1350 R

1410 C

1420 M

1503 R

1549 R

1748 C

1805 E

11/2/94 continued

1013 D PIPPEN AND W BERQUIST DEPART ~~SIGHT~~ SITE. JMH 11/2/94

1028 D PIPPEN RETURNS TO SITE AFTER TAKING W. Berquist to DX-11 ACCESS CONTROL.

1100 S Depaula and J Lujan arrive at site (DX-11 employees)

1102 S Depaula and J Lujan depart site.

1145 Sampler returns to CRZ area. Sample taken at 9 to 9 1/2 feet at 1130 approx. Sample I.D. AAC-0327.

1206 R Cordi arrives at site.

1245 Crew exits exclusion zone to CRZ.

1310 LEAVE E-F FIRING SITE FOR DX-11 ACCESS CONTROL & LUNCH BREAK. DRILL AUGER IS STUCK AT APPROX. 17 FEET. M. HENKE IS LEAVING SITE TO AQUIRE A JACK TO ATTEMPT TO PULL AUGER FROM BORE HOLE.

1350 RETURN TO E-F FIRING SITE. CREW DONS PPE.

1410 CREW ENTERS EXCLUSION ZONE. FURTHER ATTEMPTS TO FREE AUGER DRILL.

1420 M. HENKE RETURNS WITH HI-LIFT JACK, HYDRAULIC JACK (6 TON), AND CHAINS TO ATTEMPT TO EXTRACT AUGER FROM DRILL HOLE.

1503 R Cordi departs site.

1549 R Garnett is escorted off site by D Pippen.

1740 Crew exits CRZ. 5 feet of auger left in hole until tomorrow.

1805 Exit guard station 502.

SIGNATURE: Richard Cordi

11/3/94

LOCATION; TA-15 FIRING SITE (EF MOUND) OU-1086

WEATHER; MOSTLY CLOUDY, OCCASIONAL RAIN, WIND 10-15 MPH GUSTY, TEMPERATURE 50° (IN RYDER TRUCK)

PERSONNEL;

M HENKE - FTL/DRILLER

P GRAM - ALT FTL/DRILLER

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - DRILLER

R GARNETT - SAMPLER FROM ASI

T McFARLAND - FTL FROM ERM GOLDER

D PIPPEN - FTL FROM ESA-DE (OBSERVING)

R CORDI - DOCUMENTER/PHOTOGRAPHER

TEXT;

0140 MEET AT ICF KAISER. IT IS RAINING AND SOME TIME IS SPENT DISCUSSING WHETHER WE SHOULD ATTEMPT TO GO INTO THE FIELD TODAY. AT APPROXIMATELY 0815 WE

0815 DECIDE TO GO TO DX-11 AND SEE HOW THE WEATHER IS AT THE SITE.

0845 AFTER OBSERVING THE WEATHER AT DX-11 FOR ABOUT 10 MINUTES IT IS DECIDED TO PROCEED TO THE EF MOUNDS. SIGN IN AT DX-11 ACCESS CONTROL.

0900 ARRIVE AT THE EF MOUNDS. WE AGAIN DECIDE TO OBSERVE THE WEATHER SINCE IT HAS STARTED TO RAIN AGAIN.

0922 BEGIN TAILGATE SAFETY MEETING.

SIGNATURE Michael Henke

0930A

0935

0950

0910

1045

1230

1245

1305

11/3/94 CONTINUED

0934 END TAILGATE SAFETY MEETING.

0935 DRILL CREW ENTERS CRZ AND BEGINS DONNING PPE.

0950 DRILL CREW ENTERS EXCLUSION ZONE TO RETRIEVE THE LAST 5 FEET OF STUCK AUGER. THIS CAN BE RETRIEVED USING THE DRILL RIG.

0910 LAST 5 FEET OF STUCK AUGER IS PULLED FROM HOLE. RIG IS BEING REPOSITIONED OVER THIS HOLE TO ATTEMPT TO PLACE A SPLIT SAMPLER DOWN THE HOLE WITH THE VIBRATORY DRILL HEAD.

1045 THE DRILL RIG TRAILER HAS BEEN RE-ALIGNED WITH THE HOLE AND THE SONIC DRILLING HEAD IS BEING ATTACHED.

123[illegible] THE SPLIT SPOON SAMPLER WAS RUN DOWN THE HOLE TO REMOVE DEBRIS THAT WENT DOWN HOLE DURING RETRIEVAL OF THE STUCK AUGER. THE SPLIT SPOON SAMPLER WAS REPLACED WITH A DECONTAMINATED SPLIT SPOON SAMPLER AND A SAMPLE WAS RETRIEVED. THE SAMPLE IS BEING PACKAGED, FOR SUBMITTAL TO THE LABS FOR ANALYSIS.

1245 Drill RIG IS OFF MOUND, WILL BE MOVED TO FRONT OF MOUNDS FOR DECONTAMINATION.
NOTE: HOLE WAS 16 1/2 FEET DEEP AAC-0326 SAMPLE NUMBER WAS TAKEN FROM 16 TO 16 1/2 FEET. THE HOLE WAS BACKFILLED WITH CUTTINGS AND 1 1/2 BAGS OF MEDIUM BENTONITE.

1305 CREW EXITS EXCLUSION ZONE, ENTERS CRZ TO SIGNATURE [illegible]

11/3/94 CONTINUED

DOFF PPE

1330 CREW EXITS C.R.Z,

1335 DEPART EF MOUND AREA FOR DX-11 ACCESS CONTROL.

1340 ARRIVE AT DX-11 ACCESS CONTROL.

1345 DEPART DX-11 ACCESS CONTROL.

Signature: Michael Henke

11/7/94

LOCATION; TA-15 FIRING SITE (EF MOUND) OU-1086

WEATHER; HIGH LIGHT CLOUDS, LIGHT WIND, TEMP ~56°

CONTROL (IN RYDER TRUCK)

PERSONNEL;

M HENKE - FTL/DRILLER

P GRAM - ALT FTL/DRILLER

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - DRILLER

TEXT;

0830 ARRIVE AT DX-11 ACCESS CONTROL.

0835 DEPART DX-11 ACCESS CONTROL FOR EF FIRING MOUNDS.

0845 ARRIVE AT ~~Ø~~ 11/7/94 EF FIRING MOUNDS.

0855 BEGIN TAILGATE SAFETY MEETING.

0903 END TAILGATE SAFETY MEETING.

0910 TEAM ENTERS CRZ TO BEGIN DONNING PPE

0920 T McFARLAND, R GARNETT AND D PIPPEN ARRIVE AT SITE.

0930 TEAM ENTERS EXCLUSION ZONE TO BEGIN DECONTAMINATION OF EQUIPMENT.

1045 T McFARLAND, R GARNETT AND D PIPPEN DEPART SITE.

1137 TEAM EXITS EXCLUSION ZONE TO CRZ TO DOFF PPE PRIOR TO LUNCH BREAK.

1157 TEAM EXITS CRZ, DEPART EF MOUNDS FOR DX-11 ACCESS CONTROL

1203 ARRIVE AT DX-11 ACCESS CONTROL.

SIGNATURE: [illegible]

11/7/94 CONTINUED

1225 ENTER DX-11 ACCESS CONTROL TO SIGN IN PRIOR TO RETURNING TO THE EF MOUNDS

1240 RETURN TO EF MOUNDS

1245 TEAM ENTERS CRZ TO BEGIN DONNING PPE.

1250 TEAM ENTERS EXCLUSION ZONE TO REMOVE EQUIPMENT.

1500 TEAM EXITS EXCLUSION ZONE TO CRZ TO DOFF PPE.

1505 TEAM EXITS CRZ.

1510 DEPART EF MOUND AREA FOR DX-11 ACCESS CONTROL.

1515 DEPART DX-11 ACCESS CONTROL.

SIGNATURE: Michael Hence

PRIOR

PPE,
OVE

TO DOFF

ESS CONTROL

11/8/94

LOCATION; TA-15 FIRING SITE (EF MOUNDS) OU 1086

WEATHER; CLOUDY, INTERMITTENT RAIN, LIGHT WIND, TEMP 42°F (IN RYDER TRUCK)

PERSONNEL

M HENKE - FTL

P GRAM - ALT FTL

R STAUB - SSO

J TAYLOR - RCT

J BINGHAM - FIELD

TEXT;

0850 ARRIVE AT DX-11 ACCESS CONTROL AND SIGN IN.

0900 ARRIVE AT EF MOUNDS. RAD SCAN EQUIPMENT AND LOAD INTO RYDER TRUCK. PREPARE TO MOVE BACK TO TA-36.

0922 P GRAM ENTERS CRZ AND DRESSES IN PPE TO PERFORM DECONTAMINATION ON SOME EQUIPMENT.

1124 DECONTAMINATION COMPLETED. DEPART EF MOUND AREA FOR OU-1086 LESS THAN 90 DAY STORAGE AREA TO STORE DECONTAMINATION WASTE WATER.

1235 TAKE DRILL RIG AND STEAM CLEANER THRU EAST GATE TO AREA OF TA36-1.

1257 DEPART DX-11 ACCESS CONTROL.

SIGNATURE: [illegible]

11/9/94

LOCATION: TA-18 (TA36-1 LEACH FIELD)

WEATHER: CLEAR, SOME HIGH THIN CLOUDS, NO NOTICEABLE WIND. TEMP ~50°.

PERSONNEL:

M HENKE - FTL

P GRAM - ALT FTL

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - SAMPLER

TEXT:

1230 THE RYDER TRUCK WAS UNAVAILABLE UNTIL 1230 BECAUSE IT WAS BEING USED TO MAKE A VIDEO TAPE. WE WENT TO TA-18 AND PICKED UP THE KAPPA SITE ROAD, TA 52 GATE KEY AND A SECURITY GUARD TO ESCORT/ACCOMPANY US TO THE BUILDING TA-36-1 LEACH FIELD. THIS LEACH FIELD SERVED TA36-1, BUT IS ON TA-18 CONTROLLED PROPERTY.

1255 WE MOVED OUR DRILL RIG, STEAM CLEANER AND PORTABLE TOILET FROM TA-36, BELOW EAST GATE OF TA-36, THRU GUARD STATION 460 AND ONTO THE LEACH FIELD AREA. WE SITED AND LEVELLED THE DRILL RIG, SET UP AN EXCLUSION ZONE AND BEGAN SETTING UP A CRZ.

1525 RETURNED THE KAPPA SITE ROAD, TA52 GATE KEY TO TA-18 GROUP OFFICE. WE WILL BEGIN DRILLING TOMORROW. NO SAMPLES WERE TAKEN.

SIGNATURE: [illegible]

0715

0930

~1000

1015

1025

1045

11/14/99

LOCATION: TA-18 (TA-36-1 LEACH FIELD) PRS-36-003(a)

WEATHER: CLEAR, LIGHT WIND TEMP ~ 35°F.

PERSONNEL

M HENKE - FTL

P GRAM - ALT FTL

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - SAMPLER

D BAZZELL - SAMPLER

N NESS - COMPUTER (WILL ARRIVE LATER IN DAY)

TEXT:

0915 ARRIVED AT TA-18 TO PICK UP THE KAPPA SITE ROAD, TA52 GATE KEY AND A SECURITY GUARD TO ESCORT/ ACCOMPANY US TO PRS-36-003(a), (TA-36-1 LEACH FIELD). THIS LEACH FIELD IS LOCATED ON TA-18 CONTROLLED PROPERTY, BUT SERVED TA-36 BUILDING 1.

0930 ARRIVE AT PRS-36-003(a). COMPLETED SET UP OF CRZ.

~1005 CONDUCT TAILGATE SAFETY MEETING.

1015 DRILL/SAMPLE CREW ENTERS CRZ AND BEGINS DONNING PPE.

1025 DRILL/SAMPLE CREW ENTERS EXCLUSION ZONE TO BEGIN DRILLING.

1045 FIRST BORE HOLE WAS SITED TO BE IN THE AREA OF THE LEACH FIELD DISTRIBUTION BOX. REFUSAL

SIGNATURE: [illegible]

11/14/94 CONTINUED

1045 AT THIS HOLE OCCURRED AT 22 INCHES WITH NO INDICATION THAT THIS HOLE WAS IN THE LEACH FIELD. THE DRILL RIG WILL BE RELOCATED EAST APPROXIMATELY 40 FEET. NO SAMPLE TAKEN.

1107 DRILL RIG IS RELOCATED AND BEING LEVELLED.

1128 DRILL RIG IS LEVELLED. BEGIN DRILLING WITH SONIC DRILL HEAD, REFUSAL AT 2½ FEET.

1202 SAMPLE/DRILL CREW ENTERS CRZ TO DOFF PPE FOR LUNCH.

1221 CREW EXITS CRZ FOR LUNCH BREAK.

1295 CREW ENTERS CRZ TO DON PPE PRIOR TO RESUMING DRILLING.

1306 THE DRILL RIG WILL BE RELOCATED SINCE REFUSAL OCCURRED AT 2½ FEET. RIG IS LOCATED ~ 15 FEET NORTH OF PREVIOUS LOCATION. NOTE THAT TEST DRILL HOLES NUMBER 1 AND NUMBER 2 WERE BACKFILLED WITH CUTTINGS. DRILL RIG MOVED 12 FEET EAST.

1446 Samples 1897 and 1893 BROUGHT TO CRZ. BORE HOLE ~~36~~ NUMBER ~~3~~ 4; 36-3053. Test DRILL HOLE NUMBER 3 ENCOUNTERED THE NORTHERN-MOST TRENCH OF THE LEACH FIELD. THE DRILL RIG WAS MOVED ~ 1 FOOT NORTH FOR SAMPLE LOCATION 36-3053, BOREHOLE NUMBER 4. TEST HOLE NUMBER 3 AND SAMPLE HOLE 36-3053 WERE BACK FILLED WITH CUTTINGS AND ~ 1/8 BAG OF BENTONITE.

1500 DRILL/SAMPLE TEAM ENTERS CRZ TO DOFF PPE.

SIGNATURE: Michael Henke

11/14/94 CONTINUED

1529 DEPART (TA-36-1 LEACH FIELD) AREA PRS-36-003(a) FOR TA-27 FIELD OFFICE TO LABEL SAMPLES.

SIGNATURE: [illegible]

:ITH NO
LEACH
ITED
E TAKEN,
:LLED,
JG WITH

FF PPE

: TO

REFUSAL
, 15 FEET
ST DRILL
'LLED WITH

:, BORE
DRILL
ERN-MOST
RIG WAS
TION
E NUMBER
ILLED
NTON ITE.
FF PPE,

11/15/94
LOCATION; TA-18 (TA 36-1 LEACH FIELD) PRS-36-003(a)
WEATHER; CLEAR, LIGHT WIND, TEMP ~35°
PERSONNEL:
M HENKE - FTL
P GRAM - ALT FTL
K MC FADDEN - SSO
J TAYLOR - RCT
J BINGHAM - DRILLER
N NESS - COMPUTER (WORKING AT ANOTHER LOCATION)
TEXT
0815 ARRIVE AT TA-18 TO PICK UP THE KAPPA SITE ROAD TA-52 GATE KEY AND A SECURITY GUARD TO ESCORT/ACCOMPANY US TO THE BUILDING TA-36-1 LEACH FIELD. THIS LEACH FIELD SERVED TA-36 BUILDING 1, BUT IS LOCATED ON TA-18 CONTROLLED PROPERTY.
0840 DUE TO A DELAY IN PROCURING THE KAPPA SITE ROAD TA-52 GATE KEY WE HAVE JUST ARRIVED AT THE GATE TO THE WORK AREA, WE WILL PROCEED TO SET UP OUR EQUIPMENT
0914 PERFORM TAILGATE SAFETY MEETING.
0920 DRILLING/SAMPLING CREW ENTERS CRC TO BEGIN DONNING PPE
0935 DRILLING/SAMPLING CREW ENTERS EXCLUSION ZONE.
1000 BEGIN TEST BORE HOLE NUMBER 5 - 12 FEET EAST OF SAMPLE HOLE (BORE HOLE NUMBER 4)
SIGNATURE: [illegible] / [illegible]

1005
1027
1041
1200
1220

11/15/94 CONTINUED.

1005 TEST BORE HOLE NUMBER 5 REACHES 27 INCHES. TEST BORE HOLE DID NOT ENCOUNTER TRENCH. DRILL RIG WILL BE MOVED 1 FOOT TO THE ~~SOUTH~~ NORTH, NORTH FOR TEST BORE HOLE NUMBER 6

1027 TEST BORE HOLE NUMBER 6 REACHED 31 INCHES. TEST BORE HOLE DID NOT ENCOUNTER TRENCH. DRILL RIG WILL BE MOVED 2 FEET SOUTH (1 FOOT SOUTH OF TEST BORE HOLE NUMBER 5) FOR TEST BORE HOLE NUMBER 7. TEST BORE HOLES NUMBER 5 AND 6 WERE BACK FILLED WITH CUTTINGS TO THE GROUND SURFACE

1041 TEST BORE HOLE NUMBER 7 REACHES 37 INCHES. TEST BORE HOLE ENCOUNTERED TRENCH AND WILL NOW BE IDENTIFIED AS SAMPLE BORE HOLE NUMBER 7. SAMPLE SHOWS EVIDENCE OF VITRIFIED CLAY PIPE AND STAINING AT THE SOIL TUFF INTERFACE. SAMPLE NO. 7 BOREHOLE IS SAMPLE SITE I.D. 36-3054. SAMPLE I.D. ~~1895~~ 1901 AND 1900 WILL BE TAKEN FROM THIS BORE HOLE. SAMPLE NUMBER 1900 WAS TAKEN FROM 22 TO 32 INCHES. SAMPLE NUMBER 1901 WAS TAKEN FROM 32 TO 38 INCHES. BOREHOLE 36-3054 (SAMPLE BOREHOLE NUMBER 7) WAS BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE.

1200 DRILLING/SAMPLING CREW ENTERS CRZ TO DOFF PPE IN PREPARATION FOR LUNCH BREAK.

1220 BEGIN LUNCH BREAK.

Signature

11/15/94 CONTINUED

1240 DRILLING/SAMPLING CREW ENTERS CRZ TO DON PPE. 1425

1245 DRILLING/SAMPLING CREW ENTERS EXCLUSION ZONE AND BEGINS DRILLING TEST BORE HOLE NUMBER 8. 1435

1248 TEST BORE HOLE NUMBER 8 REACHES 42 INCHES MH 11/15/94 1445

TEST BORE HOLE NUMBER 8 DID NOT ENCOUNTER A TRENCH.

TEST BOREHOLE NUMBER 8 WAS LOCATED ~ 20 FEET EAST AND 10 FEET SOUTH OF SAMPLE BOREHOLE NUMBER 7.

THE DRILL RIG WILL BE MOVED 1 1/2 FEET NORTH.

1310 TEST BORE HOLE NUMBER 9 REACHES 36 INCHES. TEST BORE HOLE NUMBER 9 DID NOT ENCOUNTER TRENCH. THE DRILL RIG WILL BE MOVED 2 1/2 FEET ~ SOUTH OF TEST BORE HOLE NUMBER 8. TEST BORE HOLE ~~8~~ 9 WAS BACKFILLED WITH CUTTINGS AND ~ 1/8 BAG OF BENTONITE. MH 11/15/94 1526

1325 TEST BORE HOLE NUMBER 10 REACHES 41 INCHES. 1532

TEST BOREHOLE NUMBER 10 DID NOT ENCOUNTER TRENCH. 1537

1343 TEST BOREHOLE NUMBER 8 WAS BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE. 1613

1350 DRILL RIG IS MOVED NORTH ~ 8 INCHES FOR TEST BORE HOLE NUMBER 11.

1400 TEST BORE HOLE NUMBER 11 REACHES 38 INCHES WITH ~~REFUS~~ REFUSAL AT 38 INCHES. NO INDICATION OF BEING IN TRENCH. MH 11/15/94

BACKFILL BOTH HOLE NUMBER 10 AND 11 WITH CUTTINGS AND LESS THAN 1/4 BAG OF BENTONITE.

1420 DRILL RIG IS MOVED 3 FEET NORTH FROM TEST BORE HOLE NUMBER 11 FOR TEST BORE HOLE NUMBER 12.

SIGNATURE: Michael Hooke

[redacted]

PPE.
ZONE
NUMBER 8.
ES.
ER A TRENCH.
FEET EAST
BER 7.
TH,
BORE
THE DRILL
EST BORE
KFILLED
TE.
HES,
& TRENCH.
H CUTTINGS

EST BORE

8 INCHES
NDICATION

TINGS

TEST BORE
BER 12.

11/15/94

1425 TEST BOREHOLE NUMBER 12 REACHES 38 INCHES.
TEST BOREHOLE NUMBER 12 DID NOT ENCOUNTER TRENCH.

1435 DRILL RIG IS RELOCATED 1 FOOT NORTH OF TEST BORE HOLE NUMBER 12 FOR TEST BOREHOLE NUMBER 13.

1445 TEST BOREHOLE NUMBER 13 REACHES 40 INCHES. TEST BOREHOLE SHOWS EVIDENCE OF ENCOUNTERING TRENCH. GRAVEL AND POSSIBLY VITRIFIED CLAY PIPE. SOIL TUFF INTERFACE IS AT 28 INCHES.

1526 BACKFILL BORE HOLES 12 AND 13 WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE.
BORE HOLE NUMBER 13 IS NOW IDENTIFIED AS SAMPLE HOLE NUMBER 13. SAMPLE NUMBERS 1815, 1903 AND 1904 ARE TAKEN FROM THIS HOLE.

1532 DRILLING/SAMPLING TEAM BEGINS TO ENTER CRZ.

1551 DRILLING/SAMPLING TEAM EXITS CRZ.

1613 DEPART TA36-1 LEACH FIELD, PRS 36-003(a).

SIGNATURE [illegible]

11/17/94

LOCATION: TA-18 (TA-36-1 LEACH FIELD) PRS-36-003(a)

WEATHER: MOSTLY CLOUDY, WINDY, TEMP 30°,

LIGHT BLOWING SNOW.

PERSONNEL:

M HENKE - FTL

P GRAM - ALT FTL

K McFADDEN - SSO

J TAYLOR - RCT

J BINGHAM - DRILLER

D BAZZELL - DRILLER

N - NESS - COMPUTER (AT A REMOTE LOCATION)

TEXT:

0945 ARRIVED AT TA-18 TO PICK UP THE KAPPA SITE ROAD TA-52 GATE KEY AND A SECURITY GUARD TO ESCORT/ACCOMPANY US TO THE BUILDING TA-36-1 LEACH FIELD. THIS LEACH FIELD SERVED TA-36-1 BUILDING, BUT IS LOCATED ON TA-18 CONTROLLED PROPERTY.

0100 ARRIVE AT THE GATE TO THE WORK AREA.

0917 COMPLETE SET UP OF CRZ

0920 CONDUCT TAILGATE SAFETY MEETING.

0926 DRILLING/SAMPLING CREW ENTERS CRZ.

0935 DRILLING/SAMPLING CREW ENTERS EXCLUSION ZONE

0957 DRILL RIG RELOCATED 25 FEET EAST AND 10 FEET SOUTH OF SAMPLE BOREHOLE NUMBER 13, FOR TEST BOREHOLE NUMBER 14.

SIGNATURE: [illegible]

1007

1020

1045

1047

1053

1056

1104

1109

1117

1126

11/17/94 CONTINUED

.17 TEST BOREHOLE NUMBER 14 REACHES 3 FEET. TEST BOREHOLE NUMBER 14 DID NOT ENCOUNTER TRENCH.

.20 TEST BOREHOLE NUMBER 14 WAS BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE

.20 DRILL RIG IS MOVED 1 FOOT NORTH FOR TEST BOREHOLE NUMBER 15. THIS HOLE DOES NOT ENCOUNTER TRENCH.

.15 TEST BORE HOLE NUMBER 15 WAS BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE.

.47 DRILL RIG IS MOVED 1 FOOT NORTH OF TEST BOREHOLE NUMBER 15 FOR TEST BOREHOLE NUMBER 16.

.3 TEST BOREHOLE NUMBER 16 REACHES 3 FEET. TEST BOREHOLE NUMBER 15 REACHED 3 FEET ALSO. TEST BOREHOLE NUMBER 16 DID NOT ENCOUNTER TRENCH.

.25 DRILL RIG IS MOVED 1 FOOT NORTH OF TEST BOREHOLE NUMBER 16 FOR TEST BOREHOLE NUMBER 17.

.24 TEST BOREHOLE NUMBER 17 REACHES 3 FEET. TEST BORE HOLE NUMBER 17 DID NOT ENCOUNTER TRENCH. TEST BOREHOLE WAS FILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE.

.41 DRILL RIG IS MOVED 1 FOOT NORTH OF TEST BOREHOLE NUMBER 17 FOR TEST BOREHOLE NUMBER 18.

.17 TEST BOREHOLE NUMBER 18 REACHES 2 1/2 FEET. TEST BOREHOLE ~~Ø~~ MH 11/17/94 NUMBER 18 DID NOT ENCOUNTER TRENCH TEST BORE HOLE NUMBER 18 WAS BACKFILLED WITH CUTTINGS AND 1/8 BAG OF BENTONITE.

1126 TEST BOREHOLE NUMBER ~~18~~ 19 MH 11/17/94 REACHES 2 3/4 FEET. TEST

11/17/94

BOREHOLE NUMBER ~~18~~ 19 11/17/94 DID NOT ENCOUNTER TRENCH, TEST BOREHOLE NUMBER WAS 1 FOOT NORTH OF TEST BOREHOLE NUMBER 18.

1136 DRILL RIG IS MOVED 1 FOOT NORTH OF TEST BOREHOLE NUMBER 19 FOR TEST BOREHOLE NUMBER 20.

1145 TEST BORE HOLE REACHES 3 1/4 FEET. TEST BOREHOLE NUMBER 20 DID NOT ENCOUNTER TRENCH. TEST BOREHOLE NUMBER 19 AND 20 ARE BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG OF BENTONITE EACH.

1152 DRILL RIG IS RELOCATED 1 FOOT NORTH OF TEST BORE HOLE NUMBER 20 FOR TEST BORE HOLE NUMBER 21.

1159 TEST BORE HOLE NUMBER 21 REACHES 54 INCHES. TEST BORE HOLE NUMBER 21 ENCOUNTERED THE TRENCH; HOWEVER WE WILL NOT USE IT FOR A SAMPLE.

1204 DRILL RIG IS RELOCATED 60 INCHES NORTH FROM TEST BORE HOLE NUMBER 21 FOR TEST BOREHOLE NUMBER 22.

1237 TEST BORE HOLE NUMBER 22 REACHES 58 INCHES. TWO SAMPLE TUBES WERE USED. TEST BOREHOLE NUMBER 22 ENCOUNTERS TRENCH. TEST BOREHOLE NUMBER 22 WILL NOW BE IDENTIFIED AS SAMPLE BOREHOLE NUMBER 22, LOCATION I.D. NUMBER 3056, SAMPLE I.D. NUMBER 1906. SAMPLE WILL BE TAKEN FROM 3 1/2 TO 5 FEET

1323 ADDITIONAL VIBRATORY DRILLING IS PERFORMED IN SAMPLE BORE HOLE NUMBER 22 TO A DEPTH OF 60 INCHES. THIS WAS DONE TO GET A SAMPLE OF THE TUFF BELOW THE

SIGNATURE: [illegible]

TER TRENCH
OF TEST

BOREHOLE

BOREHOLE
TEST
ED WITH
TE EACH.
EST BORE
UMBER 21.
HES.
TRENCH;

OM TEST
NUMBER

HES. TWO
MBER 22
22 WILL
MBER 22,
NUMBER
FEET
IN SAMPLE
HES, THIS
LOW THE

11/17/94

SOIL/TUFF INTERFACE. THIS IS ACTUALLY A FILL/TUFF INTERFACE. SAMPLE I.D. 1907, LOCATION I.D. NUMBER 30560, SAMPLE DEPTH FROM ~~4'~~ 2 TO 5 1/2 FEET.

1347 SAMPLE TAKEN.

1350 TEST BOREHOLE NUMBER 21 AND SAMPLE BOREHOLE NUMBER 22 ARE BACKFILLED WITH CUTTINGS AND LESS THAN 1/8 BAG BENTONITE EACH.

1400 DRILLING/SAMPLING TEAM ENTERS CRZ. DOFF PPE.

1425 DRILLING/SAMPLING TEAM EXITS CRZ TO SUPPORT ZONE.

1430 DEPART SAMPLE AREA FOR TA-27 FIELD OFFICE TO LABEL SAMPLES.

1445 ARRIVE AT TA-27 FIELD OFFICE.

11/18/94

LOCATION: TA-18 (TA-36-1 LEACH FIELD) PRS-36-003(a)

WEATHER: CLEAR AND COOL. LIGHT BREEZE. CLOUDS ARE BEGINNING TO BUILD. WEATHER PREDICTION IS FOR SNOW IN THE P.M.

PERSONNEL:

R. CORDI - DOCUMENTOR - ACTING FTL

P. GRAM - ALT. FTL

K. McFADDEN - SSO

J. TAYLOR - RCT

J. BINGHAM - DRILLER

B. TRUJILLO - DRILLER

D. BAZZELL - DRILLER

N. NESS - COMPUTER (TA-18 FIELD OFFICE)

0850 ARRIVED AT TA-18 FIELD OFFICE TO PRINTOUT COLLECT LOGS FOR SAMPLING.

0920 ARRIVED AT COLLECTION SITE. CRZ WAS SET UP BEFORE WE ARRIVED BY TWO CREW MEMBERS.

0925 CREW ENTERS CRZ TO SUIT UP IN PPE.

0936 CONDUCT TAILGATE SAFETY MEETING.

0955 DRILLING CREW ENTERS EXCLUSION ZONE. DRILL RIG RELOCATED APPROXIMATELY 14 FEET NORTHEAST OF SAMPLE BOREHOLE NUMBER 22. THIS LOCATION WILL BE BOREHOLE NO. 23. BOREHOLE NO. 23 REACHES ~60 IN ENCOUNTERING WHAT APPEARS TO BE THE EDGE OF A TRENCH. THE DRILL RIG WILL BE RELOCATED 6" TO 8" NORTH OF BOREHOLE NO. 23. THIS BOREHOLE WILL

1155

1200

SIGNATURE: Richard Cordi

6-003(a)
CLOUDS
DICTION IS

E)
LT COLLECTION

UP BEFORE

DRILL RIG IS
EAST OF
ATION WILL
~60 INCH
EDGE OF A
6" TO 8"
HOLE WILL

11/18/94 (CONT)

BE DESIGNATED NO. 24. THIS HOLE WAS TAKEN TO A DEPTH OF 72 INCHES. WHEN THE SAMPLE CORE WAS OPENED, THERE WAS ONLY A 30 INCH SAMPLE EVIDENT WITH A LARGE ROCK IN THE BOTTOM END. APPARENTLY, THE ROCK BLOCKED FURTHER SAMPLE COLLECTION, BUT THE DRILL RIG CONTINUED TO PUSH THE CORE DRILL DOWN TO THE DEPTH OF 72 INCHES. HNU REGISTERS 1.2→2.0 PPM - SUSTAINED READING. THE COREDRILL WAS REINSTALLED AND A SAMPLE WAS TAKEN DOWN TO 72 INCHES. SAMPLE SHOWS ENGINEERING FILL GRAVEL AND CRUSHED TUFF FILL. THE TRENCH-TUFF INTERFACE WAS REACHED AT 72 INCHES. THE COREDRILL WAS REINSTALLED TO GATHER A SAMPLE FURTHER INTO THE UNDERLYING TUFF FORMATION. SAMPLE NO. 1909 IS TAKEN FROM THE GRAVEL-TUFF FILL SEGMENT. SAMPLE DEPTH IS 5'4" TO 6'. THIS IS PRESUMED TO BE IN TRENCH NO. 2 AT WHITY ROAD SITE ID. NO. 36-3057. SAMPLE NO. 1910 IS TAKEN FROM 6'6" TO 7'. THIS IS TUFF MATERIAL OF DARK BROWN COLOR, MOIST, AND ROOT LADEN.

1155 BOTH BOREHOLES NOS. 23 AND 24 WERE BACKFILLED WITH CUTTINGS AND LESS THAN 1/8th OF A BAG OF BENTONITE IN EACH HOLE.

1200 DRILL RIG IS BEING MOVED TO THE MAIN DISTRIBUTION BOX FOR THE DRAIN FIELD. ATTEMPT WILL BE MADE TO DRILL RIGHT DOWN THE CENTER OF IT.

SIGNATURE: Richard [illegible]

11/18/94 (CONT)

1225 CREW BREAKS FOR LUNCH.

1300 CREW RETURNS TO EXCLUSION ZONE TO RESUME DRILLING.

1330 DRILLING BEGINS. BOREHOLE NO. 25. CORE DRILLED 2'6" WITHOUT HITTING THE DESIRED DRAIN DITCH. AN ATTEMPT WAS MADE TO PENETRATE THE DISTRIBUTION BOX BUT WAS UNABLE TO GET THROUGH. THE RIG WAS THEN MOVED TO BOREHOLE NO. 25. HOLE NO. 25 WAS BACKFILLED WITH CUTTINGS ONLY.

1350 DRILL RIG WAS MOVED ONE (1) FOOT TO THE NORTH. BOREHOLE NO. 26 WAS BORED 2'10". CORE SAMPLE SHOWED DITCH WAS MISSED.

1420 DRILL RIG WAS MOVED ONE (1) FOOT FURTHER TO THE NORTH. BOREHOLE NO. 27. CORE DRILLED TO 3'. NO STRONG INDICATOR AS TO THE TRENCH BEING HIT.

1450 DRILL RIG MOVED "AGAIN" 11/18/94 RCC ~~ONE~~ NINE FEET TO THE NORTH AND LINE UP WITH TRENCH NO. 2. TRENCH

1445 WAS HIT, BUT ANOTHER SPOON WILL BE DRILLED TO GATHER ENOUGH MATERIAL FOR ALL THE REQUIRED SAMPLES. THIS FIRST DRILL CORE WAS TO 38 INCHES. SAMPLE NO. 1892 WILL BE TAKEN FROM 30 → 38 INCHES. FILL-TUFF INTERFACE AT 36 INCHES. COLLECTION TIME 1453. FOR SAMPLE NO. 1894, WITHIN THE TUFF LAYER, COLLECTION TIME IS 1505.

1515 BOREHOLE NO. 25 BACKFILLED TO SURFACE WITH CUTTINGS. BOREHOLE NO. 26 BACKFILLED WITH CUTTINGS & ½ BAG OF

SIGNATURE: [illegible]

11/18/
BEA
CUTT
1525 SAM
1540 CRE
1555 RE
FOR

51

RESUME

DRILLED
RAIN DITCH.
F THE
TO GET
BOREHOLE
CUTTINGS ONLY
HE NORTH.
= SAMPLE

ER TO THE
TO 9'. NO
EING HIT.
TO THE
1. TRENCH
DRILLED T
HE REQUIRED
TO 38 INCHES
30 → 38 INCH
COLLECTION
THE TUFF

ITH CUTTING
& 1/8th BAG OF

11/18/94 (CONT.)
BENTONITE. BOREHOLE NO. 27 BACKFILLED WITH
CUTTINGS AND LESS THAN 1/8th BAG OF BENTONITE.
1525 SAMPLES DECONNED.
1540 CREW EXITS CRZ.
1555 RETURN TO FIELD OFFICE TO PREPARE SAMPLES
FOR RAD VAN & CHEM VAN.

SIGNATURE: Richard Cordi

11/21/94

0825 ARRIVE AT TA-27 OFFICE TRAILER - WE WILL SAMPLE THE RAINWATER 2 PHOTO OUTFALL (PRS 36-003) SAMPLES, POUR A RINSEATE BLANK AND DEMOBILIZE THE LEACHFIELD SITE AT OU1130 TODAY.

0830 TODAYS SAMPLING TEAM CONSISTS OF PETER STRAM - FTL (ICF-KB); KEN MCFADDEN - SSO (MK); MANLEY LEE - HPT (EDI); JEFF BINGHAM (LANL); BERT TRUJILLO (ICF-KB); NANCY NOSS (ICF-KB); DWIGHT BARRELL (ICF-KB); AND CHERYL ARGYTA (LANL)

0831 NANCY BEGINS PREPARING THE DAILY PAPERWORK AND ENTERING DATA INTO THE DATA BASE. THE REST OF US WILL LOAD THE VAN (RYDER) AND ASSEMBLE EQUIPMENT.

0920 DEPART TA-27 FOR PRS 36-003(a), OU1130

0925 ARRIVE AT PRS 36-003(a), OU1130 - I WILL GO INTO THE EXCLUSION ZONE IMMEDIATELY TO COLLECT THE RINSEATE BLANK - THIS NEEDS TO BE DONE RIGHT AWAY BECAUSE CST-3 (SCF) WILL NOT ACCEPT WATER SAMPLES PAST NOON TODAY; FURTHER, IN ORDER TO HAVE RAD RESULTS PRIOR TO SHIPPING THE SAMPLES, THE RAD VAN NEEDS COMPLETE ANALYSIS BY 1000 TODAY.

0930 SAMPLE AAB 2140 COLLECTED (THIS IS THE RINSEATE)

Peter T. McGehee

0931

0945

0955

1005

1010

1020

1035

1100

1105

11/21/94 continued

0931 THE RINSATE BLANK (RB) WAS COLLECTED BY POURING DECON FREE WATER OVER A SOLID [illegible] SPOON SAMPLER USED DURING DRILLING.

0945 KEN CONDUCTS THE H&S TAILGATE MEETING; BOTH NANCY AND KEN HAVE ALREADY COMPLETED THEIR H&S AND HP DOCUMENTS

0955 NANCY PARTNERS AT SITE TO PICK UP THE RADVAN ALIQUOT OF THE RB SAMPLE. SHE WILL LABEL AND DELIVER THE SAMPLE AND THEN RETURN TO PICK UP THE OTHER RB ALIQUOTS AFTER DELIVERING THE RADVAN ALIQUOT.

1005 I WILL DEPART THE EZ, DECON, AND THEN PROCEED TO THE APPROPRIATE RB ALIQUOTS.

1010 JEFF AND DWIGHT WILL POWER DRILL RIG AND EQUIPMENT DECON AND BEGIN SITE DEMOBILIZATION. NANCY WILL CONDUCT RADSURVEYS PRIOR TO DECON FOR WASTE CHARACTERIZATION PURPOSES. WHEN HE FINISHES HE, KEN, AND BERT WILL COLLECT THE PHOTO OUTFALL SAMPLES

1020 NANCY, KEN, AND BERT DEPART TO COLLECT THE PHOTO OUTFALL SAMPLES. DEWIGHT AND JEFF CONTINUE SITE DEMOB. WORK AND DECON.

1035 SAMPLING TEAM RETURNS FROM PHOTO OUTFALL.

1100 NANCY AND CHRISTY RETURN TO PICK UP THE REMAINING RB ALIQUOTS.

1105 NANCY AND CHRISTY WILL PROCESS (LABEL ETC.) AND PACKAGE SAMPLES.

11/21/94 CONTINUED

1106 REST OF CREW CONTINUES SITE DEMOBILIZATION

1110 NANCY AND CHRISTI DEPART WITH RB SAMPLE TO DEPUTY ST TO CST-3 (TA-35)

1145 NANCY AND CHRISTI RETURN TO PRS 36-003(A) SITE.

1150 PHOTO OUTFALL PRS C-36-003 SAMPLING INFORMATION

SAMPLE #	SITE ID #	COLLECTION TIME
AAB1916	36-3112	1025
AAB1917	36-3123	1028

1155 DECONTAMINATION EFFORT IS COMPLETE. MANLEY WILL CONDUCT (COMPLETE) THE HP EQUIPMENT RELEASE SURVEY. THE CREW WILL REMAIN IN THE ZONE TO ASSIST MANLEY WITH THE DRILL RIG AND DRILLING EQUIPMENT SURVEYS.

1215 KEN AND MANLEY WILL REMAIN IN THE EZ TO SURVEY THE STEAM CLEANER. THE REST OF THE CREW EXITS THE CRZ AND WILL DECON AND BREAK FOR LUNCH

1230 MANLEY AND KEN HAVE COMPLETED THE FINAL HP SURVEYS; THE DRILL RIG CROSS THE CRZ, DECON AND BREAK FOR LUNCH

1231 DECK CORE (LANL) ARRIVES AT SITE TO OFFICIAL ASSESSMENT HE WILL REVIEW THE DAILY TAILGATE MTG RECORDS.

1300 LUNCH BREAK IS OVER; THE WILL CONTINUE SITE DEMOBILIZATION

Peter G. Kolesar

11/21/94 CONTINUED.

1301 AND SAMPLE DECONTAMINATION AND RELEASE.

1340 SITE DEMOBILIZATION, AND SAMPLE DECONTAMINATION AND RELEASE COMPLETE. WE WILL RETURN TO TA-27 OFFICE TRAILER TO 11/21/94 TO CONTINUE LABELS AND COCs AND PACKING AND PROCESS SAMPLES

1347 ARRIVE AT TA-27.

1410 SAMPLE PROCESSING AND PACKING COMPLETE. WE WILL REPORT TA-27 DOLTHOSCF AND DELIVER THE SAMPLES

1415 ARRIVE AT TA-35 RAD VAN TO DELIVER SAMPLES

1425 - SAMPLE 11/21/94 DELIVERY COMPLETE

THIS COMPLETES THE DAYS ACTIVITIES AT OUTPO

11/30/94

LOCATION: TA-36 VARIOUS LOCATIONS, TO BE IDENTIFIED IN TEXT.

WEATHER: CLEAR, COLD, LIGHT BREEZE. TEMP ~ 25°F

PERSONNEL:

M HENKE - FTL

P GRAM - ALT FTL

K McFADDEN - SSO

JOHN TAYLOR - RCT

B TRUJILLO - FIELD

N NESS - COMPUTER (AT ANOTHER LOCATION)

TEXT:

0855 ARRIVE AT DX-11 ACCESS CONTROL.

0900 DEPART DX-11 ACCESS CONTROL FOR EF MOUND

0910 ARRIVE AT EF MOUNDS TO REMOVE HAZARD TAP

0920 DEPART EF MOUND AREA FOR I.J. SITE TO REPLACE LID ON SEPTIC SYSTEM.

0935 REPLACE SEPTIC SYSTEM LID.

0945 DEPART I.J. SITE FOR LOWER POTRILLO CANYON TO RETRIEVE SAMPLE BOTTLES FROM DRY STREAM BED.

0952 BEGIN TAILGATE SAFETY MEETING.

0957 END TAILGATE SAFETY MEETING.

1000 ENTER STREAM BED AREA

1002 RETRIEVE SAMPLE BOTTLES AT 36-3121 SAMPLE LOCATION. SAMPLE BOTTLES WERE DUG UP BY UNKNOWN ANIMALS? BOTTLES EMPTY.

SIGNATURE: Michael Henke

1008

1013

1023

1030

1047

1052

1106

1205

1220

1340

1353

IDENTIFIED

MP ~ 25°F

N

F MOUNDS
IAZARD TAPE
EPLACE LID

ANYON TO
STREAM

IMPLE
BY UNKNOWN

11/30/94 CONTINUED

1008 RETRIEVE SAMPLE BOTTLES AT 36-3120 SAMPLE LOCATION, SAMPLE BOTTLES WERE DUG UP BY UNKNOWN ANIMALS? BOTTLES EMPTY.

1013 RETRIEVE SAMPLE BOTTLES AT 36-3119 SAMPLE LOCATION, SOME WATER IN BOTTLES, PROBABLY RAIN. PROBABLY WILL NOT SAMPLE.

1023 RETRIEVE SAMPLE BOTTLES AT 36-3122 SAMPLE LOCATION, SAMPLE BOTTLES WERE DUG UP BY UNKNOWN ANIMALS? BOTTLES EMPTY.

1030 DEPART DRY STREAM BED AREA OF POTRILLO (LOWER) CANYON FOR MOE MAGAZINE AREA.

1047 ARRIVE AT MOE MAGAZINE AREA. WE WILL USE THIS AREA TO ACCESS FENCE CANYON.

1052 ENTER FENCE CANYON.

1106 ARRIVE AT SAMPLE LOCATION 36-3086, SAMPLE BOTTLES WASHED OUT.

1205 ARRIVE BACK AT MOE MAGAZINE AREA. ALL SAMPLE BOTTLES HAD WASHED OUT OF DRY STREAM BED. ALL BOTTLES WERE RECOVERED.

1224 SIGN OUT OF DX-11 ACCESS CONTROL DEPART TO GO TO LOWER WATER CANYON.

1340 ARRIVE AT LOWER WATER CANYON. WE HAD TO WAIT FOR THE KEY AT THE DX DIVISION OFFICE, FOR THE LUNCH HOUR TO BE OVER AND THE PERSON WHO CONTROLS THE KEY TO RETURN

1353 ENTER DRY STREAM BED AREA.

SIGNATURE: [illegible]

11/30/94 CONTINUED

1420 EXIT LOWER WATER CANYON. 6 BOTTLES WERE RECOVERED.

1441 ARRIVE AT ICF KAISER, DROP OFF 2 TEAM MEMBERS. M HENKE WILL RETURN LOWER WATER CANYON KEY TO DX-DIVISION OFFICE. NO SAMPLES WERE TAKEN FROM ANY OF THE RECOVERED SAMPLE BOTTLES. WE WILL PROBABLY NEED TO USE A DIFFERENT METHOD TO SAMPLE IN THESE ARROYOS FOR WATER. THE RUNOFF IS APPARENTLY TOO VIOLENT FOR THIS BURIED BOTTLE SAMPLING SCHEME TO WORK. SOME BOTTLES WERE FOUND ~~50~~ MKH 11/30/94 SEVERAL HUNDRED YARDS DOWNSTREAM FROM THE LOCATION THEY WERE BURIED AT IN THE ARROYO.

SIGNATURE: Michael Henke

MBERS.
N KEY
TAKEN
TLES,
ENT
R WATER.
T FOR
E TO WORK.
CAL HONDRED
HEY WERE

12/1/94

LOCATION; TA-36 VARIOUS LOCATIONS TO RETURN SAMPLE MATERIALS.

WEATHER; CLEAR, COOL, LIGHT BREEZE TEMP ~ 35"

PERSONNEL;

M HENKE - FTL

P GRAM - ALT FTL

K McFADDEN - SSO

J TAYLOR - RCT

B TRUJILLO - FIELD

J BINGHAM - FIELD

N NESS - COMPUTER / FIELD.

TEXT;

1015 ARRIVE AT DX-11 ACCESS CONTROL.

1050 ARRIVE AT I.J. SITE AFTER PICKING UP SAMPLE REMNANTS AT TA-36-48.

1052 BEGIN RETURNING SAMPLE REMNANTS TO I.J. SITE SWMU.

1059 DEPART I.J. SITE SWMU AREA FOR TA-36-48.

1105 ARRIVE AT TA-36-48 AND SORT SAMPLE REMAINS IN REGARDS TO ~~SM~~ AMH 12/1/94 SWMU LOCATIONS. PART OF THE TEAM WILL STAY AT TA-36-48 AND PERFORM DECONTAMINATION ON EMPTIED SAMPLE CONTAINERS. THE REMAINDER OF THE TEAM WILL GO TO VARIOUS SWMUS TO RETURN SAMPLE REMNANTS.

1120 DEPART TA-36-48 FOR BONEYARD.

1130 ARRIVE AT BONEYARD. RETURN BONEYARD SAMPLE

SIGNATURE: [illegible]

12/1/94 CONTINUED.

REMNANTS TO SWMU.

1140 DEPART BONEYARD FOR MDA-AA.

1146 ARRIVE AT MDA-AA. RETURN MDA-AA SAMPLE REMNANTS TO SWMU.

1150 DEPART MDA-AA FOR UPPER POTRILLO CANYON.

1158 ARRIVE AT UPPER POTRILLO CANYON. RETURN POTRILLO CANYON SAMPLE REMNANTS TO SWMU.

1208 DEPART UPPER POTRILLO CANYON FOR TA-36-48.

1215 STOP AT LOWER SLOBBOVIA TO CHECK TIRES FOR RAD.

1225 ARRIVE AT TA-36-48

1235 M HENKE TAKES K McFADDEN AND B TRUJILLO OFFSITE

1315 M HENKE RETURNS TO TA36-48

1320 M HENKE AND P GRAM GO TO TA-36-1 PHOTO OUTFALL TO RETURN SAMPLE REMNANTS TO THE SWMU.

1330 M HENKE AND P GRAM RETURN TO TA-36-48.

1357 DEPART TA-36-48 FOR DX-11 ACCESS CONTROL.

1406 ARRIVE AT DX-11 ACCESS CONTROL.

1411 DEPART DX-11 ACCESS CONTROL.

0953

1003

1004

1055

1102

1110

1115

1156

1200

SIGNATURE: Michael Henke

12/2/99

LOCATION; VARIOUS LOCATIONS TO RETURN SAMPLE REMNANTS TO SWMU'S.

WEATHER; CLEAR, COOL, TEMP ~ 35°F.

PERSONNEL:

M HENKE - FTL

K MCFADDEN - SSO

J TAYLOR - RCT

N NESS - FIELD

J BINGHAM - FIELD (AT TA-36-48)

B TRUJILLO - FIELD (AT ~~AT~~ TA-36-48)

TEXT;

0453 ARRIVE AT LOWER WATER CANYON SWMU LOCATION. PERFORM TAILGATE SAFETY MEETING.

1005 ENTER SAMPLE AREA AND RETURN SAMPLE REMNANTS.

1009 DEPART LOWER WATER CANYON SWMU LOCATION

1055 ARRIVE AT DX-11 ACCESS CONTROL.

1102 ARRIVE AT TA-36-48 TO PICK UP FENCE CANYON SAMPLE REMNANTS.

1110 DEPART TA-36-48 FOR MOE MAGAZINE AREA.

1115 ARRIVE AT MOE MAGAZINE AREA AND ENTER THE FENCE CANYON SWMU AREA TO DISPOSE OF SAMPLES REMNANTS.

1155 DEPART MOE MAGAZINE AREA.

1200 ARRIVE AT TA-36-48 TO DECON EMPTIED SAMPLE BOTTLES. WE WILL ALSO SAMPLE THE SATELLITE STORAGE LIQUID DRUM AT TA-36-48 AFTER ADDING TODAYS DECON WATER.

SIGNATURE [illegible]

12/2/94 CONTINUED

(1225) Collected water sample from waste drum.

(1229) Completed sampling, crew to decon sampling containers.

(1253) Crew completes decontaminating, secures site and leaves the site.

(1304) Checked out at DX-11 Access Control

(1325) Returned to Kaiser to preserve and prepare samples for delivery to CST-3.

SIGNATURE: Michael Hawke / Ken H. Schlatter

Appendix 2

APPENDIX 2

SAMPLE COLLECTION LOG FORMS

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1915

Affix Sample Sticker Here

Date July 14, 1994 PBT 5/4/94 Time 11:45

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanke~~ P. Beat Trujillo

Signature P. Beat Trujillo

C of C Control No. 1130-0005

Sample Location Sediment Trap below outfall

Composite: ○ Yes ◉ No

Composite Type: None

Weather Clear Hot

Sample Type Soil - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3111	0	6	in

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	Ice
Metals(EPA6010)	125 ml Polyethylene	Ice
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice
Semi-VOCs(EPA8270)	125 ml Glass	Ice

These Samples were collected using LANL ER SOP 06.09

Sample Description [illegible]

Field HE n/a

Field Stake No 36-118

Field RAD [illegible] (c/m) [illegible]

CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 BKG (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments:

PBT 5/4/94 Brown, Moist, Slight organics, Surrounding ~~[illegible]~~ oak brush, ponderosa pine, fourth ~~sample~~ location sample on slope north of Bldg. 1 E/5/94 MWH

(Fine sands and silts and abundant interwoven clays)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1914

Affix Sample Label Here

Date July 14, 1994 Time 11:17

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanks~~ P. Bert Trujillo

Signature P. Bert Trujillo

C of C Control No. 1130-0004

Sample Location Sediment Trap below outfall

Composite: ○ Yes ◉ No

Composite Type: None

Weather Clear, Hot

Sample Type Soil - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3110	0	6	in

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	Ice
Metals(EPA6010)	125 ml Polyethylene	Ice
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice
Semi-VOCs(EPA8270)	125 ml Glass	Ice

These Samples were collected using LANL ER SOP 06.09

Sample Description Fine brown

Field HE N/A

Field Stake No BC-117

Field RAD 115 cpm Direct(m) 81 cpm Loc/

CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 BKG (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments: Soil description same as AAB1915 with exception of larger quantity of organics. location desc. is third stake on slope south of Bldg. 1

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1913

Affix Sample Sticker Here

Date July 14, 1994 Time 12:00

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanke~~ P. Bert Trujillo

Signature P. Bert Trujillo

C of C Control No. 1130-0003

Sample Location Sediment Trap below outfall

Sample Type Soil - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3109	0	6	in

Composite: ○ Yes ◉ No

Composite Type: None

Weather Hot cloudy [illegible] in Southwest

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	Ice
Metals(EPA6010)	125 ml Polyethylene	Ice
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice
Semi-VOCs(EPA8270)	125 ml Glass	Ice

These Samples were collected using LANL ER SOP 06.09

Sample Description [illegible]

Field HE N/A Field Stake No 36-116

Field RAD [illegible] (c/m) 115 cpm [illegible]

CGI N/A (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments: [illegible] AA Bert 7/14/1994

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 14, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) M. Henke

Signature [illegible]

C of C Control No. ~~1130-0002~~ 1130-0001

Sample Location Sediment Trap below outfall

AAB1911

Affix Sample Sticker Here

Sample Type Soil - Surface

QA/QC Type ~~Field Duplicate~~ N.A.

Location ID	Start Depth	End Depth	Units
36-3108	0	6	in

Composite: ○ Yes ◉ No

Composite Type: None

Weather Cloudy, Rain, Possible showers

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	Ice
Metals(EPA6010)	125 ml Polyethylene	Ice
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice
Semi-VOCs(EPAS270)	125 ml Glass	Ice

These Samples were collected using LANL ER SOP 06.09

Sample Description [illegible]

Field HE N/A

Field Stake No 36-115

Field RAD [illegible] (c/m) [illegible] cpm

CGI N/A (% LEL)

○ FID ◉ PID - Results 5.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments: Fine sands to silt/clay loam abundant inter mixed organic se (~~Pine~~ predominately pine needles and other forest litter) wildlife brown moderately moist)

Sample location taken directly below outfall within drainage channel on steep slope North of Bldg. 1

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 14, 1994 Time 13:24

Technical Area 36 Operable Unit 1130

Name (Print) P. Bart Trujillo

Signature P. Bart Trujillo

C of C Control No. 1130-0001

Sample Location Sediment Trap below outfall

AAB1912
Affix Sample Sticker Here

Sample Type Soil - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3108	0	6	in

Composite: ○ Yes ◉ No

Composite Type: None

Weather Clear, Cool, Strong Possibility

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	Ice
Metals(EPA6010)	125 ml Polyethylene	Ice
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice
Semi-VOCs(EPA8270)	125 ml Glass	Ice

These Samples were collected using LANL ER SOP 06.09

Sample Description See AAB1911

Field HE N/A Field Stake No 36-115

Field RAD 113 cpm Direct(c/m) 98 cpm Neut CGI N/A (% LEL)

○ FID ◉ PID - Results 0.7 BKG (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments: Same soil description as AAB1911

location 1.0' North of AAB1911

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1873
Affix Sample Sticker Here

Date July 21, 1994 Time 1221

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hopke~~ Richard Cecil

Signature Richard Cecil

Sample Type Sludge (Watery)

QA/QC Type None

C of C Control No. 1130-0010

Sample Location Septic Tank east of building 1, TA-36

Location ID	Start Depth	End Depth	Units
36-3094	0	0	

Composite: ○ Yes ◉ No

Composite Type: None

Weather Partially cloudy - rain coming

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice → 1130-0017 (COC control No.)
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8260)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

These Samples were collected using LANL ER SOP 06.15

Sample Description See below in comments

Field HE Neg Field Stake No NA

Field RAD 82 (c/m) (in tank) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) (background) 21% O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):
Roll 1, FRAME #1 & 2, photo of septic tank looking east of Building 1.
PHOTO LOG: #1, #2

Comments:

- Slight odor detectable in tank.
- Low turbidity - water sample

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1874

Affix Sample Sticker Here

Date July 21, 1994 Time 1228

Technical Area 36 Operable Unit 1130

Name (Print) ~~[illegible]~~ Richard Cecch

Signature [signature]

C of C Control No. 1130-0011

Sample Location Septic Tank east of building 1, TA-36

Composite: ○ Yes ◉ No

Composite Type: None

Weather Cloudy - rain coming

Sample Type Sludge (Watery)

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3095	0	0	

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice → 1130-C017 (COC [illegible])
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8260)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

These Samples were collected using LANL ER SOP 06.15

Sample Description [illegible]

Field HE NA Field Stake No NA

Field RAD 66 (c/m) (in tank) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)(background) 21 % O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

SEE AAB1873

Comments:

- Liquid sample - low turbidity
- Slight odor detectable in tank

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1875

Affix Sample Sticker Here

Date July 21, 1994 Time 1238

Technical Area 36 Operable Unit 1130

Name (Print) ~~Michael~~ Richard Coeli

Signature Richard Coeli

C of C Control No. 1130-0012

Sample Location Septic Tank east of building 1, TA-36

Sample Type Sludge (Watery)

QA/QC Type Field Duplicate

Location ID	Start Depth	End Depth	Units
36-3095	0	0	

Composite: ○ Yes ◉ No

Composite Type: None

Weather Cloudy - rain coming

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice → 1130-0017 (COC Control No.)
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8260)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

These Samples were collected using LANL ER SOP 06.15

Sample Description see below under comments

Field HE pp

Field Stake No NA

Field RAD 76 (c/m) (in tank)

CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)(background)

21 % O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

see AAB1873

Comments:

- Liquid sample - low turbidity
- Slight odor detectable in tank

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1876

Affix Sample Sticker Here

Date July 21, 1994 Time 1244

Technical Area 36 Operable Unit 1130

Name (Print) ~~Hy Hahn~~ Richard Cordi

Signature Richard Cordi

C of C Control No. 1130-0013

Sample Location Septic Tank east of building 1, TA-36

Sample Type Water - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3096	0	0	

Composite: ○ Yes ◉ No

Composite Type: None

Weather Cloudy - rain coming

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8260)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

1130-0017 (COC Control No.)

These Samples were collected using LANL ER SOP 06.15

Sample Description See below under Comments

Field HE NA Field Stake No NA

Field RAD 62 (c/m)(intake) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)(background) 21 % O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

See AAB1873

During sampling, needle deflected to 2 ppm on PID.

Comments:

- Sludge sample - moderate organic odor
- Saturated sludge, high organic content, fine to coarse sand, medium gravel. Some organic staining.
- Sample taken from west side of tank.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1877

Affix Sample Sticker Here

Date July 21, 1994 Time 1303

Technical Area 36 Operable Unit 1130

Name (Print) ~~McGeoke~~ Richard Goedl

Signature [signature]

C of C Control No. 1130-0014

Sample Location Septic Tank east of building 1, TA-36

Sample Type Water - Surface

QA/QC Type None

Location ID	Start Depth	End Depth	Units
36-3097	0	0	

Composite: ○ Yes ◉ No

Composite Type: None

Weather partially cloudy - rain coming

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice → 1130-001 7 (COC control No)
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8250)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

These Samples were collected using LANL ER SOP 06.15

Sample Description dark black - under concrete

Field HE NA Field Stake No NA

Field RAD 7.3 (c/m) (intake) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) (background) 21 % O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

See AAS1873

Comments:

- Sludge sample - moderate to strong organic odor.
- Saturated sludge, high organic content, fine to coarse sand, medium gravel. Dark organic staining.
- Sample taken from east side of tank.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1878

Affix Sample Sticker Here

Date July 21, 1994 Time 1321

Technical Area 36 Operable Unit 1130

Name (Print) ~~Michelle~~ Richard Cordi

Signature [signature]

C of C Control No. 1130-0015

Sample Location Septic Tank east of building 1, TA-36

Composite: ○ Yes ◉ No

Composite Type: None

Weather Partially cloudy - sun coming

Sample Type Water - Surface

QA/QC Type Field Duplicate

Location ID	Start Depth	End Depth	Units
36-3097	0	0	

Analysis	Container	Preservative
Cyanide	125 ml Polyethylene	NaOH
Metals(EPA6010)	500 ml Polyethylene	HNO3
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice → 1130-0011 (QC Control No.)
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice
VOCs(EPA8260)	40 ml Amber Glass-A	HCl
VOCs(EPA8260)	40 ml Amber Glass-B	HCl

These Samples were collected using LANL ER SOP 06.15

Sample Description See below under comments

Field HE NA Field Stake No NA

Field RAD 67 (c/m) (Outside) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)(background) 21 % O_2

Photo (Roll, Frame, Azimuth, Subject, Participants): SEE AAB 573

Comments:

- Sludge sample - moderate to strong organic odor.
- Saturated sludge, high organic content, fine to coarse sand, medium gravel. Some organic. [illegible]
- Sample taken from east side of tank.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1918

Affix Sample Sticker Here

Date July 25, 1994 Time 11.00

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Maestas~~ P. Bart Trujillo

Signature P. Bart Trujillo

Sample Type Water - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sediment Trap below outfall

Location ID	Start Depth	End Depth	Units
36-3108	0	0	in

These Samples were collected using LANL ER SOP

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	NaOH	1130-0008
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0008
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	~~1130-0010~~ 1130-0019
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0008

Weather Clear, Warm 75°

Sample Description See below

Field HE NEG Field Stake No 36-115

Field RAD 59 cpm (c/m) CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 BKG (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 1 Frame 3 & 4 ~~P. Trujillo~~ PBT picture taken looking to south

PHOTO LOG: #3, #4

Comments:

Flow is 14 quarts per min. (3.5 gal per min)

water is clear, ~~odor~~ no odor

Temp. 67°F, 19°C

pH 7.7

TDS 130

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1919

Affix Sample Sticker Here

Date July 25, 1994 Time 11:20

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Tenkal~~ Bert Trujillo

Signature F. Bert Trujillo

Sample Type Water - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sediment Trap below outfall

Location ID	Start Depth	End Depth	Units
36-3108	0	0	in

These Samples were collected using LANL ER SOP 1.05

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	NaOH	1130-0009
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0009
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	~~1130-0018~~ [illegible]
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0009

Weather Clear, warm 75°

Sample Description See below

Field HE NA

Field Stake No 36-115

Field RAD 58 cpm (c/m)

Cal NA (% LEL)

○ FID ◉ PID - Results 0.2 BKG (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 1, Frame 3 & 4 picture taken looking south

Comments:

Flow is 14 quarts per min (3.5 gal per min)

water is clear, no odor

Temp 67°F, 19°C

PH 7.9

TDS 130

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1852

Affix Sample Sticker Here

Date July 28, 1994 Time 1214

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Current storage area, biased by visual indicators

Location ID	Start Depth	End Depth	Units
36-3034	0	0	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0020
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0020
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0020
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0020~~ 1130-0021
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0020
U(Total)	125 ml Polyethylene	Ice	1130-0020
VOCs(EPA8260)	125 ml Glass	Ice	1130-0020

Weather Sunny warm, slight breeze

Sample Description: Gray sand [illegible] organics - small roots, moist after ~2.5 inches, no pebbles

Field HE NEG Field Stake No 5-97-17

Field RAD 117 cpm (c/m) 97-cpm

CGI NA (% LEL)

○ FID ◉ PID - Results 0.0 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#5 roll #1 photo is close up of sample

#6 roll #1 photo is close up of sample

#7 roll #1 photo is of area surrounding sample

PHOTO LOC: #5, #6, #7

Comments:

This sample requires field spot test for explosives

location: flat area surrounded by juniper trees, lots of scrap metal around sample area

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 28, 1994 Time ~~1214~~ 1230

Technical Area 36 Operable Unit 1130

Name (Print) ~~[illegible]~~ Nancy Ness

Signature [illegible]

AAB1853

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3034	0	6	in

Sample Type Soil - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Current storage area, biased by visual indicators

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0021
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0021
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0021
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0029~~ 1130-0041
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0021
U(Total)	125 ml Polyethylene	Ice	1130-0021
VOCs(EPA8260)	125 ml Glass	Ice	1130-0021

Weather Overcast, warm, breezy

Sample Description same as AAB1852

Field HE NEG Field Stake No 5-97-17

Field RAD 50 AAB1852 (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results same as 52 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

See 1552

Comments:

This sample requires field spot test for explosives

Location: same as AAB1853

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1854

Affix Sample Sticker Here

Date July 28, 1994 Time 1240

Technical Area 36 Operable Unit 1130

Name (Print) ~~[illegible]~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Current storage area, biased by visual indicators

Location ID	Start Depth	End Depth	Units
36-3035	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0022
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0022
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0022
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0329~~ 1130-0022
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0022
U(Total)	125 ml Polyethylene	Ice	1130-0022
VOCs(EPA8260)	125 ml Glass	Ice	1130-0022

Weather partly cloudy, warm windy

Sample Description Light brown, 20% biological growth, moist organic clay

Field HE NEG Field Stake No 5-95-18

Field RAD 0.8 cpm (c/m) 90-count CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#3 & #9, roll 1, photo is close up of sample

#10, roll 1, photo of area surrounding sample

PHOTO LOG: #3, #9, #10

Comments:

This sample requires field spot test for explosives

Location: flat area, juniper trees surrounding area, 2 metal campers ≈ 10' N of sample, wood timbers ≈ 15' NE of sample

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1855

Affix Sample Sticker Here

Date July 28, 1994 Time 1257

Technical Area 36 Operable Unit 1130

Name (Print) Nancy Ness

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Current storage area, biased by visual indicators

Location ID	Start Depth	End Depth	Units
36-3036	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0023
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0023
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0023
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0029~~ 1130-0031
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0023
U(Total)	125 ml Polyethylene	Ice	1130-0023
VOCs(EPA8260)	125 ml Glass	Ice	1130-0023

Weather Mostly cloudy, warm, breezy

Sample Description Slightly moist 0-2 3 inches dark brown subangular gravel <5%, <5% cobble, silty/coarse sands, moderately organic

Field HE NEG Field Stake No 5-22-19

Field RAD 131 direct (c/m) 116-bkgd CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#11 & #12 closeup of sample, roll #1

#13, roll 1, photo of area around sample

PHOTO LOG #11, #12, #13

Comments:

This sample requires field spot test for explosives

location: Yucca, juniper trees surrounding perimeter, metal signs on pallets, containers for rocket motors, 5" 33 cartridge cases, containers all on wooden pallets adjacent to sample location, metal storage shed ≈ 30' west of sample location

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1856

Affix Sample Sticker Here

Date July 28, 1994 Time 1315

Technical Area 36 Operable Unit 1130

Name (Print) ~~[illegible]~~ NANCY ROSS

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Current storage area, biased by visual indicators

Location ID	Start Depth	End Depth	Units
36-3037	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0024
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0024
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0024
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0025~~ 1130-0031
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0024
U(Total)	125 ml Polyethylene	Ice	1130-0024
VOCs(EPA8260)	125 ml Glass	Ice	1130-0024

Weather Cloudy, warm breezy

Sample Description Sand and minimal organics (roots, pine needles) medium brown, <5%

Field HE Neg (10000, <5% orange/red gravel) Field Stake No 5-100-20

Field RAD 110 cpm (c/m) 100-200 CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#14 & #15, roll 1, close up of sample

#10, roll 1, photo of area surrounding sample as well as sampling team member

Ref: PHOTO LOG: #14, #15, #10

Comments:

This sample requires field spot test for explosives

location: scrap metal ≈ 3' east of sample location, heap of scrap metal ≈ 10' south of sample, long metal strips south east ≈ 5' from sample, sparse juniper surrounding perimeter of area

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 28, 1994 Time 1331

Technical Area 36 Operable Unit 1130

Name (Print) ~~Jim Hanks~~ Nancy Ness

Signature Nancy Ness

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Former storage area, biased by visual indicators

AAB1857

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3038	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0025
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0025
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0025
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	9/21/94 ~~1130-0025~~ 1130-0051
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0025
U(Total)	125 ml Polyethylene	Ice	1130-0025
VOCs(EPA8260)	125 ml Glass	Ice	1130-0025

Weather Cloudy, Slightly warm

Sample Description Subsoil 0-6", dark brown, fine sand, ≈5% cobble, no organics

Field HE NES Field Stake No 5-101-21

Field RAD 111 dual (c/m) 120 - 60uR CGI NA (% LEL)

○ FID ◉ PID - Results 0.7 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#17 & 18, roll 1, close up of sample

#19, roll 1, photo of area surrounding sample location as well as sampling team

PHOTO LOG #17, #18, #19

Comments:

This sample requires field spot test for explosives

Location: sample location on a flat area, drainage ≈6' south of sample location, juniper tree ≈10' south of sample location, no vegetation other than this tree is growing around sample location.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 28, 1994 Time 1418

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Former storage area, biased by visual indicators

AAB1858

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3039	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0026
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0026
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0026
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0029~~ 1130-0031
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0026
U(Total)	125 ml Polyethylene	Ice	1130-0026
VOCs(EPA8260)	125 ml Glass	Ice	1130-0026

Weather cloudy warm slight breeze

Sample Description very dry, light brown, abundant organic (pine needles, bark) medium coarse sands, 25% gravel pebbles

Field HE NEG Field Stake No 5-102-22

Field RAD 103 direct (c/m) 107-bowl CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#20, #21, roll 1 close up of sample

#22, roll 1, photo of area surrounding sample location w/ field team members.

PHOTO LOG: #20, #21, #22.

Comments:

This sample requires field spot test for explosives

Location: location is directly under a ponderosa pine tree, abundant dead pine needles and pine cones. Aluminum honeycomb stacked adjacent to sample location.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 28, 1994 Time 1435

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Former storage area, biased by visual indicators

AAB1859

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3040	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0027
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0027
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0027
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0029~~ 1130-0031
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0027
U(Total)	125 ml Polyethylene	Ice	1130-0027
VOCs(EPA8260)	125 ml Glass	Ice	1130-0027

Weather Cloudy, Breezy, Warm

Sample Description: dry, clay loam, gravelly, 0-5% pebbles, abundant organics/pine needles, juniper [illegible]

Field HE NEG Field Stake No 5-103-23

Field RAD 120 dpm/cm² (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#23, 24, roll 1, close up of sample location

#25, roll 1, photo of area surrounding sample location [illegible] as sample [illegible]

PHOTO LOG: #23, #24, #25.

Comments:

This sample requires field spot test for explosives

location: sample location under a juniper tree, [illegible] amount of vegetation growing, abundant amount [illegible] dead pine needles & dead juniper

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date July 28, 1994 Time 1449

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Former storage area, biased by visual indicators

AAB1860

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3041	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0028
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0028
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0028
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0029~~ 1130-0031
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0028
U(Total)	125 ml Polyethylene	Ice	1130-0028
VOCs(EPA8260)	125 ml Glass	Ice	1130-0028

Weather Cloudy, light breeze, warm, slight sprinkles

Sample Description Charcoal gard, dry, med brown, minimal organics/roots, clear, [illegible]

Field HE Neg (5% dilution) Field Stake No 5-1141-24

Field RAD 131 dpm (c/m) CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

#1, Roll #2, close up of sample

#3, Roll #2, view surrounding sample location

[illegible]

Comments:

This sample requires field spot test for explosives

Location: dirt area, minimal vegetation growing, space trees around perimeter, scrap metal dump adjacent to sample location, metal containers in wooden box approx 20 sample location

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1834

Affix Sample Sticker Here

Date August 3, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanks~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3018	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0032
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0032
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0032
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0034
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0032
U(Total)	125 ml Polyethylene	Ice	1130-0032
VOCs(EPA8260)	125 ml Glass	Ice	1130-0032

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No [illegible]

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

[illegible] Roll [illegible], Frames 4, 5 + 6

Photos of Sampling Activities

PHOTO LOG: # 30, #31, #32

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: TA 36, SOUTH OF BOILERPLATE STORAGE AREA, NEAR MOVING FIRING SITE. SAMPLING IN DRAINAGE AREA RUNNING INTO DRY (NO WATER NEAR CC) CREEK BED. AREA IS GRASSY WITH PINON + JUNIPER TREES.

SAMPLE DESCRIPTION:

↳ COARSE SANDY SOIL, MOIST, NO ORGANICS BROWN COLOR

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1835

Affix Sample Sticker here

Date August 3, 1994 Time 1044

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ JEFF BRIGHAM

Signature Jeff Brigham

Sample Type Soil - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3018	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0034
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0034
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0034
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0048~~ 1130-0034
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0034
U(Total)	125 ml Polyethylene	Ice	1130-0034
VOCs(EPA8260)	125 ml Glass	Ice	1130-0034

Weather PARTLY CLOUDY + WARM

Sample Description SEE BELOW

Field HE NEGATIVE Field Stake No AAB 1835

Field RAD 122 DPM (c/m) 105 CPM BKG CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL # 3, PICTURES 4, 5 + 6
Photos of sampling activities
PHOTO LOG 1130, #31, #32

Comments:
This sample requires field spot test for explosives

SAMPLE LOCATION : SAME AS AAB 1834

SAMPLE DESCRIPTION : SAME AS AAB 1834

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1836
Affix Sample Sticker Here

Date August 3, 1994 Time 1100

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ 8-3-94 TB Jeff Buckham

Signature [signature]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3019	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0035
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0035
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0035
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0034
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0035
U(Total)	125 ml Polyethylene	Ice	1130-0035
VOCs(EPA8260)	125 ml Glass	Ice	1130-0035

Weather Partly cloudy 80°

Sample Description See below

Field HE Negative Field Stake No AAB 1836

Field RAD 115 DPM (a/m) 150 CPM B.G. CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2, Frames 7, 8 + 9 Photos of sampling activities

Photo Log # 34, #35

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: SAME AS AAB 1834

SAMPLE DESCRIPTION: SANDY, MOIST SOIL, BROWN COLOR

MODERATE ORGANICS

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1837
Affix sample sticker here

Date August 3, 1994 Time 1121

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ 36 5 3-94 Jeff Bingham

Signature [signature]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3020	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0036
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0036
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0036
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0037
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0036
U(Total)	125 ml Polyethylene	Ice	1130-0036
VOCs(EPA8260)	125 ml Glass	Ice	1130-0036

Weather PARTLY CLOUDY

Sample Description SEE BELOW

Field HE NEGATIVE Field Stake No AAB 1837

Field RAD 101 DUR (c/m) 45 CPM BKG CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL # 2, PICTURES 10, 11 + 12 Photos of Sampling Activities
PHOTO LOCATION 36, # 37, # 38

Comments:

SAMPLE LOCATION SAME AS AAB 1834

SAMPLE DESCRIPTION: SANDY BROWN SOIL, MOIST WITH MINIMAL ORGANICS

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1838

Affix Sample Sticker Here

Date August 3, 1994 Time 11 35

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchanan

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3021	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0037
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0037
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0037
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0037
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0037
U(Total)	125 ml Polyethylene	Ice	1130-0037
VOCs(EPA8260)	125 ml Glass	Ice	1130-0037

Weather [illegible]

Sample Description See Below

Field HE NEGATIVE Field Stake No AAB 1534

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # [illegible] Photos of Sampling Activities

PHOTO LOG # 39 #40, #41

Comments:

SAMPLE LOCATION : SAME AS AAB 1534

SAMPLE DESCRIPTION : BROWN [illegible] SILT, MEDIUM SAND, ORGANICS INTERMIXED.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1839
Affix sample sticker here

Date August 3, 1994 Time 1143

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3022	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0038
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0038
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0038
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0047
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0038
U(Total)	125 ml Polyethylene	Ice	1130-0038
VOCs(EPA8260)	125 ml Glass	Ice	1130-0038

Weather [illegible]

Sample Description [illegible]

Field HE NEGATIVE Field Stake No AAB 1839

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2 Frames 16 [illegible] 14 photos of sampling activities

PHOTO LOG: #42, #43, #44

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: SAME AS AAB 1834

SAMPLE DESCRIPTION: Brown, moist, sandy soil w/ no organics intermixed

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1840

Affix Sample Sticker Here

Date August 3, 1994 Time 1300

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Boneyard Drainage Channel

Location ID	Start Depth	End Depth	Units
36-3023	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0039
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0039
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0039
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0039
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0039
U(Total)	125 ml Polyethylene	Ice	1130-0039
VOCs(EPA8260)	125 ml Glass	Ice	1130-0039

Weather [illegible]

Sample Description [illegible]

Field HE NEGATIVE Field Stake No [illegible]

Field RAD 116 [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2, Photos 19, 20, + 21 Photos of sampling activities
PHOTO LOG #45, #46, #47

Comments:

SAMPLE LOCATION : SAME AS AAB 1534

SAMPLE DESCRIPTION : BROWN, MOIST, SANDY SILT WITH
ORGANICS INTERMIXED

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1841
Affix Sample Sticker Here

Date August 3, 1994 Time 1213

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchanan

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Arroyo down drainage from AAB 1840

Location ID	Start Depth	End Depth	Units
36-3024	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0040
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0040
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0040
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ 1130-0041
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0040
U(Total)	125 ml Polyethylene	Ice	1130-0040
VOCs(EPA8200)	125 ml Glass	Ice	1130-0040

Weather [illegible] 92°

Sample Description See Below

Field HE NEGATIVE Field Stake No [illegible]

Field RAD 117 DPM (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL # 2, PHOTOS 22, 23 + 24 / 25 + 26 ALSO PHOTOS OF THIS SAMPLING AREA

PHOTO LOG: #48, #49, #50, #51, #52

Comments:

SAMPLE LOCATION SAME AS AAB 1834

SAMPLE DESCRIPTION: BROWN WET SOIL IN STREAM BED (NOT FLOWING) MEDIUM SAND + PEBBLES ANIMAL DROPPING

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1842

Affix Sample Sticker Here

Date August 3, 1994 Time 1227

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Arroyo down drainage from AAB 1840

Location ID	Start Depth	End Depth	Units
36-3025	0	6	in

These Samples were collected using LANL ER SOP 00.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0041
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0041
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0041
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0042~~ [illegible]
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0041
U(Total)	125 ml Polyethylene	Ice	1130-0041
VOCs(EPA8260)	125 ml Glass	Ice	1130-0041

Weather [illegible]

Sample Description [illegible]

Field HE NEGATIVE Field Stake No AAB 1842

Field RAD 113 DPM (c/m) [illegible] CGI 0.0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL # 3, PHOTOS 1, 2 + 3 PHOTOS OF ~~SAMPLE~~ SAMPLING AREAS

PHOTO LOG: #54, #55, #56

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: SAME AS AAB ~~[illegible]~~ 1834 [illegible] 8-3-94

SAMPLE DESCRIPTION: BROWN MOIST SANDY SOIL WITH MINOR GRAVEL

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1861

Affix Sample Sticker Here

Date August 4, 1994 Time 1037

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ● No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (160,164)

Location ID	Start Depth	End Depth	Units
36-3042	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0043
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0043
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0043
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0059
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0043
U(Total)	125 ml Polyethylene	Ice	1130-0043
VOCs(EPA8260)	125 ml Glass	Ice	1130-0043

Weather CLEAR

Sample Description [illegible]

Field HE NEGATIVE Field Stake No AAB1861

Field RAD 101 DR2 (c/m) 113 CPM BKG CGI N/A (% LEL)

○ FID ● PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL 3, FRAMES ~~4-5~~ 4, + 6 LOOKING TO THE SOUTH DURING SAMPLING PROCESS

PHOTO LOG # 57, # 58, # 59.

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: TA-36, BONEYARD STORAGE AREA NEAR MILAGRO FIRING SITE. OPEN TERRAIN, FAIRLY DENSE WITH PINON AND JUNIPER TREES. GRASSES AND WEEDS ARE PRESENT.

SAMPLE DESCRIPTION SAMPLE WAS TAKEN BELOW AREA OF 4" OF FOREST LITTER. BELOW ~~[illegible]~~ COLOR SOIL, DRY WITH ~~SOME~~ MINIMAL ORGANICS INCORPORATED. FINE TO MEDIUM GRAINS WITH A LOAMY LOOK.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1862

Affix Sample Sticker here

Date August 4, 1994 Time 1037

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchholz

Signature [illegible]

Location ID	Start Depth	End Depth	Units
36-3042	0	6	in

Sample Type Soil - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (160,164)

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0044
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0044
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0044
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0051
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0044
U(Total)	125 ml Polyethylene	Ice	1130-0044
VOCs(EPA8260)	125 ml Glass	Ice	1130-0044

Weather [illegible] CLEAR

Sample Description [illegible]

Field HE [illegible] Field Stake No AAB 1862

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, Frames 4, 5 & 6 [illegible] PHOTO LOG #57, #58, #59.

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: SAME AS AAB 1861

SAMPLE DESCRIPTION: SAME AS AAB 1861

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1863
Affix Sample Sticker Here

Date August 4, 1994 Time 1054

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchanan

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (124,40)

Location ID	Start Depth	End Depth	Units
36-3043	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0045
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0045
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0045
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130 0054
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0045
U(Total)	125 ml Polyethylene	Ice	1130-0045
VOCs(EPA8260)	125 ml Glass	Ice	1130-0045

Weather clear

Sample Description See Below

Field HE negative Field Stake No AAB3 1563

Field RAD 26 DIR (c/m) [illegible] CGI n/a (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 3 [illegible] 7, 8 [illegible]

[illegible] sample

[illegible]

PHOTO LOG: #60, #61, #62

Comments:

This sample requires field spot test for explosives

Sample Location : Same as AAB3 1561

Sample Description : Sandy Brown color soil with medium sands

soil is moist with mild odors

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1864

Affix Sample Sticker Here

Date August 4, 1994 Time 1113

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (137,203)

Location ID	Start Depth	End Depth	Units
36-3044	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0046
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0046
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0046
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0053~~ 1130-0059
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0046
U(Total)	125 ml Polyethylene	Ice	1130-0046
VOCs(EPA8260)	125 ml Glass	Ice	1130-0046

Weather CLEAR

Sample Description SEE BELOW

Field HE NEGATIVE Field Stake No AAB 1864

Field RAD 100 DPM (c/m) 101 c/m BKG CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

ROLL # 3 PICTURES: 10 LOOKING SOUTH
11 LOOKING SOUTH
12 LOOKING WEST

PHOTO LOG: #05, #04, #05.

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION : SAME AS AAB 1861

SAMPLE DESCRIPTION : BROWN MOIST SOIL W/ MEDIUM SIZED ROCKS AND [illegible] SOME GRASS & PLANTS. MOSTLY POOR GRADED NATIVE GRASSES.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1865

Date August 4, 1994 Time 1132

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchanan

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (242,272)

Location ID	Start Depth	End Depth	Units
36-3045	0	6	in

These Samples were collected using LANL ER SOP 08.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0047
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0047
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0047
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0047
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0047
U(Total)	125 ml Polyethylene	Ice	1130-0047
VOCs(EPA8260)	125 ml Glass	Ice	1130-0047

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No [illegible]

Field RAD [illegible] (c/m) [illegible] cal [illegible] (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

[illegible]

PHOTO LOG: #66, #67, #68.

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: SAME AS AAB3 1861

SAMPLE DESCRIPTION: SAMPLE TAKEN ~~[illegible]~~ BELOW [illegible] FROM LITTER [illegible] THICK DRY, LIGHT BROWN [illegible], MEDIUM [illegible] SOME [illegible] INTERMIXED [illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1866
Affix Sample Sticker Here

Date August 4, 1994 Time 1146

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jeff Buchanan

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (35,131)

Location ID	Start Depth	End Depth	Units
36-3046	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0048
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0048
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0048
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0049
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0048
U(Total)	125 ml Polyethylene	Ice	1130-0048
VOCs(EPA8260)	125 ml Glass	Ice	1130-0048

Weather Clear

Sample Description See Below

Field HE Negative Field Stake No AAB 1866

Field RAD 134 DPM (c/m) 114 CPM Alpha CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 3 [illegible] West [illegible] of sample
Roll 3 [illegible] " " "
[illegible] East [illegible] of sample area
[illegible] PHOTO LOG: #69, #70, #71.

Comments:
This sample requires field spot test for explosives

SAMPLE LOCATION IS SAME AS AAB 1861

SAMPLE DESCRIPTION: ~~Same as AAB 1865 except~~ 35 x 4 x 14
BROWN MOIST SANDY SOIL WITH
MEDIUM SAND AND ORGANICS INTERMIXED.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1867
Affix Sample Sticker Here

Date August 4, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) M. Henke, [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (230,108)

Location ID	Start Depth	End Depth	Units
36-3047	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0049
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0049
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0049
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ [illegible]
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0049
U(Total)	125 ml Polyethylene	Ice	1130-0049
VOCs(EPA8260)	125 ml Glass	Ice	1130-0049

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No [illegible]

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 3 Photos 19 [illegible] of sample

20 [illegible]

21 [illegible]

PHOTO LOG: # 73, 173, #174.

Comments:

This sample requires field spot test for explosives

[illegible]

SAMPLE LOCATION SAME AS AAB 1861

SAMPLE DESCRIPTION: BROWN MOIST SANDY SOIL WITH MICA AND [illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date August 4, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (240,251)

AAB1868

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3048	0	0	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0050
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0050
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0050
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0057
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0050
U(Total)	125 ml Polyethylene	Ice	1130-0050
VOCs(EPA8260)	125 ml Glass	Ice	1130-0050

Weather [illegible]

Sample Description [illegible]

Field HE NEGATIVE Field Stake No [illegible]

Field RAD [illegible] DPM (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

[illegible]

PHOTO LOG: H25, H76, H77

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION IS SAME AS AAB 1861

SAMPLE DESCRIPTION: ~~[illegible]~~

[illegible] MOIST SANDY SOIL WITH CLAY AND MINIMAL [illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1869

Affix Sample Sticker Here

Date August 4, 1994 Time 1224

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ Jerry Buckman

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Random sample within bnyrd. Coordinates (77,38)

Location ID	Start Depth	End Depth	Units
36-3049	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0051
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0051
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0051
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0052~~ 1130-0051
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0051
U(Total)	125 ml Polyethylene	Ice	1130-0051
VOCs(EPA8260)	125 ml Glass	Ice	1130-0051

Weather PARTLY CLOUDY

Sample Description SEE BELOW

Field HE NEGATIVE Field Stake No AAB 1869

Field RAD 112 DPM (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # [illegible] Photos 1 Photo of Marker

2 " "

3 Photo of sampling area (location [illegible])

PHOTO LOC: #90, #91, #92.

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION : SAME AS AAB 1861

SAMPLE DESCRIPTION : MODERATELY SORTED MEDIUM SAND ~~[illegible]~~ BROWN SOIL DRY ON THE SURFACE MOIST UNDER SURFACE

NO SMELL [illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1843
Affix Sample Sticker Here

Date August 4, 1994 Time 1340

Technical Area 36 Operable Unit 1130

Name (Print) M. Henke [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Visible stain in soil
AT 234, 210

Location ID	Start Depth	End Depth	Units
36-3026	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0061
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0061
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0061
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	~~1130-0061~~ 1130-0062
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0061
U(Total)	125 ml Polyethylene	Ice	1130-0061
VOCs(EPA8260)	125 ml Glass	Ice	1130-0061

Weather [illegible]

Sample Description [illegible]

Field HE NEGATIVE Field Stake No [illegible]

Field RAD 121 [illegible] (c/m) 142 [illegible] CGI [illegible] (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll [illegible] 4 [illegible] DISCOLORED [illegible]

5 [illegible]

PHOTOS [illegible] 6 [illegible] SAMPLING [illegible]

Comments:

This sample requires field spot test for explosives

SAMPLE LOCATION: TA 36 BLOWHARD STORAGE AREA NEAR MINOR FIRING SITE. LEVEL AREA WITH TALL GRASS, PINON TREES, AND CRACKS

SAMPLE DESCRIPTION: DISCOLORED BROWN TO BLACK SOIL IN CRACKS. VISIBLE ORGANIC STAINING, PROBABLY PETROLEUM ORIGIN. SOIL IS SANDY WITH MINERAL ORGANICS.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1870
Affix Sample Sticker Here

Date August 4, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) M. Henke [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Off Boneyard-random sample coordinates (470, 138)

Location ID	Start Depth	End Depth	Units
36-3050	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0056
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0056
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0056
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0060
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0056
U(Total)	125 ml Polyethylene	Ice	1130-0056
VOCs(EPA8260)	125 ml Glass	Ice	1130-0056

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No [illegible]

Field RAD [illegible] (c/m) [illegible] CGI [illegible] (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

[illegible]

PHOTO LOG #57, #58, #59

Comments:

SAMPLING LOCATION: TA-36 BONEYARD STORAGE AREA
LEVEL AREA, [illegible] GRASS [illegible]
AND [illegible] AREA, EAST AND OUTSIDE OF [illegible]

SAMPLE DESCRIPTION: SANDY BROWN SOIL, DRY TO TP,
MOIST UNDER SURFACE.
MINIMAL ORGANICS W/ SM MEDIUM SAND

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1871

Affix Sample Sticker Here

Date August 4, 1994 Time 1413

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~

Signature

Sample Type Soil - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Off Boneyard-random sample coordinates (470, 138)

Location ID	Start Depth	End Depth	Units
	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0057
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0057
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0057
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0060
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0057
U(Total)	125 ml Polyethylene	Ice	1130-0057
VOCs(EPA8260)	125 ml Glass	Ice	1130-0057

Weather [illegible] CLEAR + HOT

Sample Description [illegible] BELOW

Field HE NEGATIVE Field Stake No AAB 1871

Field RAD [illegible] (c/m) [illegible] CPM BACK CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

SAME AS AAB 1870

PHOTO LOG: [illegible]

Comments:

SAMPLE LOCATION : SAME AS AAB 1870

SAMPLE DESCRIPTION : SAME AS AAB 1870

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date August 4, 1994 Time 1425

Technical Area 36 Operable Unit 1130

Name (Print) M. Henke

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Off Boneyard-random sample coordinates (250, 31)

AAB1872

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
	0	6	in
36 [illegible]			

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	500 ml Polyethylene	Ice	1130-0058
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0058
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0058
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0060
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0058
U(Total)	125 ml Polyethylene	Ice	1130-0058
VOCs(EPA8260)	125 ml Glass	Ice	1130-0058

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No [illegible]

Field RAD [illegible] (c/m) [illegible] CGI N/A (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # [illegible] Frames: 11 Photo of sampling area looking east

12 " "

13 " "

PHOTO LOG: #10, #11, #12

Comments:

SAMPLING LOCATION: TA-36 "BONEYARD" STORAGE AREA
MOSTLY LEVEL AREA WITH PINON + JUNIPER
GRASSES + WEEDS PRESENT, OUTSIDE OF FENCE (36-71).

SAMPLE DESCRIPTION: SANDY BROWN SOIL, MOIST WITH
MINIMAL ORGANICS, MODERATELY SORTED
SAND.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1879

Affix Sample Sticker Here

Date August 5, 1994 Time 10:59

Technical Area 36 Operable Unit 1130

Name (Print) R. Cordi

Signature Richard Cordi

Sample Type Sludge (Watery)

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location West side of tank

Location ID	Start Depth	End Depth	Units
36-3099	0	0	

Those Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0063
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0063
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0069
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0063
U(Total)	1 L Polyethylene	HNO3	1130-0063
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0063
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0063

Weather LIGHT WIND - CLOUDS BUILDING

Sample Description WATER IS LOW TURBIDITY AND DETERGENT COLOR, COLORLESS

Field HE Neg Field Stake No N/A

Field RAD 67 (c/m) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) 20% O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

#4 14-15

Showing septic tank during first sample taking. North direction

PHOTOLOG: #43, #44

Comments:

This sample requires field spot test for explosives

Negative test results

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1880

Affix Sample Sticker Here

Date August 5, 1994 Time 11:14

Technical Area 36 Operable Unit 1130

Name (Print) R. Cordi

Signature Richard Cordi

Sample Type Sludge (Watery)

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location East side of tank

Location ID	Start Depth	End Depth	Units
36-3100	0	0	

These Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0064
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0064
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0069
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0064
U(Total)	1 L Polyethylene	HNO3	1130-0064
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0064
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0064

Weather LIGHT WIND - CLOUDS BUILDING

Sample Description SAME AS AAB1879

Field HE N/A

Field Stake No N/A

Field RAD 65 (c/m)

CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

20% O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1881

Affix Sample Sticker Here

Date August 5, 1994 Time 11:20

Technical Area 36 Operable Unit 1130

Name (Print) R. Cord

Signature [illegible]

Sample Type Sludge (Watery)

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location East side of tank

Location ID	Start Depth	End Depth	Units
36-3100	0	0	

These Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0065
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0065
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0069
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0065
U(Total)	1 L Polyethylene	HNO3	1130-0065
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0065
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0065

Weather LIGHT WIND - CLOUDS BUILDING

Sample Description SAME AS AAB1879

Field HE N/A

Field Stake No N/A

Field RAD 78 (c/m)

CGI 0 (% LEL)

20% O_2

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

NA

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1882

Affix Sample Sticker Here

Date August 5, 1994 Time 11:28

Technical Area 36 Operable Unit 1130

Name (Print) R. Cordi

Signature Richard Cordi

Sample Type Liquid

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location West side of tank

Location ID	Start Depth	End Depth	Units
36-3101	0	0	

These Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0066
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0066
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0069
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0066
U(Total)	1 L Polyethylene	HNO3	1130-0066
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0066
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0066

Weather LIGHT WINDS - OCCASIONS BUILDING

Sample Description ~~SAME AS AAB1879~~ - See Comments below

RCC 8-5-94

Field HE N/A Field Stake No N/A

Field RAD 72 (c/m) CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) 20% O_2

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Very fine, thin layer of sediment on tank bottom
No significant sludge deposit
Sample will be collected to recover as much sediment as possible by scraping bottom of the tank, ~~including additional mixing~~

Sample Description:
Essentially water with moderate turbidity (< 5 NTU)
No detectable odor.
Some sludge is being recovered and turbidity is increasing

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1883

Affix Sample Sticker Here

Date August 5, 1994 Time

Technical Area 36 Operable Unit 1130

Name (Print) R. Cobb

Signature Richard Cobb

Sample Type Liquid

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location East side of tank

Location ID	Start Depth	End Depth	Units
36-3102	0	0	

These Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0067
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0067
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0069
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0067
U(Total)	1 L Polyethylene	HNO3	1130-0067
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0067
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0067

Weather LIGHT WIND - CLOUDS BUILDING

Sample Description See comments below

Field HE NA

Field Stake No N/A

Field RAD NA (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results NA (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Sample not collected due to insufficient material

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1884

Affix Sample Sticker Here

Date August 5, 1994 Time 11:40

Technical Area 36 Operable Unit 1130

Name (Print) R. Cordi

Signature [illegible]

Sample Type Liquid

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location ~~East~~ West side of tank RCC 8/5/94

Location ID	Start Depth	End Depth	Units
36-~~3102~~ 3101 RCC 8/5/94	0	0	

These Samples were collected using LANL ER SOP 06.15

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0008
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0008
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0009
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0008
U(Total)	1 L Polyethylene	HNO3	1130-0008
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0008
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0008

Weather LIGHT WIND - CLOUDS BUILDING

Sample Description Sub-surface liquid

Field HE N/A

Field Stake No N/A

Field RAD 78 RCC 8-5-94 (c/m)

CGI 0 (% LEL)

21% O_2

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Field Duplicate of AAB1882
Same description, including ~~an~~ increasing odor content.
RCC 8-5-94

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1885

Affix Sample Sticker Here

Date August 8, 1994 Time 11:11

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hemke~~ PDT 8/8/94 Bert Trujillo

Signature Bert Trujillo

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drainage channel below tank

Location ID	Start Depth	End Depth	Units
36-3104	0	6	in

Those Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0070
Mercury-Soil(SW7471)	125 ml Polyethylene	Ice	1130-0070
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0070
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0075
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0070
U(Total)	125 ml Polyethylene	Ice	1130-0070
VOCs(EPA8260)	125 ml Glass	Ice	1130-0070

Weather Pt'ly Cloudy approx 50°F w/slight breeze from SE

Sample Description See below

Field HE Neg Field Stake No N/A

Field RAD 20% gm direct (c/m) 185 cpm bkgd CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 bkgd (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #4; frames 19, 20, 21 taken from south facing North

PHOTOLOGS #19, #20, #21

Comments:

This sample requires field spot test for explosives

Location Sample Taken South of ~~Area~~ PDT 13.24 Firing Point 1d Bunker, at base of steep slope with blue grama and inter mixed grasses & shrubs.

Soil Description: Fine to medium sands, abundant intermixed silts and clays, slightly loamy texture minor intermixed tuff gravels (angular to subrounded) some engineered fill, minor organics (roots) slightly moist, light to medium brown

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1886

Affix Sample Sticker Here

Date August 8, 1994 Time 11:11

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hunke~~ P. Bert Trujillo

Signature P Bert Trujillo

Sample Type Soil - Surface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drainage channel below tank

Location ID	Start Depth	End Depth	Units
36-3104	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0071
Mercury-Soil(SW7471)	125 ml Polyethylene	Ice	1130-0071
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0071
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0075
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0071
U(Total)	125 ml Polyethylene	Ice	1130-0071
VOCs(EPA8260)	125 ml Glass	Ice	1130-0071

Weather Same as AAB 1885

Sample Description Same as AAB 1885

Field HE Neg Field Stake No N/A

Field RAD 203 cpm direct (c/m) 188 cpm bkgd CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 bkg. (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Same as AAB1885

PHOTO LOC. #4 TE, #99, #100

Comments:

This sample requires field spot test for explosives

Same as AAB 1885 - location description

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1887
Affix Sample Sticker Here

Date August 8, 1994 Time 11:30

Technical Area 36 Operable Unit 1130

Name (Print) PBT 8/8/94 ~~M. Henke~~ P. Bert Trujillo

Signature P Bert Trujillo

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drainage channel below tank

Location ID	Start Depth	End Depth	Units
36-3105	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0072
Mercury-Soil(SW7471)	125 ml Polyethylene	Ice	1130-0072
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0072
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0075
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0072
U(Total)	125 ml Polyethylene	Ice	1130-0072
VOCs(EPA8260)	125 ml Glass	Ice	1130-0072

Weather Same as AAB1885

Sample Description Same as AAB1885

Field HE Neg Field Stake No N/A

Field RAD 170 cpm direct (c/m) 168 cpm beta CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 bkg (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #4 frames 22, 23, 24 & 25 taken from South facing North

Photo Log # 101, #102, #103, #104

Comments:

This sample requires field spot test for explosives

Same as AAB1885

Location: approx. 25' South of AAB1885 in drainage channel

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1888
Affix Sample Sticker Here

Date August 8, 1994 Time 11:41

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ NOT 8/8/94 F. Bert Trujillo

Signature F Bert Trujillo

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drainage channel below tank

Location ID	Start Depth	End Depth	Units
36-3106	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0073
Mercury-Soil(SW7471)	125 ml Polyethylene	Ice	1130-0073
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0073
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0075
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0073
U(Total)	125 ml Polyethylene	Ice	1130-0073
VOCs(EPA8260)	125 ml Glass	Ice	1130-0073

Weather Same as AAB1885

Sample Description Same as AAB1885

Field HE Neg Field Stake No N/A

Field RAD 155 cpm bkgd (c/m) 228 cpm bkgd CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 bkg (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #5 Frames 1, 2 & 3 Photos taken from south facing North
Photo Loc: H 100, H107, H108.

Comments:

This sample requires field spot test for explosives

Location: approx 20' south of AAB1887 in drainage channel

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1889

Affix Sample Sticker Here

Date August 8, 1994 Time 11:52

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Henke~~ P. Bob Trujillo

Signature P. Bob Trujillo

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drainage channel below tank

Location ID	Start Depth	End Depth	Units
36-3107	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0074
Mercury-Soil(SW7471)	125 ml Polyethylene	Ice	1130-0074
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0074
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0075
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0074
U(Total)	125 ml Polyethylene	Ice	1130-0074
VOCs(EPA8260)	125 ml Glass	Ice	1130-0074

Weather Same as AAB1885

Sample Description See below

Field HE Neg Field Stake No N/A

Field RAD 163 cpm chrome/m) 154 cpm bowl CGI N/A (% LEL)

○ FID ◉ PID - Results 0.1 bkg (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #5 frames 4, 5 & 6 Photos taken from North facing South

PHOTO LOGS: #1001, #1110, #1111

Comments:

This sample requires field spot test for explosives

Location: approx 50' South of AAB1888 in drainage channel

Description: fine to course sands minor inermixed silts & clays minor tuff gravels (sub angular to sub rounded) minor organics, dry to slightly moist, light brown

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date August 8, 1994 Time 1344

Technical Area 36 Operable Unit 1130

Name (Print) ~~M. Hanks~~ NANCY NOSS

Signature

Sample Type Soil - Surface

QA/QC Type Performance Eval

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location None

AAB1933

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
	0	0	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0055
U(Isotopic)	125 ml Polyethylene	Ice	1130-0055

Weather partly cloudy, slight breeze, warm

Sample Description Sample is a Performance Evaluation Sample

Field HE NA Field Stake No NA

Field RAD NA (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results NA (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Metals sample taken from CRM 020-050 (Metals on Soil #2), Uranium sample taken from the Performance Evaluation Sample, #LCS250692-~~[illegible]~~

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 6/11/94 Time (24 hour clock) 10:50 Sheet 1 of 24

Technical Area 36 Operable Unit OU 1130

Site Work Plan ~~ER/TA~~ GA118-93-1152

Signature P. Bert Taylor

1813

AAB1812

Control No. ~~ER/TA~~ 1130-0076 Sample Type Soil - Gravel

Sample Location Site ID # 36-3074 AAB 1812

Composite NA Yes X No

Composite Type N/A

Depth of Sample 0 - 6"

Weather Partly cloudy, slight breeze, approx 78°F

Containers Used	Amount Collected
3-125 ml poly	
3-125 ml glass	
1-500 ml poly	

1 small bag → 1130-0080 (collection number)

COMMENTS LOCATION FLOW LINE OF FENCE CANYON APPROX. 20' EAST OF HAZARD RADIUS DUE SOUTH OF MUC MAGAZINE AT TA-36

DESCRIPTION: CLEAN MODERATE TO WELL SORTED, MEDIUM TO COARSE GRAIN SAND, MINOR GRAVELS (ANGULAR TO SUB ROUNDED) DRY TO MODERATELY MOIST, MOISTURE INCREASING DOWNWARD, NO ORGANICS, MEDIUM BROWN

(RAD) BETA GAMMA 113 cpm Direct & 115 cpm bent | HNU 0.2 ppm

PHOTOS - ROLL EC FRAMES 7, 8 & 9 TAKEN FACING DUE EAST
PHOTO LOG: H113, H113, H114

HE TEST : NEG

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and results stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1836 for 6:36 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge; drum contents; oil; vegetation; wipe; samples.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 6/11/94 Time (24 hour clock) 1104 Sheet 2 of 4

Technical Area 36 Operable Unit CU 113C

Site Work Plan Standard NA 64-114-93-1152
P. BERT TRUJILLO

Signature P. Bert Trujillo

1503
AAB1813

Control No. Standard NA 1130-0077 Sample Type SOIL - GRAB

Sample Location SITE ID # 36-3075 AAB1813

Composite N/A Yes X No

Composite Type N/A

Depth of Sample 0 - 6"

Weather PRTLY cloudy, slight breeze, approx 78°F

Containers Used	Amount Collected
3 - 125 ml poly	
3 - 125 ml glass	
1 - 500 ml poly	
1 - vial bag → 1130-0050 (QC control No.)	

COMMENTS
LOCATION: APPROX. 50 YARDS DOWN STREAM FROM AAB1812
IN FLOW LINE OF FENCE CANYON

DESCRIPTION: SAME AS AAB1812

(RAD) BETA-GAMMA 137 cpm direct & 165 cpm bond HNU 0.2 bkg

PHOTOS - ROLL #5 FRAMES 10, 11 & 12 TAKEN FACING WEST
PHOTO LOG: #15, #16, #17

H2S TEST: NEG

LEGEND
1. A sample collection log is to be completed for samples in each sampling interval and results stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1808 for 6:08 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe/swipe.
9. Composite Type: i.e., 24-hour, list sample numbers in comments, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 6 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 9/11/94 Time (24 hour clock) 11:20 Sheet 3 of 4

Technical Area 36 Operable Unit OU 1130

Site Work Plan SWP/QAP 1/A-UR-93-1150

Signature [illegible]

1514

AAB1814

Control No. 1130-0078 Sample Type SOIL - GREAB

Sample Location SITE ID # 36-3076 AAB1614

Composite NA Yes X No

Composite Type N/A

Depth of Sample ~~[illegible]~~ 0"-6" PBI 9/11/94

Weather ~~[illegible]~~ approx 80°F

Containers Used	Amount Collected
3-125 ml poly	
3-125 ml glass	
1-500 ml poly	
1-Vial Vog → 1130-0079 (Volatiles)	

COMMENTS

LOCATION: APPROX 250 yards DOWNSTREAM (EAST) FROM AAB1613 IN BOTTOM OF FENCE CANYON IMMEDIATELY OF TWO FLOW LINES

DESCRIPTION: SAME AS AAB1612 plus DARK ORGANIC STAINING

RAD: BETA-GAMMA 123 cpm direct + 50 cpm bkg / 12 NG [illegible]

PHOTOS - ROLL #5, FRAMES 13, 14 & 15
PHOTO LOG: [illegible] #120

HC TEST - NEG

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and affix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include station in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/11/94 Time (24 hour clock) 11 35 Sheet 4 of 4

Technical Area 36 Operable Unit 94-11 SC

Site Work Plan 94-11 SC 93-1152

Signature P Bret Tenylle

1815

AAB1815

Control No. 1130-0022 Sample Type SOIL - GRAB

Sample Location SITE 10 SE SC - 3077 AAB 1815

Composite NA Yes X No

Composite Type N/A

Depth of Sample 4 - 6"

Weather clear, slight breeze, approx 80°F

Containers Used	Amount Collected
3-125 ml poly	
3-125 ml glass	
1-500 ml poly	
1-1 gal bag → 1130-0050 (COC CONTAINER No.)	

COMMENTS VOC 8/11/94

LOCATION: APPROX. 100 YARDS DOWNSTREAM (EAST) FROM ADE 10-4 IN FLOODINE AT FENCE CANYON

DESCRIPTION: SAME AS AAB 1812, PLUS DARK STAINING

RAD: BETA GAMMA 125 cpm direct & 130 cpm wipe, 14 NU 0.2 kg

PHOTOS: ROLL #5, FRAMES 16, 17 & 18
PHOTO LOG #131, #132, #133

HE TEST: NEG

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and results stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1836 for 6:36 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge; drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 3/10/94 Time (24 hour clock) [illegible] Sheet 4 of 5

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR-93-1152

Signature [illegible]

1520 : JB 3-12-94

AAB1820

Control No. 1130-0085 Sample Type Surface Soil

Sample Location Potrillo Canyon Sed Catch #4 Site ID # 36-3082 3051 JB 3-12-94

JB 3-12-94

Composite NA Yes X No

Composite Type NA

Depth of Sample 0-1/2 IN

Weather Clear 76°

Containers Used	Amount Collected
3-125ml Glass	
3-125ml poly	
1-500ml poly	

COMMENTS Location: Potrillo Canyon Stream [illegible] (see [illegible])
Canyon floor [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible]

JB 3-12-94

Sample Description: [illegible] clear [illegible] [illegible] medium sand
[illegible] [illegible] moist, moisture [illegible] [illegible]
[illegible]

RAD READING: 10K / 10K [illegible] PID READING: 0.2

HE TEST: NEGATIVE

JB 3-12-94

PHOTO: Roll # 6 [illegible] photo of sample taken during [illegible]
3-94 Photo Log: 124, 1125

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and results stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1835 for 6:35 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distance. Include station in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 5/18/01 Time (24 hour clock) [illegible] Sheet 4 of 5

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR-93-1152

Signature [illegible]

AAB1819

Control No. 1130-0084 Sample Type Surface Soil

Sample Location Potrillo Canyon Seep Catch #3 Site ID # 36-3050

Composite NA Yes ___ No X

Composite Type NA

Depth of Sample 0-6 IN

Weather [illegible]

Containers Used	Amount Collected
3-125ml glass	
3-125ml poly	
1-500ml poly	

COMMENTS Location: [illegible] 1-[illegible] poly [illegible] (HE CONTAINING)

Sample description [illegible]

Pad Reading: [illegible] / 14 [illegible] Pad Reading: [illegible]

HE Test: [illegible]

Photo: [illegible] 5 [illegible]
[illegible] 6 "
7 "

PHOTO LOG: H134, H137, H139.

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and /self/ stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-01.
3. Time: Use 24-hour clock; i.e., 1835 for 6:35 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinate to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 5/12/94 Time (24 hour clock) 1121 Sheet 3 of 5

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR-93-1152

Signature [illegible]

AAB1818

Control No. 1130-0083 Sample Type Surface Soil

Sample Location Potrillo Canyon sed catch #2 site ID # 36-3073

Composite NA Yes X No

Composite Type NA

Depth of Sample 0"-6"IN

Weather [illegible]

Containers Used	Amount Collected
3-125ml glass	
3-125ml poly	
1-500ml poly	

COMMENTS LOCATION: [illegible]

SAMPLE DESCRIPTION: [illegible]

Grid Coordinates [illegible] Dist Roadway [illegible]

HE TEST. [illegible]

PHOTOS: [illegible]

PHOTO LOG # 1 24 M 20, H 131

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and readily available to form when the sample label is prepared.
2. Date: Use DD-MMM-YY(e.g., 01-JAN-91.
3. Time: Use 24-hour clock(i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (intersect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, amount, personnel); sludge, drum contents; oil; vegetation; wipe(samples.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Container Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/12/94 Time (24 hour clock) 1133 Sheet 2 of 5

Technical Area 36 Operable Unit 1130

Site Work Plan LA UR-93-1552

Signature [illegible]

AAB1817

Control No. 1130-CO82 Sample Type Surface Soil - Duplicate of 1816

Sample Location Rotello Canyon Sed Catch #1 Site ID # 36-3078

Composite NA Yes X No

Composite Type NA

Depth of Sample 0-6 in

Weather Clear + warm

Containers Used	Amount Collected
3-125ml glass	
3-125ml poly	
1-500ml poly	
1-RESERVE poly bag #1130-CO86 (Duplicate No.)	

COMMENTS Location: same as 1816 ~~[illegible]~~ 8/12/94 1820

Sample Description: same as 1816

Rad Reading: 12b / 113 Beta PID Reading: 0

HE Test: Negative

Photo: Roll 16 Photos 12 " Sampling Photos location [illegible]
13 "

Photo Log: #132, #133, #134

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and results stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1808 for 6:08 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinate to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/12/94 Time (24 hour clock) 1134 Sheet 5 of 5

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR 93-1152

Signature [illegible]

1816 TA 8-12-94

AAB1810

Control No. 1130-0031 Sample Type Surface Soil

Sample Location Potrillo Canyon Sed Catch #4 / Site ID 36-3054 30-75

Composite N/A Yes X No

Composite Type NA

Depth of Sample 0-6 IN

Weather CLEAR + WARM

Containers Used	Amount Collected
3-125ml glass	
3-125ml poly	
1-500ml poly	

COMMENTS Catch. Same as [illegible] 1-125ml glass poly dup → 1130-0086 (QC Control No.)

Sample Description: SAME AS AAB 1811

Rad Reading: [illegible] PID Reading: 0.2

HE TEST: [illegible]

PHOTO: [illegible]

PHOTO LOG: [illegible] #132, #133, #134 [illegible]

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use coring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include season in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/12/94 Time 1300 AAB1934

Technical Area 36 Operable Unit 1130

Name /Signature PETER GRAY [signature]

Control No (from Chain of Custody form) 1130-0057

Location ID No NA

Sample Type PERFORMANCE EVALUATION

Sample Location NA

Composite NA YES ✓ NO

Composite Type NONE

Depth of Sample NA (in) (ft)

Weather SUNNY, MILD, NO BREEZE, ETC

Containers Used	Analysis Requested
1 25 ml Poly	U (ISOTOPIC)
1 Comp Poly	ARGONS

LANL ER SOP # 6.09 was used to collect this sample.

COMMENTS

PERFORMANCE EVALUATION SAMPLE MADE UP OF GRID SPIKED SOIL MIXED BY TNF AND SPIKED BY WATER PLUS ARGONS SPIKED SOIL MIXED BY WORGANIC VENTURES. THIS IS THE SECOND PE SAMPLE COLLECTED AND IT WAS COLLECTED USING FIRST-STEPS SAMPLING IN POPULATED CANYON

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/10/94 Time (24 hour clock) 1152 Sheet 4 of 4

Technical Area 36 Operable Unit 1130

Site Work Plan CA-CIC-93-1152

Signature P. Bart Trujillo

AAB1942

Control No. 1130-0091 Sample Type Surface Soil

Sample Location Pratillo Canyon below Lower Slobbouw #4 Site ID# 36-3118

Composite NA Yes X No

Composite Type NA

Depth of Sample 0-6 in

Weather clear [illegible] 73°F

Containers Used	Amount Collected
3-125ml Glass	-
3-125ml poly	
1-500ml poly	

COMMENTS Location: Lower Pratillo Canyon approx. [illegible] East of the Break in wall beyond drainage channel (drainage channel approx 2' deep and 2' wide) [illegible] Sample Channel [illegible]

Sample Description: [illegible] well sorted sandy [illegible] light brown, slight (wet) below particles in [illegible] channel

EXT READING [illegible] PID READING [illegible]

HE TEST: Negative

Other: Roll TE [illegible] Frames 14, 15 and 16 taken from East [illegible] West (upstream)
PHOTO LOG: # 135, 136, 137

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and real/fix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 5/16/04 Time (24 hour clock) 11:12 Sheet 3 of 4

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR-93-1152

Signature P. Bart Trujillo

AAB1941

Control No. 1130-00970 Sample Type Surface Soil

Sample Location Pajarito Canyon below lower Slobovia #3 Site ID# 36-3117

Composite N/A Yes X No

Composite Type N/A

Depth of Sample 0-6 IN

Weather clear, calm 75°F

Containers Used	Amount Collected
3 · 125ml glass	
3 · 125ml poly	
1 · 500ml poly	
1 · Ziploc/reseal poly bag	

COMMENTS Location, lower Pajarito Canyon approx. 75 yds west of Fire Break at Pajarito Canyon bottom, crossing and crossing with fire break and jumping onto place path trail, [illegible] channel approx 100 yds, hard to tell where water flows

Sample description: fine sandy with intermixed silty and clays, minor organics, moderately moist and medium loose soil

Rad Screening 112 cpm direct 110 cpm level PID Reading: 0.2 ppm

HE TEST negative

PHOTO: 12011 #6, Frames 11, 15 and 19 taken from East facing West (upstream)
PHOTO LOC: #130, #134, #140

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-01.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinate to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 8/10/94 Time (24 hour clock) 11:26 Sheet 2 of 4

Technical Area 36 Operable Unit 1130

Site Work Plan IA-1130-93-1152

Signature [illegible]

AAB1940

Control No. 1130-0039 Sample Type Surface Soil

Sample Location Potrillo Canyon below Lower Slobovia #2 Site ID# 36-3116

Composite N/A Yes X No

Composite Type N/A

Depth of Sample 0-6 in

Weather [illegible] 75°F

Containers Used	Amount Collected
3-125ml glass	
3-125ml poly	
1-500ml poly	
1-[illegible] poly [illegible]	

COMMENTS Location: Lower Potrillo Canyon approx. 150 yds west of Fire Break in gently defined drainage channel with [illegible] with [illegible] and juniper trees. [illegible] to fall where water flows. Surface description: medium sand with interbedded silts and clays. [illegible] moist with medium brown color.

Rad Reading: [illegible] Rad Reading: [illegible]

HE Test: Negative

Photo: Roll # [illegible] Frames 20, 21 and 22 taken from East facing west up stream

PHOTO LOG: H141, 0142, H143

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and reflist attached to form when the sample list is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following: soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge; drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Container Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 3/16/04 Time (24 hour clock) 11:46 Sheet 1 of 4

Technical Area 36 Operable Unit 1130

Site Work Plan LA-UR-03-1552

Signature P. Brad Tomlin

AAB1939

Control No. 1130-0088 Sample Type Surface Soil

Sample Location Pueblo Canyon below Lower Sediment #1 SWMU 36-3115

Composite N/A Yes X No

Composite Type N/A

Depth of Sample 0-6 IN

Weather small clouds moving in, calm approx 75°F

Containers Used	Amount Collected
3 - 125ml glass	
3 - 125ml poly	
1 - 500ml poly	
1 - resealable poly bag → 1130-0092 (QC control No.)	

COMMENTS Location: Lower Pueblo Canyon approx 25 yds west of fire break in north-bound drainage channel (approx 100' west of Pueblo where water flows) surrounding gravel channel with pink banner and Pinned Sediment sample description: fine to medium sands, well sorted with minor organics, moderately moist and medium brown color

TRAC READING: 274 cpm direct, 222 cpm bowl BG Background 0.2 mR/hr

HE TEST: negative

Photos: Roll #6, frames 23, 24 and 25 taken from East looking west (upstream)

PHOTO LOG: MINI-HILS, H Hale

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1835 for 6:35 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sediment.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, special composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 3-22-94 Time (24 hour clock) [illegible] Sheet 1 of 4

Technical Area TA 36 Operable Unit [illegible]

Site Work Plan [illegible] TA-UR-93-1152

Signature [illegible]

AAB1608

Control No. 1130-[illegible]-1130-0077 Sample Type SURFACE SOIL

Sample Location SEE COMMENTS [illegible]

Composite N/A Yes ✓ No

Composite Type N/A

Depth of Sample 0-6"

Weather [illegible]

Containers Used	Amount Collected
3 125 ml Poly	
3 125 ml Glass	
1 500 ml Poly	
1 RAD BAG	

COMMENTS

SAMPLE LOCATION: TA-36 [illegible] OF [illegible] CANYON IN [illegible] AREA
SAMPLED [illegible] BELOW [illegible] AREAS [illegible] PROJECTED [illegible]
~~SAMPLE DESCRIPTION~~ [illegible] RAD [illegible]

SAMPLE DESCRIPTION: WELL SORTED MEDIUM TO COARSE [illegible] SAND
W/ [illegible] MEDIUM [illegible] (LOW [illegible]) MOIST [illegible] SAND [illegible]
[illegible] ANALYSIS AND [illegible]
FIELD [illegible]

PACTS:
[illegible] #7
[illegible] 1 [illegible] SAMPLE
2 "
3 "
PACTS LOCATION 142 [illegible]

TID: [illegible]

HE SCREEN TEST: NEGATIVE

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1805 for 6:05 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe/swipe.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 5-22-94 Time (24 hour clock) 1119 Sheet 2 of 4

Technical Area 7A 36 Operable Unit CU-136

Site Work Plan 9/13/94 LA-UR-93-1152

Signature [illegible]

AAB1809

Control No. 1130-0090 / 1130-0097 Sample Type SURFACE SOIL

Sample Location SEE COMMENTS AIR ID 30-3071

Composite U/A Yes — No

Composite Type U/A

Depth of Sample 0 - 6"

Weather CLEAR & WARM

Containers Used	Amount Collected
3 125 ml Poly	
3 125 ml Glass	
1 500 ml Poly	
1 Ziploc bag	

COMMENTS

SAMPLE LOCATION NAME AAS AAS 9/13/94 1858

SAMPLE DESCRIPTION: SAME AS AAS 9/13/94 1808

FIELD BLANK: 123 [illegible] PHOTO: [illegible]

TID [illegible]

PHOTO LOG: II-152, II-151, II-152

HE SPOT TEST: NEGATIVE

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY(e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1835 for 6:35 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinate to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge; drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass; 4 - 40 ml glass vial; 1 - 400 ml plastic; 1 - 3 inch steel tube; 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: 9-22-94 Time (24 hour clock) [illegible] Sheet 3 of 4

Technical Area TA-36 Operable Unit CC-113C

Site Work Plan ~~[illegible]~~ LA-UR-93-1152

Signature [illegible] Singham

AAB1810

Control No. 1120-[illegible]-0097 Sample Type [illegible] SOIL

Sample Location [illegible] COMMENTS CC ID 36-3072

Composite n/a Yes ✓ No

Composite Type n/a

Depth of Sample 0-6"

Weather [illegible]

Containers Used	Amount Collected
3 125 ml [illegible]	
3 125 ml [illegible]	
1 500 ml [illegible]	
1 RAD Bag	

COMMENTS

SAMPLE LOCATION: SAME AS AAB1808

SAMPLE DESCRIPTION: SAME AS AAB1808

FIELD RAD [illegible] PHOTO [illegible]

PID: 0.0 PHOTO LOG: #153, #154, #155

HE [illegible]

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and realfit stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-01.
3. Time: Use 24-hour clock; i.e., 1806 for 6:06 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day; i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chart of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge; drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration
SAMPLE COLLECTION LOG

Date: [illegible] Time (24 hour clock) [illegible] Sheet [illegible] of [illegible]

Technical Area TA-36 Operable Unit [illegible]

Site Work Plan LANL-93-1152

Signature [illegible]

AAB1811

Control No. 1130-[illegible]-1130-0047 Sample Type [illegible]

Sample Location [illegible] [illegible]-36-5073

Composite N/A Yes ✓ No

Composite Type N/A

Depth of Sample 0-6"

Weather [illegible]

Containers Used	Amount Collected
3 125 ml poly	
3 125 ml glass	
1 500 ml poly	
1 40 ml VOA	

COMMENTS

[illegible] SAME AS AAB1805

SAMPLE DESCRIPTION SAME AS AAB1805

PHOTO ROLL 7

FIELD [illegible]

PID [illegible] PHOTOLOG: 1156, 1157, 1158

[illegible]

LEGEND

1. A sample collection log is to be completed for samples in each sampling interval and real/fix stickers to form when the sample label is prepared.
2. Date: Use DD-MMM-YY; e.g., 01-JAN-91.
3. Time: Use 24-hour clock; i.e., 1836 for 6:36 PM.
4. All entries on the log are to be completed. If not applicable, mark N/A.
5. Page: Each sample team should number sheet ___ of ___ for the day's activities for all sheets prepared on a single day, i.e., if there is a total of 24 pages, number 1 of 24, 2 of 24, etc.
6. Control No.: obtain from chain of custody/request for analysis form.
7. Sample Location: Use boring or monitor well number, grid location (transect), sample station I.D., or coordinates to physical features with distances. Include sketch in comment section, if necessary.
8. Sample Type: Use the following - soil; water (surface or ground); air (filter, tubes, ambient, personnel); sludge, drum contents; oil; vegetation; wipe; sample.
9. Composite Type: i.e., 24-hour, list sample numbers in composite, spatial composite.
10. Depth of Sample: Give units, write out units such as feet.
11. Weather: Approximate temperature, sun, and moisture conditions.
12. Containers Used: List each container type as number, volume, material type (e.g., 2 - 1L glass, 4 - 40 ml glass vial, 1 - 400 ml plastic, 1 - 3 inch steel tube, 1 - 8 oz. glass jar).
13. Amount Collected: Volume of container.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date September 13, 1994 Time 14:19

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo

Signature P.B. Trujillo

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location 1st depth below inlet pipe to the sump

AAB1801

Affix Sample Sticker Here

Location ID	Start Depth	End Depth	Units
36-3001	0	5	ft

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0098
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0098
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0109
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0098
U(Total)	125 ml Polyethylene	Ice	1130-0098
VOCs(EPA8260)	125 ml Glass	Ice	1130-0098

Weather partly cloudy, slight breeze, approx. 80°F

Sample Description See below

Field HE NEG

Field Stake No N/A

Field RAD 118 cpm direct (c/m) 108 cpm bowl

CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 bkg. (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #7, frames 13 & 14
PHOTO LOG: #154, #160

Comments:

This sample requires field spot test for explosives

LOCATION: AT THE SUMP Northwest of bldg. 36-48
This is the first sample it is 5' below grade and is less than one foot below inlet pipe to sump

DESCRIPTION: Medium to coarse sands and eng fill gravels, intermixed silts and clays, minor to no organics, slightly moist, medium brown with no visable staining

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1802

Affix Sample Sticker Here

Date September 14, 1994 Time 10:19

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo

Signature P.B. Trujillo

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location 2nd depth below inlet pipe to the sump

Location ID	Start Depth	End Depth	Units
36-3002	5.0'	5.5'	

These Samples were collected using LANL ER SOP 08.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0099
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0099
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0110
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0099
U(Total)	125 ml Polyethylene	Ice	1130-0099
VOCs(EPA8260)	125 ml Glass	Ice	1130-0099

Weather partly cloudy, slight breeze, approx. 74°F

Sample Description See below

Field HE NEG. Field Stake No N/A

Field RAD 122 cpm direct (c/m) 117 cpm bowl CGI 0% (% LEL)

○ FID ◉ PID - Results 0.2 bkg. (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 7 frames 17 and 18 photo taken facing North to Northwest
FRAMES 19 and 20
(frames 17 & 18 were taken with wrong site ID written on board therefore frames 19 & 20 were taken with correct ID #)

Comments: PHOTO LOG: #165, #164.

This sample requires field spot test for explosives

LOCATION: sump Northwest of bldg 36-48 TA-36, This sample is 5.5' below grade and 1.5' below inlet pipe to sump (at this depth additional moisture became visable, probably from sump)

DESCRIPTION: Medium to coarse sands and gravels mostly engineering fill, minor to no organics, slightly moist, medium to light brown color with no visable staining

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1803

Affix Sample Sticker Here

Date September 14, 1994 Time 10:39

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo

Signature P.B Trujillo

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location 3rd depth below inlet pipe to the sump

Location ID	Start Depth	End Depth	Units
36-3003	5.5'	6.5'	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0100
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0100
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0110
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0100
U(Total)	125 ml Polyethylene	Ice	1130-0100
VOCs(EPA8260)	125 ml Glass	Ice	1130-0100

Weather partly cloudy, slight breeze, approx 75°F

Sample Description see below

Field HE NEG

Field Stake No N/A

Field RAD 109 cpm direct (c/m) 99 cpm bkgd

CGI 0% (% LEL)

○ FID ◉ PID - Results 0.2 bkg (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #7 Frames 21 and 22. Photo taken facing East

FRAMES 23 and 24

(Frames 21 & 22 were taken with ~~wrong site ID #~~ written on white board therefore frames 23 and 24 were taken with correct ID #)

Comments: PHOTO LOG: #165, #166

This sample requires field spot test for explosives

LOCATION: Same as AAB1802, went approx 1.0' deeper

Description: Course sands and gravels minor intermixed silts and clays, Fairly clean engineering fill, minor to no organics, moderatly moist with moisture increasing downward, medium to light brown color with no visable staining

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1804

Affix Sample Sticker Here

Date September 14, 1994 Time 10:34

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo

Signature P.B Trujillo

Sample Type Soil - Subsurface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location 33' depth below inlet pipe to the sump

Location ID	Start Depth	End Depth	Units
~~36-3001~~ TBT 9/14/94	0	0	
36-5003	5.5'	6.5'	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0107
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0107
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0110
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0107
U(Total)	125 ml Polyethylene	Ice	1130-0107
VOCs(EPA8260)	125 ml Glass	Ice	1130-0107

Weather Same as AAB1803

Sample Description See below

Field HE NEG

Field Stake No N/A

Field RAD Same as AAB1803 (c/m)

CGI Same as AAB1803 (% LEL)

○ FID ◉ PID - Results Same as AAB1803 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Same as AAB1803

PHOTO LOG A145, A146

Comments:

LOCATION: Same as AAB1803

DESCRIPTION: Same as AAB1803

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1805

Affix Sample Sticker Here

Date September 14, 1994 Time 11:51

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo.

Signature P.B. Trujillo

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sludge sample from bottom of the sump

Location ID	Start Depth	End Depth	Units
36-3004	0	0	
	6.5'	8.5'	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0102
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0102
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0110
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0102
U(Total)	125 ml Polyethylene	Ice	1130-0102
VOCs(EPA8260)	125 ml Glass	Ice	1130-0102

Weather partly cloudy, slight breeze, approx 77°F

Sample Description see below

Field HE Neg. Field Stake No N/A

Field RAD 48 cpm direct (c/m) 47 cpm bowl CGI 0% (% LEL)

○ FID ◉ PID - Results 0.2 bkg. (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #8 frames 1 and 2 photos taken facing East

PHOTO LOG: # 169, #170.

Comments:

This sample requires field spot test for explosives

LOCATION: Same as AAB1802, at a depth of approx 8.5' below grade. Very near depth of original sump excavation as indicated by thining gravels and broken tuff.

DESCRIPTION: Predominantly clean engineering fill gravels with increasing fine sands downward, indicative of downward migration of fluids from discharge to sump, fine sands are moderately moist, gravels dry, minor to no organics, no clear evidence of staining.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1806

Affix Sample Sticker Here

Date September 14, 1994 Time 1210

Technical Area 36 Operable Unit 1130

Name (Print) P.B. Trujillo

Signature P.B. Trujillo

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sludge sample from bottom of the sump

Location ID	Start Depth	End Depth	Units
36-3005	0	0	
	8.5'	9.5'	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0103
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0103
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0110
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0103
U(Total)	125 ml Polyethylene	Ice	1130-0103
VOCs(EPA8260)	125 ml Glass	Ice	1130-0103

Weather partly cloudy, slight breeze, approx 78°F

Sample Description see below

Field HE Neg. Field Stake No N/A

Field RAD 102 cpm direct (c/m) 113 cpm beta CGI 0% (% LEL)

○ FID ◉ PID - Results 0.2 bkg (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #8 frames 3 and 4 photos taken facing south
(frames 5 and 6 are of sump itself and taken facing Northwesterly)
PHOTO LOG: #171, #172.

Comments:

This sample requires field spot test for explosives

LOCATION: Same as AAB1802, at tuff gravel interface approx 4.5' below grade

DESCRIPTION: Same as AAB1805

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1935

Affix Sample Sticker Here

Date September 20, 1994 Time 1326

Technical Area 36 Operable Unit 1130

Name (Print) N. Ness

Signature Nancy Ness

Sample Type Soil - Surface

QA/QC Type Performance Eval

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location None

Location ID	Start Depth	End Depth	Units
	0	0	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0111
U(isotopic)	125 ml Polyethylene	Ice	1130-0111

Weather [illegible]

Sample Description [illegible]

Field HE NA

Field Stake No NA

Field RAD NA (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results NA (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

PERFORMANCE EVALUATION SAMPLE CONSISTING OF A METALS SPIKED ALIQUOT PREPARED BY DUQUESNE VENTURES - METALS ON SOIL #2 - DUQUESNE VENTURES NUMBER CRM 020-050.

AND A RAD SPIKED SAMPLE PREPARED BY THE DOE - DOE NUMBER LCS250693-064.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB2109

Affix Sample Sticker Here

Date September 28, 1994 Time 1200

Technical Area 36 Operable Unit 1130

Name (Print) P. Quam

Signature

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Drill cuttings from test borehole

Location ID	Start Depth	End Depth	Units
36-3144	~~15~~ 10	18	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0115
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0115
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0115
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0115
U(Total)	125 ml Polyethylene	Ice	1130-0115
VOCs(EPA8260)	125 ml Glass	Ice	1130-0115

Weather SUNNY CLEAR, CALM, CLIMB ~ 86°F

Sample Description SEE BELOW

Field HE NEGATIVE

Field Stake No N/A

Field RAD 130 (BKGD) (c/m)

CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (BKGD) (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NO PHOTO TAKEN OF SAMPLE

Comments:

~~SAMPLE CONSISTS OF~~ 9/28/94

TEST BOREHOLE #1 IS LOCATED IN CENTRAL SECTION OF THE SOUTHERN MOST (PRESUMABLY) DUCTAL TRENCH. SAMPLE CONSISTS OF CUTTINGS RECOVERED FROM THE DEPTH INTERVAL 10 FT – 18 FT. AT APPROXIMATELY 10 FT CUTTINGS APPEARED TO BE VISUALLY STAINED. THIS STAINING WAS SIMILAR TO CUTTINGS FROM 10' TO ~ 15'. CUTTINGS DESCRIPTION: PREDOMINANTLY COARSE SANDS AND MINOR GRAVELS, MINOR TO MODERATE TUFFACEOUS SILTS AND CLAYS, PROBABLY FILL OR WEATHERED MATERIAL. ASH VISIBLE AND PRESENT IN SAMPLE. DEBRIS RECOVERED IN THE DUCTAL INTERVAL, BUT NOT SAMPLED. ~~MATERIAL OF~~ 9/28/94 CUTTINGS SHOW MINOR ORGANIC STAINING, AND ARE MODERATELY MOIST, WITH MORE SURFACE INCRUSTATION REMOVED.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1952

Affix Sample Sticker Here

Date September 30, 1994 Time 1111

Technical Area 36 Operable Unit 1130

Name (Print) ~~R. Grafe~~

Signature

Sample Type Soil - Subsurface

QA/QC Type ~~Field Duplicate~~

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #1, sample from ~~overlying fill~~

Location ID	Start Depth	End Depth	Units
36-3125	~~0~~	~~0~~	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0118-0117
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0118-0117
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0122-0123
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0118-0117
U(Total)	125 ml Polyethylene	Ice	1130-0118-0117
VOCs(EPA8260)	125 ml Glass	Ice	1130-0118-0117

Weather

Sample Description

Field HE

Field Blake No

Field RAD (c/m)

CGI (% LEL)

○ FID ◉ PID - Results (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

PHOTO LOG #120

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1953

Affix Sample Sticker Here

Date October 3, 1994 Time 1130

Technical Area 36 Operable Unit 1130

Name (Print) ~~P. Gram~~ JOHN TAYLOR

Signature

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #1, sample from ash debris

Location ID	Start Depth	End Depth	Units
36-3125	8'	10'	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0120
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0120
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	~~1130-0122~~ 1130-0122
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0120
U(Total)	125 ml Polyethylene	Ice	1130-0120
VOCs(EPA8260)	125 ml Glass	Ice	1130-0120

Weather [illegible]

Sample Description See Below

Field HE Negative

Field Stake No NA

Field RAD [illegible] (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

8 [illegible]

PHOTO LOG: #181, #182

Comments:

Sample collected 8' to 10' Med to Coarse Sands abundant Silts & Clays minor Embedded Tuff plus Andesite Gravels (Sub Angular to Sub Rounded) no Natural Organics Ash & Debris present Part organic staining & odor approx 9' and minor Iron Staining Moderate Moisture.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1954

Affix Sample sticker here

Date October 3, 1994 Time 1407

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #1, sample from underlying tuf

Location ID	Start Depth	End Depth	Units
36-3125	[illegible]	[illegible]	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0121
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0121
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0122
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0121
U(Total)	125 ml Polyethylene	Ice	1130-0121
VOCs(EPA8260)	125 ml Glass	Ice	1130-0121

Weather [illegible]

Sample Description [illegible]

Field HE [illegible] Field Stake No NA

Field RAD [illegible] (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants): [illegible] PHOTO LOG: # 183, #184, #185, #186.

Comments:

Fine to Medium SANDS Abundant ~~[illegible]~~ SILTS and Clays Minor TUFF Gravels (Sub-Rounded) NO Natural Organics Moderately Moist, NO NSM, NO Debris, NO Obvious Organic Staining Indicating Sample Probably Collected Zone Below active Trench, no apparent undisturbed Soil horizon encountered at 13 feet 4 inches

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1950

Affix Sample Sticker Here

Date October 6, 1994 Time 12 15

Technical Area 36 Operable Unit 1130

Name (Print) J. Taylor

Signature [signature]

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #2, sample from overlying fill

Location ID	Start Depth	End Depth	Units
36-3126	[illegible]	[illegible]	[illegible]
	2'	4'	

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0117
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0117
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0128
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0117
U(Total)	125 ml Polyethylene	Ice	1130-0117
VOCs(EPA8260)	125 ml Glass	Ice	1130-0117

Weather Fair Partly Cloudy Mild Breeze

Sample Description See Below

Field HE Neg

Field Stake No

Field RAD 98 / 118 (c/m)

CGI (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

8 19/20

PHOTO LOG [illegible]

Comments: Sample Collected 2'-4' Below Surface Medium to Coarse Sands Abundt Silts and Clays Minor Tuff Aggregate gravels No Natural Organic No ash coal Debris No Visable staining Indicating Sample Collected from fill material Overlying Trench Moderately Moist

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1951

Affix Sample Sticker Here

Date October 6, 1994 Time 12:15

Technical Area 36 Operable Unit 1130

Name (Print) J. Taylor

Signature [illegible]

Sample Type Soil - Subsurface

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #2, sample from overlying fill

Location ID	Start Depth	End Depth	Units
36-3126	[illegible]	[illegible]	
	[illegible]	[illegible]	
	5'	6'	

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0118
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0118
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0128
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0118
U(Total)	125 ml Polyethylene	Ice	1130-0118
VOCs(EPA8260)	125 ml Glass	Ice	1130-0118

Weather Fair Partly Cloudy Mild Breeze

Sample Description See Below

Field HE N/E G

Field Stake No N/A

Field RAD 98/118 (c/m)

CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

8 19/20

PHOTO LOG: #187, #188

Comments:

Same as HHS-1950

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1955

Affix Sample Sticker Here

Date October 6, 1994 Time 14:33

Technical Area 36 Operable Unit 1130

Name (Print) D. Taylor

Signature [signature]

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #2, sample from ash debris

Location ID	Start Depth	End Depth	Units
36-3126	6	8	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0125
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0125
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0126
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0125
U(Total)	125 ml Polyethylene	Ice	1130-0125
VOCs(EPA8260)	125 ml Glass	Ice	1130-0125

Weather Fair Breeze Cloudy Windy

Sample Description See below

Field HE NEG

Field Stake No N/A

Field RAD 97/109 (c/m)

CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #5, frames #21 and #22

PHOTOLOG: #189, #190

Comments:

Sample Collected @ 6'-8' Below Surface

Medium to Course Sands Abundant Silts and Clays Minor Tuff and Gravels Subrounded Sub Angular No Natural Organics Visable Ash At Bottom 3" Indicating inside Trench Top ~~Fill~~ Fill Material Moderatly Moist

~~Top of~~ ONE foot

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1956

Affix Sample Sticker Here

Date October 11, 1994 Time 11:04

Technical Area 36 Operable Unit 1130

Name (Print) J. Taylor

Signature [illegible]

Sample Type Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #2, sample from ash debris

Location ID	Start Depth	End Depth	Units
36-3126	8	10	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0126
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0126
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0129
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0126
U(Total)	125 ml Polyethylene	Ice	1130-0126
VOCs(EPA8260)	125 ml Glass	Ice	1130-0126

Weather Fair Breezy Cool and Clear

Sample Description See Below

Field HE NEG Field Stake No N/A

Field RAD 40 / 134 Bkgd (c/m) CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

8 23/24 Picture Taken Facing East, photo of sample

PHOTO LOG: #191, #192

Comments: ~~Sample Collected~~ Sample material collected from Approx 8' to 8'6" No Recovery Below 8' to 8'6" Additional ~~Sample Not Collected~~ material Recovered By Re-sampling of Interval 8'6" to 11'. "Description" Fine to Medium Sands Abundant Silt and Clays Minor Pumice and Tuff Granules No Natural Organics Slightly Moist Heavy Ash Layer (Black) Unidentified Grayish to white Debris Apparently Consisting to Slightly Elevated Rad Readings Additional Debris Includes Nails and Wood. Approx 30% Recovery of 8' to 11' profile

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1957

Affix Sample Sticker Here

Date October 11, 1994 Time 1215

Technical Area 36 Operable Unit 1130

Name (Print) J. Taylor

Signature

Sample Type: Soil - Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Trench #1, Borehole #2, sample from underlying tuf

Location ID	Start Depth	End Depth	Units
36-3126	~~12~~ 20	~~14~~ 22	ft

These Samples were collected using LANL ER SOP 06.24

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	125 ml Glass	Ice	1130-0127
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0127
Mobile Rad Van(alpha,beta,gamma)	Resealable Poly Bag	Ice	1130-0129
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0127
U(Total)	125 ml Polyethylene	Ice	1130-0127
VOCs(EPA8260)	125 ml Glass	Ice	1130-0127

Weather Clear Sun Breeze

Sample Description See Below

Field HE NEG

Field Stake No N/A

Field RAD 92/109 (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

8 25/26 pictures taken facing East, photo of sample

PHOTO LOG: #193, #194

Comments:

Sample material taken from 20' to 22' undisturbed (apparently) Silts & Clays ~~[illegible]~~ Moderately minor fine sands No natural organics Moderatly Moist to Moist Medium to Dark Brown No fish or Debris changes into Sand(med) at 22'

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB2115
Affix Sample Sticker Here

Date October 14, 1994 Time 1010

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Drum Contents - Liquid

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location N/A

Location ID	Start Depth	End Depth	Units
	0	0	

These Samples were collected using LANL ER SOP 06.16

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	NaOH	1130-0134
Gamma Spec	1 L Polyethylene	HNO3	1130-0134
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0134
Mercury-Water(SW7470)	500 ml Polyethylene	HNO3	1130-0134
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0134
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0135
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0134
U(Total)	1 L Polyethylene	HNO3	1130-0134
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0134
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0134

Weather RAIN OVERCAST COOL ~45°

Sample Description SEE BELOW

Field HE N/A

Field Stake No N/A

Field RAD N/A (c/m)

CGI N/A (% LEL)

○ FID ◉ PID - Results N/A (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments:

SAMPLE ~~WAS COLLECTED FROM~~ 10/14/94 IS OF LIQUID DRUM CONTENTS COLLECTED FROM THE LIQUID DRUM CONTAINER AT THE TA-36-53 SHEETER STORAGE AREA.

SAMPLE DESCRIPTION: HIGH PURITY LIQUID (DECONTAMINATION WATER)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1821

Affix Sample Sticker Here

Date October 17, 1994 Time 1400

Technical Area 36 Operable Unit 1130

Name (Print) R. Gram

Signature

Sample Type Water - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Most upstream Water Canyon sample

STIE ID # 36-3082

Location ID	Start Depth	End Depth	Units
36-3082	0	0	in

These Samples were collected using LANL ER SOP 06.13

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	1 L Polyethylene	HNO3	1130-0136
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0136
Mercury-Water(SW7470)	500 ml Polyethylene	HNO3	1130-0136
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0136
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0136
Pu(Isotopic)+U(Total)	1 L Polyethylene	HNO3	1130-0136
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0136
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0136
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0136

Weather PARTLY CLOUDY COOL ~45° CLEARING-

Sample Description Cat Canyon

Field HE NA

Field Stake No ~~AA~~ 36-3082

Field RAD NA (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (PKUS) (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA- SAMPLE LOCATIONS PHOTOGRAPHED GIVEN IN STIEED

Comments:

STREAM DISCHARGE CLEAR - LOW TURBIDITY, SOME FLOATING DEBRIS. (LEAVES, TWIGS, WOOD) - NO VISIBLE SHEEN, NO ODOR

TEMP 55° F

PH 6.6

TDS 20 µS

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1822

Affix Sample Sticker Here

Date October 17, 1994 Time 1430

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Water - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location 2nd Water Canyon sample

Location ID	Start Depth	End Depth	Units
36-3083	0	0	

These Samples were collected using LANL ER SOP 06.13

Analysis	Container	Preservative	C of C Control No.
Gamma Spec	1 L Polyethylene	HNO3	1130-0137
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0137
Mercury-Water(SW7470)	500 ml Polyethylene	HNO3	1130-0137
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0137
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0138
Pu(Isotopic)+U(Total)	1 L Polyethylene	HNO3	1130-0137
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0137
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0137
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0137

Weather PARTLY CLOUDY, COOL ~45°F, CLEARING

Sample Description SEE BELOW

Field HE NA

Field Stake No 36-3083

Field RAD NA (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results 0.2 (GLCC) (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA - SAMPLE LOCATION PHOTOGRAPHED WITH SAMPLE STATION CUTS 10/17/1994

Comments:

SAME AS AAG ~~1822~~ 1821

TEMP. 57°F

pH 6.5

TDS 20 µS

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1896

Affix Sample Sticker Here

Date November 14, 1994 Time

Technical Area 36 Operable Unit 1130

Name (Print) P. Gunn

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH2 sample at tile depth

Location ID	Start Depth	End Depth	Units
36-3053	0	0	ft

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0147
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0147
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0150
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0147
VOCs(EPA8260)	125 ml Glass	Ice	1130-0147

Weather _____

Sample Description _____

Field HE _____ Field Stake No _____

Field RAD _____ (c/m) CGI _____ (% LEL)

○ FID ◉ PID - Results _____ (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample not collected. Soil / tuff interface depth and tile depth are the same, so the sample was collected under sample #AAB1897 at the soil / tuff interface.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1897

Affix Sample Sticker Here

Date November 14, 1994 Time 1405

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH2 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3053	24	32	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0148
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0148
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0151
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0148
VOCs(EPA8260)	125 ml Glass	Ice	1130-0148

Weather Fair, clear and cool, breezy

Sample Description See comments

Field HE Nd Field Stake No 3053

Field RAD 92/107(bcd) (c/m) CGI Bkg (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9, frames 4, 5, 6.
PHOTO LOG: #195, #196, #197.

Comments:

Sample location in farthest North(presumed) trench/drain line, approx. 35' east of the Northwest corner of the leach field. Area is ~~now~~ flat, covered with grass (Blue Gramma) and weeds and sparce vegetation.

Sample Description:

24"-29": Sample consisted of crushed and reworked tuff fill material and intermixed engineering fill gravels (approx. 1" to 2" in diameter).

at 29": Soil/tuff interface, with visible staining.

29"-32": Undisturbed Tshirege member, grey, weathered.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1893

Affix Sample Sticker Here

Date November 14, 1994 Time 1410

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Soil - Surface

QA/QC Type Field Duplicate of HAP1997

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH2 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3053	24	32	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0142
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0142
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0151
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0142
VOCs(EPA8260)	125 ml Glass	Ice	1130-0142

Weather Fair, cloudy and cold, breezy

Sample Description Same as HAP1997

Field HE NA Field Stake No 3052

Field RAD 9.2/10.7 (bkgd) (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results 0.3 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9, frames 4, 5, 6 taken from Southwest looking North

PHOTO LOG: #195, #196, #197.

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1898

Affix Sample Sticker Here

Date November 14, 1994 Time 1415

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH2 sample at2ft. into tuff

Location ID	Start Depth	End Depth	Units
36-3053	33	42	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0149
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0149
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0151
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0149
VOCs(EPA8260)	125 ml Glass	Ice	1130-0149

Weather Fair clear and cold, breezy.

Sample Description See comments

Field HE NA Field Stake No 3053

Field RAD 1.7/13.3 (c/m) CGI Bkg (% LEL)

○ FID ◉ PID - Results 0.0 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

Location Description: same as 4/23/1997

Sample Description: Undisturbed well consolidated Tshirege member, tuff greyish and into pinkish tuff (Tuff was crushed in order to collect sample).

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1900
Affix Sample Sticker Here

Date November 15 [illegible] Time 1137

Technical Area [illegible] Operable Unit [illegible]

Name (Print) [illegible] KEN M. MCFADDEN

Signature [illegible]

Sample Type [illegible] Subsurface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH-3 sample at [illegible]

Location ID	Start Depth	End Depth	Units
36-3054	0	0	ft
	22"	~~32~~" 30"	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	[illegible] polyethylene	Ice	1130-0152
Metals(EPA6010)	[illegible] polyethylene	Ice	1130-0152
Mobile Rad Vanadium [illegible]	[illegible] Polyeth. Jar	Ice	1130-0152
Semi-VOCs(EPA82[illegible])	[illegible]	Ice	1130-0152
VOCs(EPA8260)	[illegible]	Ice	1130-0152

Weather Clear and Clear

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 121 (cpm) DIRECT 4/4 cpm Bkgd CGI N/A (% LEL)

○ FID ◉ PID - Result: 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 9 Frames 9 & 10, 7 & 8
PHOTO LOG: #190, #191, ~~[illegible]~~ Single Photo

Comments:

Location Description: In 2nd Trench (Accessed) approx. 40' east of NW corner of trench floor

Sample Description: 22" to 30" is predominantly crushed tuff fill material, minor fragmenting bentonite and gravel and red clays probably from leached vitrified clay tile drain line. Red clay shows roots and other minor organics, indicating clay is the drain line. Thin yellow stained layer at 30" (at fill tuff interface) also thin dark organic stained layer at approx. 29.5". 30" to 32" is weathered consolidated tshirege member tuff (gray). Slightly moist

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

Date November 15 1994 Time 1148

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH3 sample 2ft into fill

AAB1901

Affix Sample Barcode Here

Location ID	Start Depth	End Depth	Units
36-3054	0	0	ft
	32"	34"	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	1.25 ml Polyethylene	Ice	1130-0153
Metals(EPA6010)	1.25 ml Polyethylene	Ice	1130-0153
Mobile Rad Van(alpha,beta,gamma)	[illegible] Polyethylene	Ice	1130-0152
Semi-VOCs(EPA8270)	1.25 ml Glass	Ice	1130-0153
VOCs(EPA8260)	1.25 ml Glass	Ice	1130-0153

Weather Clear and cold

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 111 (c/m) direct, 118 Below CGI N/A (% LEL)

○ FID ◉ PID - Results 0.21 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments: LOCATION DESCRIPTION: SAME AS HA13 1900

SAMPLE DESCRIPTION: Predominately well consolidated tshirege member Grey TUFF with minor crushed (from drilling) TUFF NO ORGANICS, dry to slightly moist. Hand Crushed Tuff to collect sample.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1903

Affix Sample Sticker Here

Date November 15, 1994 Time 1527

Technical Area 36 Operable Unit 1130

Name (Print) ~~[illegible]~~ Ken H. Mitchell

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH4 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3055	0	0	ft
	22"	30"	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0155
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0155
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0162
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0155
VOCs(EPA8260)	125 ml Glass	Ice	1130-0155

Weather Clear and cold

Sample Description See below

Field HE N/A Field Stake No N/A

Field RAD 97 (c/m) direct / 105 ~~45~~ cpm Beta RHM 11-15-94 CGI N/A (% LEL)

○ FID ◉ PID - Results 0.0 (ppm) Notes

Photo (Roll, Frame, Azimuth, Subject, Participants):

Rolled of Frames 11 & 12

PHOTO LOG #200, #201

Comments:

Location Description: Approximately 75' East of Northwest corner of Lockfield

Sample Description: Fill material consisting of broken and rounded Tuff, small and some angular fill pieces (1-2" diam. Intact piece of clay tile about recovered in sample indicating trench (presumably BH1 trench) was refilled. Most roots, slightly moist upon staining at fill/Tuff interface at approx. 28" 28"-30" interval. Weathered grey tshirtge number tuff.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1904

Affix Sample Sticker Here

Date November 15, 1994 Time 1516

Technical Area 36 Operable Unit 1130

Name (Print) ~~Pasam~~ KEN H. ASKADOW

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH4 sample 2ft into tuff

Location ID	Start Depth	End Depth	Units
36-3055	0	0	ft
	30	40	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0156
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0156
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0162
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0156
VOCs(EPA8260)	125 ml Glass	Ice	1130-0156

Weather Clear & cold, slight breeze

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 105 (c/m) Direct/112 cpm Bkgd CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) NOTE! 2ppm reading taken after sample was collected

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9 Frames 11 & 12

PHOTO LOG: # 2001 #201

Comments:

LOCATION DESCRIPTION: SEE NAB 1903

SAMPLE DESCRIPTION: Grey consolidated Tshirege member. Tuff Partly to moderately welded, Dry to slightly moist no organics no staining. Material was washed out to collect sample.

Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

1530

Technical Area: Operable Unit

Name (Print): Ken H. Alexander

Sample Type:

Date: 05 MAR 1994

Composite: O

Composite Type:

Sample Location: OH4

AAB1895

Affix Sample Label

Location ID	Start Depth	End Depth	Units
36-30-95	30"	60"	

The Samples were labeled LANL EP SOP

Analysis	Container	Preservative	C of C Control No.

Matrix: Silane / Cold

Sample Description: See Below

Field HL: N/A

Field Stake No: N/A

Field RAD: 105

Direct/Net cpm 200

CGI: 4/2 (% LEL)

O2: NOTE: Light Reading down hole where sample was collected

Roll #9 Frames 11 pic 2

PHOTO LOG: A300, #301

Comments

Sample Location: SAME AS MAR 1994

Sample Description: SAME AS MAR 1994

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1906

Affix Sample Sticker Here

Date November 17, 1994 Time 1250

Technical Area 36 Operable Unit 1130

Name (Print) ~~R. Gram~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH5 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3056	0	[illegible]	ft
	[illegible]	[illegible]	
	[illegible]		

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0158
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0158
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0158
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0158
VOCs(EPA8260)	125 ml Glass	Ice	1130-0158

Weather [illegible]

Sample Description [illegible]

Field HE N/A Field Stake No N/A

Field RAD 95 (cpm) [illegible], 112 cpm [illegible] CGI 0 (% LEL)

○ FID ◉ PID - Results [illegible] (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

[illegible] PHOTO LOG # 202, #203

Comments: [illegible] Trench #5 (removed) [illegible] 25' EAST OF [illegible]

Sample description: 54" to 57" [illegible] SANDS [illegible] (yellow, 1-2" diameter) SLIGHT STAINING (yellowish) [illegible] 57" to 60" [illegible] QBT, [illegible] MOST NO [illegible]. [illegible] Sample.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1907

Affix Sample Sticker Here

Date November 17, 1994 Time 1350

Technical Area 36 Operable Unit 1130

Name (Print) [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH5 sample 2ft. into tuff

Location ID	Start Depth	End Depth	Units
36-3056	0	0	ft
	[illegible]	[illegible]	
	60"	66"	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0159
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0159
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0166
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0159
VOCs(EPA8260)	125 ml Glass	Ice	1130-0159

Weather Clear and Cold

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 117 (c/m) Direct 101 cpm Bkgd CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #5, Frames 16-17, 15-16 PHOTO LOGS #204, #205

Comments: Location Description: Same as AOC 1130c

Sample Description. Sample collected from 3" below tuff tuff Interface. Consists of heavily weathered pinkish QBT along insite weathering products such as clay Decomposed and altered pumice no organics slightly moist to moderate moist with moisture increasing Downward from below the fill tuff interface. This may be a single contact from weathering fracture.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1909

Affix Sample Sticker Here

Date November 18, 1994 Time 1129

Technical Area 36 Operable Unit 1130

Name (Print) ~~P. Gram~~ K. McGaughey

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH6 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3057	0	0	ft
	5'4" to 6'		

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0184
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0188
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0184
VOCs(EPA8260)	125 ml Glass	Ice	1130-0184

Weather Clear cool, slight breeze

Sample Description See below

Field HE N/A Field Stake No N/A

Field RAD 90 (c/m) Sheet, 103cm Rod CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) NOTE: 1.2 to 2.0 ppm from hole where sample was collected.

Photo (Roll, Frame, Azimuth, Subject, Participants): Roll 9, Frames 18-19 [illegible]

PHOTO LOG: #20 #207.

Comments: Location Description Trench #2 (Excavated) Approx 10' East of location 36-3056.

Sample Description: Engineering fill gravels, approx 1" to >3" of angular with crushed tuff and soils (fill material) slight. Most no organics slight smelling tuff. Note here not 6'.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1910

Affix Sample Sticker Here

Date November 18, 1994 Time [illegible]

Technical Area 36 Operable Unit 1130

Name (Print) ~~P. Gram~~ K. H. McFarlan

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH6 sample 2ft. into fill

Location ID	Start Depth	End Depth	Units
36-3057	0	0	ft
	6" to 7'		

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0165
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0166
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0165
VOCs(EPA8260)	125 ml Glass	Ice	1130-0165

Weather Clear Cool and Sunny Breeze

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 89 (c/m) Meets 120 CPM Bkgd CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm) Note: 1.2 to 0.0 ppm from hole where sample was collected

Photo (Roll, Frame, Azimuth, Subject, Participants): Roll 29 Frames 18-19 [illegible]

PHOTO LOG: #206, #207 SAME AS APRIL 1989

Comments: Location Designation: SAME AS APRIL 1989

Sample Description: Sample collected from natural below fill/tuff interface. Sampled material not likely recovered from a fractured horizon within the QBt deposits or not slightly weathered QBt and known weathered QBt with developed clays, altered minerals and organics (roots) and slightly to moderately moist. Weathered horizon shows Fine and Organic staining

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1890

Affix Sample Sticker Here

Date November 18, 1994 Time

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH1 sample at tile depth

Location ID	Start Depth	End Depth	Units
36-3052	0	0	ft

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0139
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0139
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0146
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0139
VOCs(EPA8260)	125 ml Glass	Ice	1130-0139

Weather _____

Sample Description _____

Field HE _____ Field Stake No _____

Field RAD _____ (c/m) CGI _____ (% LEL)

○ FID ◉ PID - Results _____ (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample not collected. Soil/tuff interface depth and tile depth are the same, so the sample was collected under sample # AAB1892 at soil/tuff interface.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

[AAB1891]

Affix Sample Sticker Here

Date November 18, 1994 Time

Technical Area 36 Operable Unit 1130

Name (Print) R Quam

Signature

Sample Type Soil - Surface

QA/QC Type Field Duplicate of AAB1892

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH1 sample at tile depth

Location ID	Start Depth	End Depth	Units
36-3052	0	0	ft

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	Ice	1130-0140
Metals(EPA6010)	125 ml Polyethylene	Ice	1130-0140
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0140
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0140
VOCs(EPA8260)	125 ml Glass	Ice	1130-0140

Weather _____

Sample Description _____

Field HE _____ Field Stake No _____

Field RAD _____ (c/m) CGI _____ (% LEL)

○ FID ◉ PID - Results _____ (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample not collected. Soil/tuff interface depth and tile depth are the same, so the sample was collected under sample # AAB1892 at the soil/tuff interface.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1892

Affix Sample Sticker Here

Date November 18, 1994 Time 1455

Technical Area 36 Operable Unit 1130

Name (Print) ~~P. Gram~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH1 sample at soil tuff interface

Location ID	Start Depth	End Depth	Units
36-3052	0	0	ft
	30"	36"	

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0141
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0168
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0141
VOCs(EPA8260)	125 ml Glass	Ice	1130-0141

Weather Clear & Cold

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 99 (c/m) Direct, 118 cm Bkgd CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9 Frames 20-21

Comments: PHOTO LOG: #203, #204
LOCATION DESCRIPTION: In Trench #2 Approximately 9' west of 36-3054.

Sample Description: 30" to 36" is crushed tuff and engineering fill soils and gravel (approx. 1-2") dry to slightly moist, slight yellowish staining at fill/tuff interface at 36". 30" to 36" well consolidated weathered slightly ABC. Chisled to collect sample.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1894

Affix Sample Sticker Here

Date November 18, 1994 Time 1545

Technical Area 36 Operable Unit 1130

Name (Print) ~~P Gram~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location BH1 sample2ft. into tuff

Location ID	Start Depth	End Depth	Units
36-3052	0	0	ft
	38" TO 46"		

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0143
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0168
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0143
VOCs(EPA8260)	125 ml Glass	Ice	1130-0143

Weather Clear & Cold

Sample Description See Below

Field HE N/A Field Stake No N/A

Field RAD 92 (c/m) direct, 18 cm from Bottom CGI 0 (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9 Frames [illegible]

Comments: PHOTO LOG: #310, #311

Location Description: Same as AUG 1992

Sample Description: Weathered drilling cracked and consolidated QBC (green) Dry to slightly moist [illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB2140

Affix Sample Sticker Here

Date November 21, 1994 Time 0950

Technical Area 36 Operable Unit 1130

Name (Print) P. Gram

Signature

Sample Type Water - QA/QC Samples

QA/QC Type Rinsate

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Leachfield

Location ID	Start Depth	End Depth	Units
NA	0	0	

These Samples were collected using LANL ER SOP 1.05

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	NaOH	1130-0169
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0169
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0170
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0169
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0169
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0169

Weather SUNNY, CLEAR, SLIGHT BREEZE, COOL ~58°F

Sample Description SEE BELOW

Field HE NA

Field Stake No NA

Field RAD NA (c/m)

CGI NA (% LEL)

○ FID ◉ PID - Results NA (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

SAMPLE IS A RINSATE QA SAMPLE, COLLECTED BY POURING DEIONIZED WATER OVER A DECONTAMINATED SPLIT SPOON SAMPLER USED DURING LEACHFIELD (PRS 36-003(a)) DRILLING.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1916
Affix Sample Sticker Here

Date November 21, 1994 Time 1625

Technical Area 36 Operable Unit 1130

Name (Print) ~~P. Gram~~ [illegible]

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sediment Trap below outfall

Location ID	Start Depth	End Depth	Units
36-3112	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0006
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0171
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0006

Weather Clear & Cold

Sample Description See Below

Field HE N/A Field Stake No 36-119

Field RAD 73 (cpm) Direct / Random Background CGI N/A (% LEL)

○ FID ◉ PID - Results 0.2 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9 Frame #24

PHOTO LOG # 312

Comments: Location Description: Sample was taken on slope North of Office Bldg (36-1) approx 30' North of Hog Wire Fence 2/3 of way down the slope

Sample Description: Medium sand, slightly moist, considerable organics (leaves, etc) Dark Brown color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB1917

Affix Sample Sticker Here

Date November 21, 1994 Time 1028

Technical Area 36 Operable Unit 1130

Name (Print) ~~R. Gram~~ R. McFarland

Signature [illegible]

Sample Type Soil - Surface

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Sample Location Sediment Trap below outfall

Location ID	Start Depth	End Depth	Units
36-3113	0	6	in

These Samples were collected using LANL ER SOP 06.09

Analysis	Container	Preservative	C of C Control No.
Metals(EPA6010)+CN	125 ml Polyethylene	Ice	1130-0007
Mobile Rad Van(alpha,beta,gamma)	Resealable Polyethylene	Ice	1130-0171
Semi-VOCs(EPA8270)	125 ml Glass	Ice	1130-0007

Weather Clear & cold

Sample Description See Below

Field HE N/A Field Stake No 36-3C-120

Field RAD _____ (c/m) CGI N/A (% LEL)

○ FID ◉ PID - Results 0.0 (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9 Frames 25 & 26

PHOTO LOG #213, #214.

Comments: Location Description: Sample taken approx. 40' North of AAB 1916 2/3 of the way down the slope.

Sample Description: Same as AAB 1916

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB2141

Date December 2, 1994 Time 1225

Technical Area 36 Operable Unit 1130

Name (Print) N. Ness

Signature [illegible]

Sample Type Liquid

QA/QC Type None

Composite: ☒ Yes ◉ No

Composite Type: None

Sample Location Drum contents - liquid

Location ID	Start Depth	End Depth	Units
	0	0	

These Samples were collected using LANL ER SOP

Analysis	Container	Preservative	C of C Control No.
Cyanide	125 ml Polyethylene	NaOH	1130-0172
Gamma Spec	1 L Polyethylene	HNO3	1130-0172
Metals(EPA6010)	500 ml Polyethylene	HNO3	1130-0172
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0173
Pu(Isotopic)+U(Total)	1 L Polyethylene	HNO3	1130-0172
Semi-VOCs(EPA8270)	1 L Amber Glass	Ice	1130-0172
VOCs(EPA8260)	40 ml Amber Glass-A	HCl	1130-0172
VOCs(EPA8260)	40 ml Amber Glass-B	HCl	1130-0172

Weather Clear, warm

Sample Description Liquid, [illegible], strong odor, cloudy, [illegible] color

Field HE N/A Field Stake No N/A

Field RAD N/A (c/m) CGI N/A (% LEL)

○ FID ◉ PID - Results N/A (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments:

Sample is a liquid sample taken from decontamination water (DZ water) in the 55-gallon drum

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG

AAB2142

Affix Sample Sticker Here

Date December 5, 1994 Time 0913

Technical Area 36 Operable Unit 1130

Name (Print) N. Ness

Signature Nancy Ness

Sample Type Liquid

QA/QC Type None

Composite: ☒ Yes ◉ No

Composite Type: None

Sample Location Drum contents - liquid

Location ID	Start Depth	End Depth	Units
	0	0	

These Samples were collected using LANL ER SOP

Analysis	Container	Preservative	C of C Control No.
High Explosives(USTHMA)	1 L Amber Glass	Ice	1130-0174
Mobile Rad Van(alpha,beta,gamma)	500 ml Polyethylene	Ice	1130-0175

Weather Windy, raining, cool

Sample Description liquid, murky, strong odor, yellowish/brown color

Field HE NA Field Stake No NA

Field RAD NA (c/m) CGI NA (% LEL)

○ FID ◉ PID - Results NA (ppm)

Photo (Roll, Frame, Azimuth, Subject, Participants):

NA

Comments:

liquid sample from decontamination water (CRC water) in the 55-gallon drum

Appendix 3

APPENDIX 3

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS FORMS

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/14/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0001
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van to CST-9	Lab Report Required 08/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1911	07/14/94 1216	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1911	07/14/94 1216	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1911	07/14/94 1216	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1911	07/14/94 1216	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/14/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0002
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van to CST-9	Lab Report Required 08/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1912	07/14/94 1224	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1912	07/14/94 1224	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1912	07/14/94 1224	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1912	07/14/94 1224	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date: 7/14/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-1	Time: 1445	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/14/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0003
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van to CST-9	Lab Report Required 08/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1913	07/14/94 1206	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1913	07/14/94 1206	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1913	07/14/94 1206	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1913	07/14/94 1206	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Lenke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/14/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0004
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van to CST-9	Lab Report Required 08/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1914	07/14/94 1157	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1914	07/14/94 1157	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1914	07/14/94 1157	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1914	07/14/94 1157	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M Hanks (Signature): Affiliation: ES&H	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/14/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0005
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van to CST-9	Lab Report Required 08/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1915	07/14/94 1148	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1915	07/14/94 1148	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1915	07/14/94 1148	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1915	07/14/94 1148	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date: 7/14/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1415	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0010
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1873	07/21/94 1221	X		125 ml Polyethylene	Sludge (W	NaOH	Cyanide	
AAB1873	07/21/94 1221	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1873	07/21/94 1221	X		1 L Amber Glas	Sludge (W	Ice	Semi-VOCs(EPA5270)	
AAB1873	07/21/94 1221	X		40 ml Ambe Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1873	07/21/94 1221	X		40 ml Am Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard XV Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0011
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1874	07/21/94 1228	X		125 ml Polyethylene	Sludge (W	NaOH	Cyanide	
AAB1874	07/21/94 1228	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1874	07/21/94 1228	X		1 L Amber Glass	Sludge (W	Ice	Semi VOCs(EPA8270)	
AAB1874	07/21/94 1228	X		40 ml Amber Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1874	07/21/94 1228	X		40 ml Amber Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other ✓

SAMPLE DISPOSAL:
Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0012
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1875	07/21/94 1238	X		125 ml Polyethylene	Sludge (W	NaOH	Cyanide	
AAB1875	07/21/94 1238	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1875	07/21/94 1238	X		1 L Amber Glass	Sludge (W	Ice	Semi-VOCs(EPA8270)	
AAB1875	07/21/94 1238	X		40 ml Amber Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1875	07/21/94 1238	X		40 ml Amber Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ~~✓~~ Other ✓

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0013
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1876	07/21/94 1244	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB1876	07/21/94 1244	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1876	07/21/94 1244	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB1876	07/21/94 1244	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB1876	07/21/94 1244	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ~~X~~ Other ✓

SAMPLE DISPOSAL: Disposal by Lab

Comments: [illegible]

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0014
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglo
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1877	07/21/94 1308	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB1877	07/21/94 1308	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1877	07/21/94 1308	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB1877	07/21/94 1308	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB1877	07/21/94 1308	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date: 7/21/94	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time: 1945	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other ✓

SAMPLE DISPOSAL: Disposal by Lab

Comments: INTERNALLY TRUCKED

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0015
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1878	07/21/94 1321	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB1878	07/21/94 1321	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1878	07/21/94 1321	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB1878	07/21/94 1321	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB1878	07/21/94 1321	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous___ Other ✓

SAMPLE DISPOSAL:
Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/21/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0017
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: Rad Van		Lab Report Required 08/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1873	07/21/94 1221	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1874	07/21/94 1228	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1875	07/21/94 1238	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1876	07/21/94 1244	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1877	07/21/94 1308	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1878	07/21/94 1321	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous ✓ Other ✓

SAMPLE DISPOSAL:
Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/25/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0008
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/24/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1918	07/25/94 11:00	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB1918	07/25/94 11:00	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1918	07/25/94 11:00	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Lenke (Signature): Affiliation: ESA-7	Date: 7/25/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1510	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/25/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0009
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/24/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1919	07/25/94 1120	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB1919	07/25/94 1120	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1919	07/25/94 1120	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	

Relinquished by: M. Masnka (Signature): Affiliation: ESA-4	Date: 7/25/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1320	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/25/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0019
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: Rad Van		Lab Report Required 05/24/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1918	07/25/94 1100	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1919	07/25/94 1120	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: (Signature): Affiliation: ESA-4	Date: 7/25/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: ST-4	Time: 1510	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/23/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0020
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1852	07/23/94 1214	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1852	07/23/94 1214	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1852	07/23/94 1214	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1852	07/23/94 1214	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1852	07/23/94 1214	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1852	07/23/94 1214	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: 7 [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0021
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Migeo
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1853	07/28/94 1230	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1853	07/28/94 1230	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1853	07/28/94 1230	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1853	07/28/94 1230	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1853	07/28/94 1230	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1853	07/28/94 1230	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: 7-29-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1043	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0022
	Operable Unit 1130	ICF KE, MS M703	

OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: CST-9 Sample Receiving		Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1854	07/28/94 1240	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1854	07/28/94 1240	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1854	07/28/94 1240	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1854	07/28/94 1240	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1854	07/28/94 1240	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1854	07/28/94 1240	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): [illegible] Affiliation: ESA-4	Date: 7-28-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: 1413	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/23/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0023
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1855	07/23/94 1257	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1855	07/23/94 1257	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1855	07/23/94 1257	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1855	07/23/94 1257	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1855	07/23/94 1257	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1855	07/23/94 1257	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): [illegible] Affiliation: ESA-4	Date: 7-7-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0024
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: CST-9 Sample Receiving		Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1856	07/28/94 1315	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1856	07/28/94 1315	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1856	07/28/94 1315	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1856	07/28/94 1315	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1856	07/28/94 1315	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1856	07/28/94 1315	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: 7-27-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0025
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1857	07/28/94 1331	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1857	07/28/94 1331	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1857	07/28/94 1331	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1857	07/28/94 1331	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1857	07/28/94 1331	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1857	07/28/94 1331	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: 7-29-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: 0946	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0026
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1858	07/28/94 1418	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1858	07/28/94 1418	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1858	07/28/94 1418	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1858	07/28/94 1418	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1858	07/28/94 1418	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1858	07/28/94 1418	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	CGC 1130-0027
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1859	07/28/94 1435	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1859	07/28/94 1435	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1859	07/28/94 1435	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1859	07/28/94 1435	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1859	07/28/94 1435	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1859	07/28/94 1435	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: ESA-4	Date: 7-29-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: 1547	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0028
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1860	07/28/94 1449	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1860	07/28/94 1449	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1860	07/28/94 1449	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1860	07/28/94 1449	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1860	07/28/94 1449	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1860	07/28/94 1449	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): [signature] Affiliation: ESA-4	Date: 7-29-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation:	Time: 0845	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 07/28/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0031
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van	Lab Report Required 08/27/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1852	07/28/94 1214	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1853	07/28/94 1230	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1854	07/28/94 1240	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1855	07/28/94 1257	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1856	07/28/94 1315	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1857	07/28/94 1331	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1858	07/28/94 1418	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1859	07/28/94 1435	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1860	07/28/94 1449	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Henke (Signature): [signature] Affiliation: ESA-4	Date: 7/28/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation: [illegible]	Time: 0956	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0032
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1834	08/03/94 1044	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1834	08/03/94 1044	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1834	08/03/94 1044	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1834	08/03/94 1044	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1834	08/03/94 1044	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1834	08/03/94 1044	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanka (Signature): Affiliation: ESA-1	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0034
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1835	08/03/94 1044	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1835	08/03/94 1044	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1835	08/03/94 1044	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1835	08/03/94 1044	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1835	08/03/94 1044	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1835	08/03/94 1044	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0035
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1835	08/03/94 1105	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1836	08/03/94 1105	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1836	08/03/94 1105	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1836	08/03/94 1105	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1836	08/03/94 1105	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1836	08/03/94 1105	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0036
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1837	08/03/94 1121	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1837	08/03/94 1121	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1837	08/03/94 1121	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1837	08/03/94 1121	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1837	08/03/94 1121	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1837	08/03/94 1121	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0037
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1838	08/03/94 1135	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1838	08/03/94 1135	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1838	08/03/94 1135	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1838	08/03/94 1135	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1838	08/03/94 1135	X		125 ml Polyetnylene	Soil	Ice	U(Total)	
AAB1838	08/03/94 1135	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0038
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: CST-9 Sample Receiving		Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1839	08/03/94 1148	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1839	08/03/94 1148	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1839	08/03/94 1148	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1839	08/03/94 1148	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1839	08/03/94 1148	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1839	08/03/94 1148	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0039
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman		Lab Contact John Miglio
Contact Phone No	(505) 661-5227	Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
✓ AAB1840	08/03/94 1200	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
✓ AAB1840	08/03/94 1200	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
✓ AAB1840	08/03/94 1200	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
✓ AAB1840	08/03/94 1200	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
✓ AAB1840	08/03/94 1200	X		125 ml Polyethylene	Soil	Ice	U(Total)	
✓ AAB1840	08/03/94 1200	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ~~ESA-4~~	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0040
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1841	08/03/94 1213	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1841	08/03/94 1213	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1841	08/03/94 1213	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1841	08/03/94 1213	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1841	08/03/94 1213	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1841	08/03/94 1213	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0041
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Migito
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1842	08/03/94 1227	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1842	08/03/94 1227	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1842	08/03/94 1227	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1842	08/03/94 1227	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1842	08/03/94 1227	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1842	08/03/94 1227	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/03/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0054
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van	Lab Report Required 09/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1834	08/03/94 1044	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1835	08/03/94 1044	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1836	08/03/94 1106	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1837	08/03/94 1121	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1838	08/03/94 1135	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1839	08/03/94 1148	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1840	08/03/94 1200	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1841	08/03/94 1213	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1842	08/03/94 1227	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: ~~M. Henke~~ (Signature): Affiliation: ES	Date: 5/3/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1530	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0043
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1861	08/04/94 1037	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1861	08/04/94 1037	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1861	08/04/94 1037	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1861	08/04/94 1037	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1861	08/04/94 1037	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1861	08/04/94 1037	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0044
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1862	08/04/94 1037	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1862	08/04/94 1037	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1862	08/04/94 1037	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1862	08/04/94 1037	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1862	08/04/94 1037	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1862	08/04/94 1037	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0045
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1863	08/04/94 1058	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1863	08/04/94 1058	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1863	08/04/94 1058	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1863	08/04/94 1058	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1863	08/04/94 1058	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1863	08/04/94 1058	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0046
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1864	08/04/94 1113	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1864	08/04/94 1113	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1864	08/04/94 1113	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1864	08/04/94 1113	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1864	08/04/94 1113	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1864	08/04/94 1113	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henka (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0047
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1865	08/04/94 1132	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1865	08/04/94 1132	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1865	08/04/94 1132	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1865	08/04/94 1132	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1865	08/04/94 1132	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1865	08/04/94 1132	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0048
	Operable Unit 1130	ICF KE, MS M703	
CU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1866	08/04/94 1146	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1866	08/04/94 1146	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1866	08/04/94 1146	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1866	08/04/94 1146	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1866	08/04/94 1146	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1866	08/04/94 1146	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0049
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1867	08/04/94 1201	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1867	08/04/94 1201	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1867	08/04/94 1201	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1867	08/04/94 1201	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1867	08/04/94 1201	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1867	08/04/94 1201	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0050
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1868	08/04/94 1215	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1868	08/04/94 1215	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1868	08/04/94 1215	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1868	08/04/94 1215	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1868	08/04/94 1215	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1868	08/04/94 1215	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0051
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1869	08/04/94 1229	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1869	08/04/94 1229	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1869	08/04/94 1229	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1869	08/04/94 1229	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1869	08/04/94 1229	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1869	08/04/94 1229	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0056
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1870	08/04/94 1413	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1870	08/04/94 1413	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1870	08/04/94 1413	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1870	08/04/94 1413	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1870	08/04/94 1413	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1870	08/04/94 1413	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date: 8/4/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1630	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritent___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0057
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1871	08/04/94 1413	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1871	08/04/94 1413	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1871	08/04/94 1413	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1871	08/04/94 1413	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1871	08/04/94 1413	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1871	08/04/94 1413	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date: 8/4/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1[illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0058
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1872	08/04/94 1428	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1872	08/04/94 1428	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1872	08/04/94 1428	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1872	08/04/94 1428	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1872	08/04/94 1428	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1872	08/04/94 1428	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date: [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0059
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1861	08/04/94 1037	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1862	08/04/94 1037	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1863	08/04/94 1058	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1864	08/04/94 1113	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1865	08/04/94 1132	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1866	08/04/94 1146	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1867	08/04/94 1201	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1868	08/04/94 1215	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1869	08/04/94 1229	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Henk (Signature): Affiliation: ESA	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0060
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: Rad Van	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1870	08/04/94 1413	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1871	08/04/94 1413	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1872	08/04/94 1428	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: Matthew [illegible] (Signature): [illegible] Affiliation: ESA-4	Date: [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0061
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227		Lab Destination: CST-9 Sample Receiving	Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1843	08/04/94 1348	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1843	08/04/94 1348	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1843	08/04/94 1348	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1843	08/04/94 1348	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1843	08/04/94 1348	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1843	08/04/94 1348	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-[illegible]	Date: 8/4/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1130	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/04/94	Technical Area 36	Send Lab Report to: Lynn Kidman	COC 1130-0052
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman			Lab Contact John Miglio
Contact Phone No (505) 661-5227	Lab Destination: Rad Van		Lab Report Required 09/03/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1543	08/04/94 1343	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Hen[illegible] (Signature): [illegible] Affiliation: ES[illegible]	Date: [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0053
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1879	08/05/94 1059	X		1 L Amber Glass	Sludge (W	Ice	High Explosives(USTHMA)	
AAB1879	08/05/94 1059	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1879	08/05/94 1059	X		1 L Amber Glass	Sludge (W	Ice	Semi-VOCs(EPA8270)	
AAB1879	08/05/94 1059	X		1 L Polyethylene	Sludge (W	HNO3	U(Total)	
AAB1879	08/05/94 1059	X		40 ml Amber Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1879	08/05/94 1059	X		40 ml Amber Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: R. Cord (Signature). Affiliation: ESA-4	Date: 8-5-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1500	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTUOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman		COC 1130-0064
	Operable Unit 1130	ICF KE, MS M703		

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1880	08/05/94 1114	X		1 L Amber Glass	Sludge (W	Ice	High Explosives(USTHMA)	
AAB1880	08/05/94 1114	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1880	08/05/94 1114	X		1 L Amber Glass	Sludge (W	Ice	Semi-VOCs(EPA8270)	
AAB1880	08/05/94 1114	X		1 L Polyethylene	Sludge (W	HNO3	U(Total)	
AAB1880	08/05/94 1114	X		40 ml Amber Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1880	08/05/94 1114	X		40 ml Amber Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: R. Cordova (Signature): Affiliation: ESA-4	Date: 8-5-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: Rebecca Eaton (Signature): Affiliation: CST-9	Time: 1300	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0065
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1881	08/05/94 1120	X		1 L Amber Glass	Sludge (W	Ice	High Explosives(USTHMA)	
AAB1881	08/05/94 1120	X		500 ml Polyethylene	Sludge (W	HNO3	Metals(EPA6010)	
AAB1881	08/05/94 1120	X		1 L Amber Glass	Sludge (W	Ice	Semi-VOCs(EPA8270)	
AAB1881	08/05/94 1120	X		1 L Polyethylene	Sludge (W	HNO3	U(Total)	
AAB1881	08/05/94 1120	X		40 ml Amber Glass-A	Sludge (W	HCl	VOCs(EPA8260)	
AAB1881	08/05/94 1120	X		40 ml Amber Glass-B	Sludge (W	HCl	VOCs(EPA8260)	

Relinquished by: R. Cord (Signature): Affiliation: ESA-4	Date: 8-5-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: Edna Eaton (Signature): Affiliation: CST-9	Time: 1400	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0066
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1882	08/05/94 1128	X		1 L Amber Glass	Liquid	Ice	High Explosives(USTHMA)	
AAB1882	08/05/94 1128	X		500 ml Polyethylene	Liquid	HNO3	Metals(EPA6010)	
AAB1882	08/05/94 1128	X		1 L Amber Glass	Liquid	Ice	Semi-VOCs(EPA8270)	
AAB1882	08/05/94 1128	X		1 L Polyethylene	Liquid	HNO3	U(Total)	
AAB1882	08/05/94 1128	X		40 ml Amber Glass-A	Liquid	HCl	VOCs(EPA8260)	
AAB1882	08/05/94 1128	X		40 ml Amber Glass-B	Liquid	HCl	VOCs(EPA8260)	

Relinquished by: R. Cordova (Signature): Affiliation: ESA-4	Date: 8-5-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: Robert Eaton (Signature): Affiliation: CST-9	Time: 1300	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTUOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0066
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1884	08/05/94 1140	X		1 L Amber Glass	Liquid	Ice	High Explosives(USTHMA)	
AAB1884	08/05/94 1140	X		500 ml Polyethylene	Liquid	HNO3	Metals(EPA6010)	
AAB1884	08/05/94 1140	X		1 L Amber Glass	Liquid	Ice	Semi-VOCs(EPA8270)	
AAB1884	08/05/94 1140	X		1 L Polyethylene	Liquid	HNO3	U(Total)	
AAB1884	08/05/94 1140	X		40 ml Amber Glass A	Liquid	HCl	VOCs(EPA8260)	
AAB1884	08/05/94 1140	X		40 ml Amber Glass B	Liquid	HCl	VOCs(EPA8260)	

Relinquished by: R. Coldwell (Signature): Affiliation: ESA-4	Date: 8-5-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: Fabian Eaton (Signature): Affiliation: CST-9	Time: 1500	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: POTENTIALLY INFECTIOUS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0069
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/04/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1879	08/05/94 1059	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1880	08/05/94 1114	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1881	08/05/94 1120	X		500 ml Polyethylene	Sludge (W	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1882	08/05/94 1123	X		500 ml Polyethylene	Liquid	Ice	Mobile Rad Van(alpha,beta,gamma)	
~~AAB1883~~	~~08/05/94~~	~~X~~		~~500 ml Polyethylene~~	~~Liquid~~	~~Ice~~	~~Mobile Rad Van(alpha,beta,gamma)~~	
AAB1884	08/05/94 1140	X		500 ml Polyethylene	Liquid	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Henke (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0055
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Migliio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1933	08/08/94 1249	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1933	08/08/94 1249	X		125 ml Polyethylene	Soil	Ice	U(Isotopic)	

Relinquished by: M. Henke 8/8/94 (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological ___ Highly Toxic ___ Flammable ___ Skin Irritant ___ Non-Hazard ✓ Other ___

SAMPLE DISPOSAL:
Disposal by Lab

Comments: DO NOT SEND SAMPLE TO GEOTECH FOR ANALYSIS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0070
	Operable Unit 1130	ICF KE, MS M703	

CU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1885	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1885	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1885	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M Hankes (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RESULTS [illegible] FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 19.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0070
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1885~~	~~08/08/94 1111~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(SW7471)~~ Returned to customer	
AAB1885	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1885	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1885	08/08/94 1111	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Hanson (Signature): [signature] Affiliation: ESA-4	Date: 8/5/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation:	Time: 14:20	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0071
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1886	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1886	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1886	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALL SAMPLES FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0071
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1886~~	~~08/08/94 1111~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(SW7471)~~ Returned to customer	
AAB1886	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1886	08/08/94 1111	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1886	08/08/94 1111	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: ~~M. Hart~~ 8/8/94 (Signature): Affiliation: ESA	Date: 8/8/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 14:26	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

8/8/94

RERUN ALIQUOT 1 FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0072
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1887	08/08/94 1130	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1887	08/08/94 1130	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1887	08/08/94 1130	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1887	08/08/94 1130	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1887	08/08/94 1130	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1887	08/08/94 1130	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR TECHNETIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0072
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1897	08/08/94 1130	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1897~~	~~08/08/94 1130~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil (SW7471)~~ Returned to customer	
AAB1897	08/08/94 1130	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1897	08/08/94 1130	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1897	08/08/94 1130	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1897	08/08/94 1130	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESA-4	Date: 8/8/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 14:30	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___	SAMPLE DISPOSAL: Disposal by Lab
Comments:	

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0073
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1888	08/08/94 1141	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1888	08/08/94 1141	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1888	08/08/94 1141	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

REPORT ALLOWOUT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 11.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0073
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1888~~	~~08/08/94 1141~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~ Returned to customer	
AAB1888	08/08/94 1141	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1888	08/08/94 1141	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1888	08/08/94 1141	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESA-4	Date: 8/8/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 14:26	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0074
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1889	08/08/94 1152	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1889	08/08/94 1152	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1889	08/08/94 1152	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henry (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

DEQUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 35	Send Lab Report to Lynn Kidman	COC 1130-0074
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1889~~	~~08/08/94 1152~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(SW7471)~~ Returned to customer	
AAB1889	08/08/94 1152	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1889	08/08/94 1152	X		125 ml Polyethylene	Soil	Ice	U(Total)	SEE BELOW
AAB1889	08/08/94 1152	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: ~~M. Hedgy~~ P. Gray 9/8/94 (Signature): Affiliation: ESA-4	Date: 9/8/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 14:26	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/08/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0075
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/07/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1885	08/08/94 1111	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1886	08/08/94 1111	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1887	08/08/94 1130	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1888	08/08/94 1141	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1889	08/08/94 1152	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: (Signature): Affiliation:	Date: 8/8/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1415	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0076
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1812	08/11/94 1050	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1812	08/11/94 1050	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1812	08/11/94 1050	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1812	08/11/94 1050	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanka (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0076
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1812	08/11/94 1050	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1812~~	~~08/11/94 1050~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Metals Soil(SW7471)~~ Returned to customer RLE	
AAB1812	08/11/94 1050	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1812	08/11/94 1050	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1812	08/11/94 1050	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESX-4	Date: 8/11/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 15:05	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0077
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1813	08/11/94 1104	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1813	08/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1813	08/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1813	08/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanks (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0077
	Operable Unit 1130	ICF KE, MS M738	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglo
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1813	08/11/94 1104	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1813~~	~~08/11/94 1104~~	X		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~ Returned to customer	
AAB1813	08/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1813	08/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1813	08/11/94 1104	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: ESH-[illegible]	Date: 8/11/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature) [illegible] Affiliation: [illegible]	Time: 1505	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0078
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1814	08/11/94 1123	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1814	08/11/94 1123	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1814	08/11/94 1123	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1814	08/11/94 1123	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hensel (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 35	Send Lab Report to Lynn Kidman	COC 1130-0078
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1814	08/11/94 1123	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1814~~	~~08/11/94 1123~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Heavy Soil Screen~~ Returned to customer	
AAB1814	08/11/94 1123	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1814	08/11/94 1123	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1814	08/11/94 1123	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation:	Date: 8/11/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 15:05	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0079
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1815	08/11/94 1138	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1815	08/11/94 1138	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1815	08/11/94 1138	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1815	08/11/94 1138	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08.11.94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1139 0079
	Operable Unit 1139	ICF KE, MS M703	
OU Contact Lynn Kidman	Lab Destination CST-9 Sample Receiving	Lab Contact John Miglio	
Contact Phone No (505) 661-5227	Lab Mail Stop	Lab Report Required 09/10 94	

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1815	08/11/94 1138	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1815~~	~~08/11/94 1138~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Se(SW7471)~~ Returned to customer. RCE	
AAB1815	08/11/94 1138	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1815	08/11/94 1138	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1815	08/11/94 1138	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: EA-4	Date: 8/11/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 15:05	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08.11.94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0080
	Operable Unit 1139	IOF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1812	08.11/94 1050	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1813	08.11/94 1104	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1814	08/11/94 1123	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1815	08/11/94 1138	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08 12 94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0031
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1816	08/12/94 1138	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1816	08/12/94 1138	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1816	08/12/94 1138	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1816	08/12/94 1138	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M Henke (Signature): [signature] Affiliation: ESA-4	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation:	Time: 1517	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/12/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0091
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglo
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1816	08/12/94 1138	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1816~~	~~08/12/94 1138~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~ Returned to customer	
AAB1816	08/12/94 1138	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1816	08/12/94 1138	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1816	08/12/94 1138	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: ESA-4	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: 1517	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08.12.94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130 0092
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1817	08/12/94 1133	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1817	08/12/94 1133	X		125 ml Glass	Soil	Ice	High Explosives(USTHWA)	
AAB1817	08/12/94 1133	X		125 ml Polyethylene	Soil	Ice	Mercury Soil(SW7471)	
AAB1817	08/12/94 1133	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1817	08/12/94 1133	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1817	08/12/94 1133	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1817	08/12/94 1133	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: ~~M Hacke~~ (Signature): Affiliation:	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1518	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08 12 94	Technical Area 39	Send Lab Report to Lynn Kidman	COC [illegible]
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1817	08/12/94 1133	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1817	08/12 94 1133	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1817~~	~~08/12 94 1133~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(EPA7471)~~ Returned to customer	
AAB1817	08/12 94 1133	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1817	08/12/94 1133	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1817	08/12/94 1133	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1817	08/12/94 1133	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: ESA-4	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] CST-9 Affiliation:	Time: 1518	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08 12 94	Technical Area 39	Send Lab Report to Lynn Kuhnan	COC 1130-0083
	Operable Unit 1130	ICF KE, MS M783	

OU Contact	Lynn Kuhnan	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	505/691-6027	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1818	08 12 94 1121	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1818	08 12 94 1121	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1818	08 12 94 1121	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1818	08/12/94 1121	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	VOCs(EPA-260)	

Relinquished by: M. Henke (Signature): [illegible] Affiliation: [illegible]	Date: 8-12-94 Time: 1519	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]		Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08.12.94	Technical Area 36	Send Lab Report to Lynn Kidman	COC [illegible]
	Operable Unit 1130	ICF KE, MS M703	
OU Contact Lynn Kidman	Lab Destination CST-9 Sample Receiving	Lab Contact [illegible]	
Contact Phone No (505) 661-5227	Lab Mail Stop	Lab Report Required [illegible]	

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1818	08/12/94 1121	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	High Explosives(USTHMX)	
~~AAB1818~~	~~08/12/94 1121~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Metals, Total(Hg)~~ Returned to customer	
AAB1818	08/12/94 1121	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1818	08/12/94 1121	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1818	08/12/94 1121	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: ESH-4	Date: 8-12-94 Time: 1519	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] CST-9 Affiliation:		Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08 12 94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 113 [illegible]
	Operable Unit 1139	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661 5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1819	08 12 94 1108	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1819	08/12 94 1108	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1819	08 12 94 1108	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1819	08 12 94 1108	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1819	08/12 94 1108	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1819	08/12/94 1108	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1819	08/12/94 1108	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: ~~M. Henke~~ [illegible] (Signature): [illegible] Affiliation: [illegible]	Date: 8-17-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: [illegible]	Time: 1521	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08-12-94	Technical Area 36	Send Lab Report to Lynn Kinman	COC [illegible]
	Operable Unit 1133	ICF KE, MS M703	

OU Contact	Lynn Kinman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	505/667-8[illegible]	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1819	08-12-94 1108	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1819	08-12-94 1108	X		125 ml Glass	Soil	Ice	High Explosives(USTH-MA)	
~~[illegible]~~	~~[illegible]~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~[illegible]~~ Returned to customer	
AAB1819	08-12-94 1108	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1819	08-12-94 1108	X		125 ml Polyethylene	Soil	Ice	Pu(isotopic)-U(Total)	
AAB1819	08/12/94 1108	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1819	08/12/94 1108	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: ESA-[illegible]	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: 1521	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF | Yellow - RPF | Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date [illegible]	Technical Area 36	Send Lab Report to Lynn Kidman	COC [illegible]
	Operable Unit 1130	ICF KE, MS M793	
OU Contact Lynn Kidman	Lab Destination CST-9 Sample Receiving	Lab Contact John Miglo	
Contact Phone No (505) 667 5227	Lab Mail Stop	Lab Report Required 09/11/94	

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1820	08/12/94 1054	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	-
AAB1820	08/12/94 1054	X		125 ml Glass	Soil	Ice	High Explosives (USTHMA)	-
AAB1820	08/12/94 1054	X		125 ml Polyethylene	Soil	Ice	Mercury (SW7471)	-
AAB1820	08/12/94 1054	X		125 ml Polyethylene	Soil	Ice	Metals (EPA6010)	-
AAB1820	08/12/94 1054	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	-
AAB1820	08/12/94 1054	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	-
AAB1820	08/12/94 1054	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	-

Relinquished by: ~~M. Hinke~~ (Signature): [illegible] Affiliation:	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: 1522	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08 12 94	Technical Area 36	Send Lab Report to Lynn Kidman	COC [illegible]
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	[illegible]
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09 11 94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1820	08 12 94 1054	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1820	08 12 94 1054	X		125 ml Glass	Soil	Ice	High Explosives(USTHMX)	
~~AAB1820~~	~~08 12 94 1054~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(SW7471)~~	Returned to customer. RCE
AAB1820	08/12/94 1054	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1820	08/12/94 1054	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1820	08/12/94 1054	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1820	08/12/94 1054	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: ~~M. Henke~~ Ken McFadden (Signature): [signature] Affiliation: ESH-1	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation: CST-9	Time: 1522	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY REQUEST FOR ANALYSIS

Date [illegible]	Technical Area [illegible]	Send Lab Report to [illegible]	COC [illegible]
	Operable Unit 1139	[illegible] ICF KE, MS M793	
OU Contact [illegible]		Lab Destination Red Van	Lab Contact John Miglio
Contact Phone No [illegible]		Lab Mail Stop	Lab Report Required 09 11 94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1816	[illegible]	X		Resealable Polyethylene	Soil	Ice	Mobile Red Van(alpha,beta,gamma)	
AAB1817	[illegible]	X		Resealable Polyethylene	Soil	Ice	Mobile Red Van(alpha,beta,gamma)	
AAB1818	[illegible]	X		Resealable Polyethylene	Soil	Ice	Mobile Red Van(alpha,beta,gamma)	
AAB1819	08 12 94 1109	X		Resealable Polyethylene	Soil	Ice	Mobile Red Van(alpha,beta,gamma)	
AAB1820	08 12 94 1054	X		Resealable Polyethylene	Soil	Ice	Mobile Red Van(alpha,beta,gamma)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: [illegible]	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/12/94	Technical Area 16	Send Lab Report to Lynn Kidman	COC 1133-0097
	Operable Unit 1130	ICF KE, MS M993	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop		Lab Report Required	09/11/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1934	08/12/94 1300	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1934	08/12/94 1300	X		125 ml Polyethylene	Soil	Ice	U(Isotopic)	

Relinquished by: [illegible], NSD (Signature): [illegible] Affiliation: ESA-1	Date: 8-12-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation:	Time: 1523	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: DO NOT SEND TO GEOTECH FOR SAMPLE ANALYSIS

Original - SCF Yellow - RPF Pink - FTL Copy

Date [illegible]	Technical Area 35	Send Lab Report to [illegible]	COC [illegible]
	Operable Unit 1120	IOF KEL MS M703	
OU Contact [illegible]	Lab Destination [illegible]	Lab Contact [illegible]	
Contact Phone No [illegible]	Lab Mail Stop	Lab Report Required [illegible]	

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1939	[illegible]	X		[illegible] ml Polyethylene	Soil	Ice	[illegible]	
AAB1939	[illegible]	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1939	08/16/94 1140	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1939	08/16/94 1140	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1939	08/16/94 1140	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	SEE BELOW
AAB1939	08/16/94 1140	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1939	08/16/94 1140	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date: [illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: [illegible]	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___	SAMPLE DISPOSAL: Disposal by Lab
Comments:	

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT ~~IFOU~~ FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory Facility

Date [illegible]	Technical Area [illegible]	Send Lab Report to [illegible]	COC [illegible]
	Operable Unit [illegible]	ICF KE, MS [illegible]	
OU Contact [illegible]		Lab Destination [illegible]	Lab Contact [illegible]
Contact Phone No [illegible]		Lab Mail Stop	Lab Report Required [illegible]

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
[illegible]	[illegible]	X		[illegible]	Soil	Ice	[illegible]	
[illegible]	[illegible]	X		[illegible]	Soil	Ice	[illegible]	
[illegible]	[illegible]	X		[illegible]	Soil	Ice	[illegible]	Returned to customer RCE
AAB1939	08/16/94 1140	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1939	08/16/94 1140	X		125 ml Polyethylene	Soil	Ice	Pu(total)(U-U(Total))	SEE BELOW
AAB1939	08/16/94 1140	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1939	08/16/94 1140	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: Gary Kinnes (Signature): Terry Dea Affiliation: ESA4	Date: 8-16-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Kyle Gary Affiliation: CST-7	Time: 2:45P	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT ~~EPA~~ 8/16/94 FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Los Alamos National Laboratory

Date	Technical Area	Send Lab Report to	COC
	Operable Unit 1130		
OU Contact	Lab Destination	Lab Contact	
Contact Phone No	Lab Mail Stop	Lab Report Required	

Field Unique Sample ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED. TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1940	[illegible]	X		[illegible] Polyethylene	Soil	Ice	Gamma Rad	
AAB1940	[illegible]	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1940	08/16/94 1126	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1940	08/16/94 1126	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1940	08/16/94 1126	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)-U(Total)	SEE BELOW
AAB1940	08/16/94 1126	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1940	08/16/94 1126	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation:	Date: 8-[illegible]	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 2450	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF | Yellow - RPF | Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF TOTAL U EXCEEDS 14.75 pCi/g

Date [illegible] Technical Area [illegible] Send Lab Report [illegible]

Operable Unit [illegible]

OU Contact [illegible] Lab Destination [illegible]

Contact Phone No [illegible] Lab Mail Stop [illegible]

Field Unique Sample #ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUIRED (Test (METHOD))	REMARKS (Condition of sample on receipt etc.)
AAB1940	08 16 94 1126	X		500 ml Polyethylene	Soil	Ice	[illegible]	
AAB1940	08 16 94 1126	X		125 ml Glass	Soil	Ice	High Explosives(SW846)	
AAB1940	08 16 94 1126	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	Returned to Customer
AAB1940	08 16 94 1126	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1940	08/16/94 1126	X		125 ml Polyethylene	Soil	Ice	Pu(isotopic)-U(Total)	SEE BELOW
AAB1940	08/16/94 1126	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1940	08/16/94 1126	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation: [illegible]	Date: 8-16-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: [illegible]	Time: 2450	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF TOTAL U EXCEEDS 14.75 pCi/g

Operable Unit 1139

Lab Destination

Lab Contact

Lab Contact

Contact Phone No.

Lab Mail Stop

Lab Report Required

Field Reader Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume Material	Matrix	Preservative	ANALYSIS REQUESTED TEST (METHOD)	REMARKS Condition of sample upon receipt
AAB1941	[illegible]	X		[illegible]	[illegible]	[illegible]	[illegible]	
AAB1941	[illegible]	X		125 ml [illegible]	[illegible]	Ice	[illegible]	
AAB1941	08 16 94 1112	X		125 ml Polyethylene	Soil	Ice	Mercury Soil (SW7471)	
AAB1941	08 16 94 1112	X		125 ml Polyethylene	Soil	Ice	Metals (EPA6010)	
AAB1941	08 16 94 1112	X		125 ml Polyethylene	Soil	Ice	Pu(isotopic)+U(Total)	See below
AAB1941	08 16 94 1112	X		125 ml Glass	Soil	Ice	Semi-VOCs (EPA8270)	
AAB1941	08 16 94 1112	X		125 ml Glass	Soil	Ice	VOCs (EPA8260)	

Relinquished by: (Signature): Affiliation:	Date: 8-16-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1154	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Date [illegible] Technical Area [illegible] Send Lab Report to [illegible] SCF [illegible]

Operable Unit 1130 [illegible]

OU Contact [illegible] Lab Destination [illegible] Lab Contact

Contact Phone No [illegible] Lab Mail Stop Lab Report Required

Field Unique Sample #ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED TO TEST (METHOD)	REMARKS (Field Notes, Instructions, etc.)
AAB1941	08/16/94 1112	X		[illegible] Polyethylene	Soil	Ice	[illegible]	
AAB1941	08/16/94 1112	X		125 ml Glass	Soil	Ice	High Explosives(SW846)	
AAB1941	08/16/94 1112	X		125 ml Polyethylene	Soil	Ice	[illegible]	Returned to customer
AAB1941	08/16/94 1112	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1941	08/16/94 1112	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)-U(Total)	SEE BELOW
AAB1941	08/16/94 1112	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1941	08/16/94 1112	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: SIGNATURE NANCY NES (Signature): Nancy Nes Affiliation: ESA-4	Date: 8-16-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-7	Time: 2:45P	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RERUN ALIQUOT FOR ISOTOPIC URANIUM IF U(TOTAL) EXCEEDS 14.75 pCi/g

Operable Unit:

Lab Destination: Lab Contact:

Lab Mail Stop: Lab Report Required:

Field Unique Sample ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1942	[illegible]	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1942	08 16 94 1052	X		125 ml Polyethylene	Soil	Ice	Mercury, Soil(SW7471)	
AAB1942	08 16 94 1052	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1942	08 16 94 1052	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	SEE BELOW
AAB1942	08 16 94 1052	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1942	08 16 94 1052	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

REDRUN ALIQUOT FOR ISOTOPIC URANIUM IF U (TOTAL) EXCEEDS 14.75 pCi/g

Operable Unit

Lab Contact

Contact Phone No.

Lab Destination

Lab Mail Stop

Field Unique Sample #ID	Date Time Collected	GRAB	COMP	Sample Container Volume Material	Matrix	Preservative	Analysis Requested	REMARKS
AAB1942				[illegible] Polyethylene	Soil	Ice	[illegible]	
AAB1942	[illegible]	X		125 ml Glass	Soil	Ice	[illegible]	
AAB1942	[illegible]	X		[illegible] Polyethylene	Soil	Ice	[illegible]	Returned to customer
AAB1942	08/16/94 1052	X		125 ml Polyethylene	Soil	Ice	[illegible] (EPA[illegible])	
AAB1942	08/16/94 1052	X		125 ml Polyethylene	Soil	Ice	[illegible] (Total)	SEE BELOW
AAB1942	08/16/94 1052	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1942	08/16/94 1052	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: [illegible] Nagy/NES (Signature): [illegible] Affiliation: EPA	Date: 8-16-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [illegible] Affiliation: CSF-7	Time: 2:45P	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

RETURN ALIQUOT FOR ISOTOPIC URANIUM IF U (TOTAL) EXCEEDS 14.75 pCi/g

Operable Unit

Lab Contact

Lab Report Required

Field Sample ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED TEST METHOD	REMARKS
[illegible]	[illegible]	X		Reseatable Poly Bag	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	X		Reseatable Poly Bag	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	X		Reseatable Poly Bag	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	X		Reseatable Poly Bag	[illegible]	[illegible]	[illegible]	

Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0093
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1808	08/22/94 1100	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1808	08/22/94 1100	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1808	08/22/94 1100	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1808	08/22/94 1100	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0093
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1808	08/22/94 1100	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1808~~	~~08/22/94 1100~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~ Returned to customer	
AAB1808	08/22/94 1100	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1808	08/22/94 1100	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1808	08/22/94 1100	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date: 8/22/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1100	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0094
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1809	08/22/94 1118	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1809	08/22/94 1118	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1809	08/22/94 1118	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1809	08/22/94 1118	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0094
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1809	08/22/94 1118	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1809~~	~~08/22/94 1118~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~ Returned to customer	
AAB1809	08/22/94 1118	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1809	08/22/94 1118	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1809	08/22/94 1118	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date: 8/22/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1600	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0095
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1810	08/22/94 1141	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1810	08/22/94 1141	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1810	08/22/94 1141	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1810	08/22/94 1141	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0095
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1810	08/22/94 1141	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1810~~	~~08/22/94 1141~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury-Soil(SW7471)~~	Returned to customer
AAB1810	08/22/94 1141	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1810	08/22/94 1141	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1810	08/22/94 1141	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date: 8/22/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1627	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0096
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1811	08/22/94 1200	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1811	08/22/94 1200	X		125 ml Polyethylene	Soil	Ice	Mercury-Soil(SW7471)	
AAB1811	08/22/94 1200	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1811	08/22/94 1200	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0096
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1811	08/22/94 1200	X		500 ml Polyethylene	Soil	Ice	Gamma Spec	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
~~AAB1811~~	~~08/22/94 1200~~	~~X~~		~~125 ml Polyethylene~~	~~Soil~~	~~Ice~~	~~Mercury Soil(SW7471)~~ Returned to customer	
AAB1811	08/22/94 1200	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1811	08/22/94 1200	X		125 ml Polyethylene	Soil	Ice	Pu(Isotopic)+U(Total)	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1811	08/22/94 1200	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: H. Ness (Signature): Affiliation: ICF KE	Date: 8/23/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST-9	Time: 1609	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 08/22/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0097
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	09/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1808	08/22/94 1100	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1809	08/22/94 1118	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1810	08/22/94 1141	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1811	08/22/94 1200	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: [illegible] (Signature): [illegible] Affiliation: ICF KE	Date: 8/22/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: [illegible] (Signature): [illegible] Affiliation: CST-9	Time: 1600	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/13/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0098
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1801	09/13/94 1419	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1801	09/13/94 1419	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1801	09/13/94 1419	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1801	09/13/94 1419	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1801	09/13/94 1419	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST 9	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0099
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1802	09/14/94 1019	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1802	09/14/94 1019	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1802	09/14/94 1019	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1802	09/14/94 1019	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1802	09/14/94 1019	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman		COC 1130-0100
	Operable Unit 1130	ICF KE, MS M703		

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1803	09/14/94 1039	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1803	09/14/94 1039	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1803	09/14/94 1039	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1803	09/14/94 1039	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1803	09/14/94 1039	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazardous___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments: [illegible]

Original - SCF / Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0107
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K434	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1804	09/14/94 1039	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1804	09/14/94 1039	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1804	09/14/94 1039	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1804	09/14/94 1039	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1804	09/14/94 1039	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments: [illegible]

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0102
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1805	09/14/94 1151	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1805	09/14/94 1151	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1805	09/14/94 1151	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1805	09/14/94 1151	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1805	09/14/94 1151	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments: [illegible]

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0103
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglo
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1806	09/14/94 1210	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1806	09/14/94 1210	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1806	09/14/94 1210	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1806	09/14/94 1210	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1806	09/14/94 1210	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments: [illegible]

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/13/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0109
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1801	09/13/94 1419	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0110
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1802	09/14/94 1019	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1803	09/14/94 1039	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1804	09/14/94 1039	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1805	09/14/94 1151	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1806	09/14/94 1210	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/20/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0111

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/20/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1935	09/20/94 1326	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1935	09/20/94 1326	X		125 ml Polyethylene	Soil	Ice	U(Isotopic)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments: DO NOT ADD TO COMPOSITE ANALYSIS

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/28/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0115
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/28/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2109	09/28/94 1200	X		125 ml Glass	Soil	Ice	High Explosivas(USTHMA)	
AAB2109	09/28/94 1200	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB2109	09/28/94 1200	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB2109	09/28/94 1200	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB2109	09/28/94 1200	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/28/94	Technical Area 35	Send Lab Report to Lynn Kidman	COC 1130-0116
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/28/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2109	09/28/94 1200	X		Resaalable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation: ESA-4	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/30/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0119
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/30/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1952	09/30/94 1111	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1952	09/30/94 1111	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1952	09/30/94 1111	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1952	09/30/94 1111	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1952	09/30/94 1111	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: M. Henke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 9:15	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 09/30/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0123
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	10/30/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1952	09/30/94 1111	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Hanke (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/03/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0120
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1953	10/03/94 1136	X		125 ml Glass	Soil	Ice	High Explosivss(USTHMA)	
AAB1953	10/03/94 1136	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1953	10/03/94 1136	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1953	10/03/94 1136	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1953	10/03/94 1136	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/03/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0121
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1954	10/03/94 1407	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1954	10/03/94 1407	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1954	10/03/94 1407	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1954	10/03/94 1407	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1954	10/03/94 1407	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/03/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0124
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/02/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1953	10/03/94 1135	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1954	10/03/94 1407	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/06/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0117
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/05/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1950	10/06/94 1215	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1950	10/06/94 1215	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1950	10/06/94 1215	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1950	10/06/94 1215	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1950	10/06/94 1215	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: R. Cordi (Signature): R. Cordi Affiliation: ESA-4	Date: 10-6-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1609	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/06/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0118
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/05/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1951	10/06/94 1215	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1951	10/06/94 1215	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1951	10/06/94 1215	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1951	10/06/94 1215	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1951	10/06/94 1215	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: R. Cordi (Signature): R. Cordi Affiliation: ESA-4	Date: 10-6-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1609	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/06/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0125
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/05/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1955	10/06/94 1433	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1955	10/06/94 1433	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1955	10/06/94 1433	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1955	10/06/94 1433	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1955	10/06/94 1433	X		125 ml Glass	Soil	Ice	VOCs(EPA8250)	

Relinquished by: A Cordell (Signature): Affiliation: ESA-4	Date: 10-6-94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1609	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/06/94	Technical Area 35	Send Lab Report to Lynn Kidman	COC 1130-0128
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/05/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1950	10/06/94 1215	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1951	10/06/94 1215	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1955	10/06/94 1433	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: R. Cordi (Signature): Affiliation: ESA-4	Date: 10/6/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1100	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0126
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1956	10/11/94 1104	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1956	10/11/94 1104	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1956	10/11/94 1104	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1956	10/11/94 1104	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1956	10/11/94 1104	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0127
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1957	10/11/94 1257	X		125 ml Glass	Soil	Ice	High Explosives(USTHMA)	
AAB1957	10/11/94 1257	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1957	10/11/94 1257	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1957	10/11/94 1257	X		125 ml Polyethylene	Soil	Ice	U(Total)	
AAB1957	10/11/94 1257	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date: 10/11/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation: CST 3	Time: 1:30	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/11/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0129
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/10/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1956	10/11/94 1104	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1957	10/11/94 1257	X		Resealable Poly Bag	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): [signature] Affiliation: ICF KE	Date: 10/11/94	Relinquished by: [signature] (Signature): Affiliation: ESH-4	Date: 10/11/94	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): [signature] Affiliation:	Time: 2:20	Received by: (Signature): [signature] Affiliation: ESH-4	Time: 2:59	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0134
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2115	10/14/94 1016	X		125 ml Polyethylene	Liquid	NaOH	Cyanide	
AAB2115	10/14/94 1016	X		1 L Polyethylene	Liquid	HNO3	Gamma Spec	
AAB2115	10/14/94 1016	X		1 L Amber Glass	Liquid	Ice	High Explosives(USTHMA)	
AAB2115	10/14/94 1016	X		500 ml Polyethylene	Liquid	HNO3	Mercury-Water(SW7470)	
AAB2115	10/14/94 1016	X		500 ml Polyethylene	Liquid	HNO3	Metals(EPA6010)	
AAB2115	10/14/94 1016	X		1 L Amber Glass	Liquid	Ice	Semi-VOCs(EPA8270)	
AAB2115	10/14/94 1016	X		1 L Polyethylene	Liquid	HNO3	U(Total)	
AAB2115	10/14/94 1016	X		40 ml Amber Glass-A	Liquid	HCl	VOCs(EPA8260)	
AAB2115	10/14/94 1016	X		40 ml Amber Glass-B	Liquid	HCl	VOCs(EPA8260)	

Relinquished by: R. Cordi (Signature): Affiliation: ESA-4	Date: 10/14/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: [illegible] (Signature): Affiliation: CST-3	Time: 1350	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0135
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/13/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2115	10/14/94 1016	X		500 ml Polyethylene	Liquid	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: R. Cora (Signature): Affiliation: ESA-4	Date: 10/17/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 1115	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/17/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0136
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/16/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1821	10/17/94 1400	X		1 L Polyethylene	Water	HNO3	Gamma Spec	
~~AAB1821~~	~~10/17/94 1400~~	~~X~~		~~1 L Amber Glass~~	Water	Ice	~~High Explosives(USTHMA)~~	
AAB1821	10/17/94 1400	X		500 ml Polyethylene	Water	HNO3	Mercury-Water(SW7470)	
AAB1821	10/17/94 1400	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1821	10/17/94 1400	X		1 L Polyethylene	Water	HNO3	Pu(Isotopic)+U(Total)	
AAB1821	10/17/94 1400	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB1821	10/17/94 1400	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB1821	10/17/94 1400	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: R. Cora (Signature): Affiliation: EGA-4	Date: 10/17/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/17/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0137
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van to Chem Van	Lab Contact	John Migliio
Contact Phone No	(505) 667-5227	Lab Mail Stop	K484	Lab Report Required	11/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1822	10/17/94 1430	X		1 L Polyethylene	Water	HNO3	Gamma Spec	
AAB1822	10/17/94 1430	X		1 L Amber Glass	Water	Ice	High Explosives(USTHMA)	
~~AAB1822~~	~~10/17/94 1430~~	~~X~~		~~500 ml Polyethylene~~	~~Water~~	~~HNO3~~	~~Mercury-Water(SW7470)~~	
AAB1822	10/17/94 1430	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB1822	10/17/94 1430	X		1 L Polyethylene	Water	HNO3	Pu(Isotopic)+U(Total)	
AAB1822	10/17/94 1430	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB1822	10/17/94 1430	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB1822	10/17/94 1430	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: R. Cordi (Signature): Affiliation: ESA-4	Date: 10/17/94	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time: 3:36	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard V Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 10/17/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0138
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	11/16/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1821	10/17/94 1400	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1822	10/17/94 1430	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: R. Cordi (Signature): Affiliation: ESA	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0142
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1893	11/14/94 1410	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1893	11/14/94 1410	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1893	11/14/94 1410	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1893	11/14/94 1410	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: P. Gram (Signature): Affiliation: ICF KE	Date: 11/14	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0145
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1897	11/14/94 1405	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1897	11/14/94 1405	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1897	11/14/94 1405	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1897	11/14/94 1405	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: P. Gram (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard ✓ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0149
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1898	11/14/94 1415	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1898	11/14/94 1415	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1898	11/14/94 1415	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1898	11/14/94 1415	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: P. Gram (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/14/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0151
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/14/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1893	11/14/94 1410	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1897	11/14/94 1405	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1898	11/14/94 1415	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: P. Gram (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0144
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1895	11/15/94 1520	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1895	11/15/94 1520	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1895	11/15/94 1520	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1895	11/15/94 1520	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0152

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1900	11/15/94 1137	X		125 ml Polyethylene	Soil	Ice	Cyanids	
AAB1900	11/15/94 1137	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1900	11/15/94 1137	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1900	11/15/94 1137	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab
Comments:	

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0153
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1901	11/15/94 1143	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1901	11/15/94 1143	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1901	11/15/94 1143	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1901	11/15/94 1143	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0155
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1903	11/15/94 1507	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1903	11/15/94 1507	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1903	11/15/94 1507	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1903	11/15/94 1507	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0156

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1904	11/15/94 1516	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1904	11/15/94 1516	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1904	11/15/94 1516	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1904	11/15/94 1516	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/15/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0162
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/15/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1895	11/15/94 1520	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1900	11/15/94 1137	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1901	11/15/94 1148	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1903	11/15/94 1507	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1904	11/15/94 1516	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/17/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0158
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/17/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1906	11/17/94 1250	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1906	11/17/94 1250	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1906	11/17/94 1250	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1906	11/17/94 1250	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/17/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0159
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglo
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/17/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1907	11/17/94 1338	X		125 ml Polyethylene	Soil	Ice	Cyanide	
AAB1907	11/17/94 1338	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)	
AAB1907	11/17/94 1338	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1907	11/17/94 1338	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/17/94	Technical Area 35	Send Lab Report to Lynn Kidman	COC 1130-0167
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/17/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1906	11/17/94 1250	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1907	11/17/94 1338	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/18/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0141
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/18/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1892	11/18/94 1453	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1892	11/18/94 1453	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1892	11/18/94 1453	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/18/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0143

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/18/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1894	11/18/94 1505	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1894	11/18/94 1505	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1894	11/18/94 1505	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:	
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/18/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0164
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K434	Lab Report Required	12/18/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1909	11/18/94 1129	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1909	11/18/94 1129	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1909	11/18/94 1129	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/18/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0165

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/18/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1910	11/18/94 1145	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1910	11/18/94 1145	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	
AAB1910	11/18/94 1145	X		125 ml Glass	Soil	Ice	VOCs(EPA8260)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/18/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0168
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/18/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1892	11/18/94 1453	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1894	11/18/94 1505	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1909	11/18/94 1129	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1910	11/18/94 1145	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/21/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0006

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1916	11/21/94 1025	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1916	11/21/94 1025	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/21/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0007

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1917	11/21/94 1028	X		125 ml Polyethylene	Soil	Ice	Metals(EPA6010)+CN	
AAB1917	11/21/94 1028	X		125 ml Glass	Soil	Ice	Semi-VOCs(EPA8270)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/21/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0171

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Migilo
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB1916	11/21/94 1025	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	
AAB1917	11/21/94 1028	X		Resealable Polyethylene	Soil	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/21/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0169

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglo
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2140	11/21/94 0930	X		125 ml Polyethylene	Water	NaOH	Cyanide	
AAB2140	11/21/94 0930	X		500 ml Polyethylene	Water	HNO3	Metals(EPA6010)	
AAB2140	11/21/94 0930	X		1 L Amber Glass	Water	Ice	Semi-VOCs(EPA8270)	
AAB2140	11/21/94 0930	X		40 ml Amber Glass-A	Water	HCl	VOCs(EPA8260)	
AAB2140	11/21/94 0930	X		40 ml Amber Glass-B	Water	HCl	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 11/21/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0170

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	12/21/94

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2140	11/21/94 0930	X		500 ml Polyethylene	Water	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 12/02/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0172
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	01/01/95

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2141	12/02/94 1225	X		125 ml Polyethylene	Liquid	NaOH	Cyanide	
AAB2141	12/02/94 1225	X		1 L Polyethylene	Liquid	HNO3	Gamma Spec	
AAB2141	12/02/94 1225	X		500 ml Polyethylene	Liquid	HNO3	Metals(EPA6010)	
AAB2141	12/02/94 1225	X		1 L Polyethylene	Liquid	HNO3	Pu(Isotopic)+U(Total)	
AAB2141	12/02/94 1225	X		1 L Amber Glass	Liquid	Ice	Semi-VOCs(EPA8270)	
AAB2141	12/02/94 1225	X		40 ml Amber Glass-A	Liquid	HCl	VOCs(EPA8260)	
AAB2141	12/02/94 1225	X		40 ml Amber Glass-B	Liquid	HCl	VOCs(EPA8260)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL:
Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 12/02/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0173
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	01/01/95

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2141	12/02/94 1225	X		500 ml Polyethylene	Liquid	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: N. Ness (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___

SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 12/05/94	Technical Area 36	Send Lab Report to Lynn Kidman	COC 1130-0174
	Operable Unit 1130	ICF KE, MS M703	

OU Contact	Lynn Kidman	Lab Destination	CST-9 Sample Receiving	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K484	Lab Report Required	01/04/95

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2142	12/05/94 0913	X		1 L Amber Glass	Liquid	Ice	High Explosives(USTHMA)	

Relinquished by: N. Nass (Signature): Affiliation: ICF KE	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Date 12/05/94	Technical Area 36 Operable Unit 1130	Send Lab Report to Lynn Kidman ICF KE, MS M703	COC 1130-0175

OU Contact	Lynn Kidman	Lab Destination	Rad Van	Lab Contact	John Miglio
Contact Phone No	(505) 661-5227	Lab Mail Stop	K434	Lab Report Required	01/04/95

Field Unique Sample #/ID	Date & Time Collected	GRAB	COMP	Sample Container Volume/Material	Matrix	Preservative	ANALYSIS REQUESTED: TEST (METHOD)	REMARKS (Conditions of receipt, etc.)
AAB2142	12/05/94 0913	X		500 ml Polyethylene	Liquid	Ice	Mobile Rad Van(alpha,beta,gamma)	

Relinquished by: M. Hanks (Signature): Affiliation: ESA-4	Date:	Relinquished by: (Signature): Affiliation:	Date:	Relinquished by: (Signature): Affiliation:	Date:
Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard___ Other___	SAMPLE DISPOSAL: Disposal by Lab

Comments:

Original - SCF Yellow - RPF Pink - FTL Copy

Appendix 4

APPENDIX 4

PHOTO DOCUMENTATION

Correction to Photo Documentation

In some of the photo documentation for PRS 36-005, Boneyard (Photos 5 through 92), the sign in the photo incorrectly indicates the PRS number as 27-005. This number should read PRS 36-005. The Summary of photo documentation correctly indicates the Boneyard as PRS 36-005.

Summary of 1994 Photo Documentation by Photo Number

Summary of 1994 Photo Documentation

Photo ID #	Location ID #	PRS #	PRS Name
1	36-3094	36-003(a)	Septic Tank
2	36-3094	36-003(a)	Septic Tank
3	36-3108	C-36-003	Photo Outfall
4	36-3108	C-36-003	Photo Outfall
5	36-3034	36-005	Boneyard
6	36-3034	36-005	Boneyard
7	36-3034	36-005	Boneyard
8	36-3035	36-005	Boneyard
9	36-3035	36-005	Boneyard
10	36-3035	36-005	Boneyard
11	36-3036	36-005	Boneyard
12	36-3036	36-005	Boneyard
13	36-3036	36-005	Boneyard
14	36-3037	36-005	Boneyard
15	36-3037	36-005	Boneyard
16	36-3037	36-005	Boneyard
17	36-3038	36-005	Boneyard
18	36-3038	36-005	Boneyard
19	36-3038	36-005	Boneyard
20	36-3039	36-005	Boneyard
21	36-3039	36-005	Boneyard
22	36-3039	36-005	Boneyard
23	36-3040	36-005	Boneyard
24	36-3040	36-005	Boneyard
25	36-3040	36-005	Boneyard
26	36-3040	36-005	Boneyard
27	36-3041	36-005	Boneyard
28	36-3041	36-005	Boneyard
29	36-3041	36-005	Boneyard
30	36-3041	36-005	Boneyard
31	36-3018	36-005	Boneyard
32	36-3018	36-005	Boneyard
33	36-3019	36-005	Boneyard
34	36-3019	36-005	Boneyard
35	36-3019	36-005	Boneyard
36	36-3020	36-005	Boneyard
37	36-3020	36-005	Boneyard
38	36-3020	36-005	Boneyard
39	36-3021	36-005	Boneyard
40	36-3021	36-005	Boneyard
41	36-3021	36-005	Boneyard
42	36-3022	36-005	Boneyard
43	36-3022	36-005	Boneyard
44	36-3022	36-005	Boneyard
45	36-3023	36-005	Boneyard

Summary of 1994 Photo Documentation

Photo ID #	Location ID #	PRS #	PRS Name
46	36-3023	36-005	Boneyard
47	36-3023	36-005	Boneyard
48	36-3024	36-005	Boneyard
49	36-3024	36-005	Boneyard
50	36-3024	36-005	Boneyard
51	36-3024	36-005	Boneyard
52	36-3024	36-005	Boneyard
53	36-3024	36-005	Boneyard
54	36-3025	36-005	Boneyard
55	36-3025	36-005	Boneyard
56	36-3025	36-005	Boneyard
57	36-3042	36-005	Boneyard
58	36-3042	36-005	Boneyard
59	36-3042	36-005	Boneyard
60	36-3045	36-005	Boneyard
61	36-3045	36-005	Boneyard
62	36-3045	36-005	Boneyard
63	36-3046	36-005	Boneyard
64	36-3046	36-005	Boneyard
65	36-3046	36-005	Boneyard
66	36-3047	36-005	Boneyard
67	36-3047	36-005	Boneyard
68	36-3047	36-005	Boneyard
69	36-3048	36-005	Boneyard
70	36-3048	36-005	Boneyard
71	36-3048	36-005	Boneyard
72	36-3049	36-005	Boneyard
73	36-3049	36-005	Boneyard
74	36-3049	36-005	Boneyard
75	36-3050	36-005	Boneyard
76	36-3050	36-005	Boneyard
77	36-3050	36-005	Boneyard
78	36-3050	36-005	Boneyard
79	36-3050	36-005	Boneyard
80	36-3051	36-005	Boneyard
81	36-3051	36-005	Boneyard
82	36-3051	36-005	Boneyard
83	36-3026	36-005	Boneyard
84	36-3026	36-005	Boneyard
85	36-3026	36-005	Boneyard
86	36-3026	36-005	Boneyard
87	36-3052	36-005	Boneyard
88	36-3052	36-005	Boneyard
89	36-3052	36-005	Boneyard
90	36-3054	36-005	Boneyard

Summary of 1994 Photo Documentation

Photo ID #	Location ID #	PRS #	PRS Name
91	36-3054	36-005	Boneyard
92	36-3054	36-005	Boneyard
93	36-3099-36-3102	36-003(b)	Septic Tank
94	36-3099-36-3102	36-003(b)	Septic Tank
95	Support Zone	36-003(b)	Septic Tank
96	36-3099-36-3102	36-003(b)	Septic Tank
97	36-3099-36-3102	36-003(b)	Septic Tank
98	36-3104	36-003(b)	Septic Tank
99	36-3104	36-003(b)	Septic Tank
100	36-3104	36-003(b)	Septic Tank
101	36-3105	36-003(b)	Septic Tank
102	36-3105	36-003(b)	Septic Tank
103	36-3105	36-003(b)	Septic Tank
104	36-3105	36-003(b)	Septic Tank
105	36-3105	36-003(b)	Septic Tank
106	36-3106	36-003(b)	Septic Tank
107	36-3106	36-003(b)	Septic Tank
108	36-3106	36-003(b)	Septic Tank
109	36-3107	36-003(b)	Septic Tank
110	36-3107	36-003(b)	Septic Tank
111	36-3107	36-003(b)	Septic Tank
112	36-3074	36-004	Firing Sites
113	36-3074	36-004	Firing Sites
114	36-3074	36-004	Firing Sites
115	36-3074	36-004	Firing Sites
116	36-3075	36-004	Firing Sites
117	36-3075	36-004	Firing Sites
118	36-3076	36-004	Firing Sites
119	36-3076	36-004	Firing Sites
120	36-3076	36-004	Firing Sites
121	36-3077	36-004	Firing Sites
122	36-3077	36-004	Firing Sites
123	36-3077	36-004	Firing Sites
124	36-3081	36-004	Firing Sites
125	36-3081	36-004	Firing Sites
126	36-3080	36-004	Firing Sites
127	36-3080	36-004	Firing Sites
128	36-3080	36-004	Firing Sites
129	36-3079	36-004	Firing Sites
130	36-3079	36-004	Firing Sites
131	36-3079	36-004	Firing Sites
132	36-3078	36-004	Firing Sites
133	36-3078	36-004	Firing Sites
134	36-3078	36-004	Firing Sites
135	36-3118	36-004	Firing Sites

Photo ID #	Location ID #	PRS #	PRS Name
136	36-3118	36-004	Firing Sites
137	36-3118	36-004	Firing Sites
138	36-3117	36-004	Firing Sites
139	36-3117	36-004	Firing Sites
140	36-3117	36-004	Firing Sites
141	36-3116	36-004	Firing Sites
142	36-3116	36-004	Firing Sites
143	36-3116	36-004	Firing Sites
144	36-3115	36-004	Firing Sites
145	36-3115	36-004	Firing Sites
146	36-3115	36-004	Firing Sites
147	36-3070	36-004	Firing Sites
148	36-3070	36-004	Firing Sites
149	36-3070	36-004	Firing Sites
150	36-3071	36-004	Firing Sites
151	36-3071	36-004	Firing Sites
152	36-3071	36-004	Firing Sites
153	36-3072	36-004	Firing Sites
154	36-3072	36-004	Firing Sites
155	36-3072	36-004	Firing Sites
156	36-3073	36-004	Firing Sites
157	36-3073	36-004	Firing Sites
158	36-3073	36-004	Firing Sites
159	36-3001	36-002	Sump
160	36-3001	36-002	Sump
161	Excavation	36-002	Sump
162	Excavation	36-002	Sump
163	36-3002	36-002	Sump
164	36-3002	36-002	Sump
165	36-3003	36-002	Sump
166	36-3003	36-002	Sump
167	Excavation	36-002	Sump
168	Excavation	36-002	Sump
169	36-3004	36-002	Sump
170	36-3004	36-002	Sump
171	36-3005	36-002	Sump
172	36-3005	36-002	Sump
173	Excavation	36-002	Sump
174	Excavation	36-002	Sump
175	Covered Excavation	36-002	Sump
176	Covered Excavation	36-002	Sump
177	Covered Excavation	36-002	Sump
178	HE Spot Test	36-004	Firing Sites
179	Water Station	36-004	Firing Sites
180	36-3125	36-001	MDA AA

Photo ID #	Location ID #	PRS #	PRS Name
181	36-3125	36-001	MDA AA
182	36-3125	36-001	MDA AA
183	36-3125	36-001	MDA AA
184	36-3125	36-001	MDA AA
185	36-3125	36-001	MDA AA
186	36-3125	36-001	MDA AA
187	36-3126	36-001	MDA AA
188	36-3126	36-001	MDA AA
189	36-3126	36-001	MDA AA
190	36-3126	36-001	MDA AA
191	36-3126	36-001	MDA AA
192	36-3126	36-001	MDA AA
193	36-3126	36-001	MDA AA
194	36-3126	36-001	MDA AA
195	36-3053	36-003(a)	Leachfield
196	36-3053	36-003(a)	Leachfield
197	36-3053	36-003(a)	Leachfield
198	36-3054	36-003(a)	Leachfield
199	36-3054	36-003(a)	Leachfield
200	36-3055	36-003(a)	Leachfield
201	36-3055	36-003(a)	Leachfield
202	36-3056	36-003(a)	Leachfield
203	36-3056	36-003(a)	Leachfield
204	36-3056	36-003(a)	Leachfield
205	36-3056	36-003(a)	Leachfield
206	36-3057	36-003(a)	Leachfield
207	36-3057	36-003(a)	Leachfield
208	36-3052	36-003(a)	Leachfield
209	36-3052	36-003(a)	Leachfield
210	36-3052	36-003(a)	Leachfield
211	36-3052	36-003(a)	Leachfield
212	36-3112	C-36-003	Photo Outfall
213	36-3113	C-36-003	Photo Outfall
214	36-3113	C-36-003	Photo Outfall

Summary of 1994 Photo Documentation by Location I.D. Number

Summary of 1994 Photo Documentation

Location ID #	PRS #	PRS Name	Photo ID #
36-3001	36-002	Sump	159
36-3001	36-002	Sump	160
36-3002	36-002	Sump	163
36-3002	36-002	Sump	164
36-3003	36-002	Sump	165
36-3003	36-002	Sump	166
36-3004	36-002	Sump	169
36-3004	36-002	Sump	170
36-3005	36-002	Sump	171
36-3005	36-002	Sump	172
36-3018	36-005	Boneyard	31
36-3018	36-005	Boneyard	32
36-3019	36-005	Boneyard	33
36-3019	36-005	Boneyard	34
36-3019	36-005	Boneyard	35
36-3020	36-005	Boneyard	36
36-3020	36-005	Boneyard	37
36-3020	36-005	Boneyard	38
36-3021	36-005	Boneyard	39
36-3021	36-005	Boneyard	40
36-3021	36-005	Boneyard	41
36-3022	36-005	Boneyard	42
36-3022	36-005	Boneyard	43
36-3022	36-005	Boneyard	44
36-3023	36-005	Boneyard	45
36-3023	36-005	Boneyard	46
36-3023	36-005	Boneyard	47
36-3024	36-005	Boneyard	48
36-3024	36-005	Boneyard	49
36-3024	36-005	Boneyard	50
36-3024	36-005	Boneyard	51
36-3024	36-005	Boneyard	52
36-3024	36-005	Boneyard	53
36-3025	36-005	Boneyard	54
36-3025	36-005	Boneyard	55
36-3025	36-005	Boneyard	56
36-3026	36-005	Boneyard	83
36-3026	36-005	Boneyard	84
36-3026	36-005	Boneyard	85
36-3026	36-005	Boneyard	86
36-3034	36-005	Boneyard	5
36-3034	36-005	Boneyard	6
36-3034	36-005	Boneyard	7
36-3035	36-005	Boneyard	8
36-3035	36-005	Boneyard	9

Summary of 1994 Photo Documentation

Location ID #	PRS #	PRS Name	Photo ID #
36-3035	36-005	Boneyard	10
36-3036	36-005	Boneyard	11
36-3036	36-005	Boneyard	12
36-3036	36-005	Boneyard	13
36-3037	36-005	Boneyard	14
36-3037	36-005	Boneyard	15
36-3037	36-005	Boneyard	16
36-3038	36-005	Boneyard	17
36-3038	36-005	Boneyard	18
36-3038	36-005	Boneyard	19
36-3039	36-005	Boneyard	20
36-3039	36-005	Boneyard	21
36-3039	36-005	Boneyard	22
36-3040	36-005	Boneyard	23
36-3040	36-005	Boneyard	24
36-3040	36-005	Boneyard	25
36-3040	36-005	Boneyard	26
36-3041	36-005	Boneyard	27
36-3041	36-005	Boneyard	28
36-3041	36-005	Boneyard	29
36-3041	36-005	Boneyard	30
36-3042	36-005	Boneyard	57
36-3042	36-005	Boneyard	58
36-3042	36-005	Boneyard	59
36-3045	36-005	Boneyard	60
36-3045	36-005	Boneyard	61
36-3045	36-005	Boneyard	62
36-3046	36-005	Boneyard	63
36-3046	36-005	Boneyard	64
36-3046	36-005	Boneyard	65
36-3047	36-005	Boneyard	66
36-3047	36-005	Boneyard	67
36-3047	36-005	Boneyard	68
36-3048	36-005	Boneyard	69
36-3048	36-005	Boneyard	70
36-3048	36-005	Boneyard	71
36-3049	36-005	Boneyard	72
36-3049	36-005	Boneyard	73
36-3049	36-005	Boneyard	74
36-3050	36-005	Boneyard	75
36-3050	36-005	Boneyard	76
36-3050	36-005	Boneyard	77
36-3050	36-005	Boneyard	78
36-3050	36-005	Boneyard	79
36-3051	36-005	Boneyard	80

Summary of 1994 Photo Documentation

Location ID #	PRS #	PRS Name	Photo ID #
36-3051	36-005	Boneyard	81
36-3051	36-005	Boneyard	82
36-3052	36-005	Boneyard	87
36-3052	36-005	Boneyard	88
36-3052	36-005	Boneyard	89
36-3052	36-003(a)	Leachfield	208
36-3052	36-003(a)	Leachfield	209
36-3052	36-003(a)	Leachfield	210
36-3052	36-003(a)	Leachfield	211
36-3053	36-003(a)	Leachfield	195
36-3053	36-003(a)	Leachfield	196
36-3053	36-003(a)	Leachfield	197
36-3054	36-005	Boneyard	90
36-3054	36-005	Boneyard	91
36-3054	36-005	Boneyard	92
36-3054	36-003(a)	Leachfield	198
36-3054	36-003(a)	Leachfield	199
36-3055	36-003(a)	Leachfield	200
36-3055	36-003(a)	Leachfield	201
36-3056	36-003(a)	Leachfield	202
36-3056	36-003(a)	Leachfield	203
36-3056	36-003(a)	Leachfield	204
36-3056	36-003(a)	Leachfield	205
36-3057	36-003(a)	Leachfield	206
36-3057	36-003(a)	Leachfield	207
36-3070	36-004	Firing Sites	147
36-3070	36-004	Firing Sites	148
36-3070	36-004	Firing Sites	149
36-3071	36-004	Firing Sites	150
36-3071	36-004	Firing Sites	151
36-3071	36-004	Firing Sites	152
36-3072	36-004	Firing Sites	153
36-3072	36-004	Firing Sites	154
36-3072	36-004	Firing Sites	155
36-3073	36-004	Firing Sites	156
36-3073	36-004	Firing Sites	157
36-3073	36-004	Firing Sites	158
36-3074	36-004	Firing Sites	112
36-3074	36-004	Firing Sites	113
36-3074	36-004	Firing Sites	114
36-3074	36-004	Firing Sites	115
36-3075	36-004	Firing Sites	116
36-3075	36-004	Firing Sites	117
36-3076	36-004	Firing Sites	118
36-3076	36-004	Firing Sites	119

Location ID #	PRS #	PRS Name	Photo ID #
36-3076	36-004	Firing Sites	120
36-3077	36-004	Firing Sites	121
36-3077	36-004	Firing Sites	122
36-3077	36-004	Firing Sites	123
36-3078	36-004	Firing Sites	132
36-3078	36-004	Firing Sites	133
36-3078	36-004	Firing Sites	134
36-3079	36-004	Firing Sites	129
36-3079	36-004	Firing Sites	130
36-3079	36-004	Firing Sites	131
36-3080	36-004	Firing Sites	126
36-3080	36-004	Firing Sites	127
36-3080	36-004	Firing Sites	128
36-3081	36-004	Firing Sites	124
36-3081	36-004	Firing Sites	125
36-3094	36-003(a)	Septic Tank	1
36-3094	36-003(a)	Septic Tank	2
36-3099-36-3102	36-003(b)	Septic Tank	93
36-3099-36-3102	36-003(b)	Septic Tank	94
36-3099-36-3102	36-003(b)	Septic Tank	96
36-3099-36-3102	36-003(b)	Septic Tank	97
36-3104	36-003(b)	Septic Tank	98
36-3104	36-003(b)	Septic Tank	99
36-3104	36-003(b)	Septic Tank	100
36-3105	36-003(b)	Septic Tank	101
36-3105	36-003(b)	Septic Tank	102
36-3105	36-003(b)	Septic Tank	103
36-3105	36-003(b)	Septic Tank	104
36-3105	36-003(b)	Septic Tank	105
36-3106	36-003(b)	Septic Tank	106
36-3106	36-003(b)	Septic Tank	107
36-3106	36-003(b)	Septic Tank	108
36-3107	36-003(b)	Septic Tank	109
36-3107	36-003(b)	Septic Tank	110
36-3107	36-003(b)	Septic Tank	111
36-3108	C-36-003	Photo Outfall	3
36-3108	C-36-003	Photo Outfall	4
36-3112	C-36-003	Photo Outfall	212
36-3113	C-36-003	Photo Outfall	213
36-3113	C-36-003	Photo Outfall	214
36-3115	36-004	Firing Sites	144
36-3115	36-004	Firing Sites	145
36-3115	36-004	Firing Sites	146
36-3116	36-004	Firing Sites	141
36-3116	36-004	Firing Sites	142

Location ID #	PRS #	PRS Name	Photo ID #
36-3116	36-004	Firing Sites	143
36-3117	36-004	Firing Sites	138
36-3117	36-004	Firing Sites	139
36-3117	36-004	Firing Sites	140
36-3118	36-004	Firing Sites	135
36-3118	36-004	Firing Sites	136
36-3118	36-004	Firing Sites	137
36-3125	36-001	MDA AA	180
36-3125	36-001	MDA AA	181
36-3125	36-001	MDA AA	182
36-3125	36-001	MDA AA	183
36-3125	36-001	MDA AA	184
36-3125	36-001	MDA AA	185
36-3125	36-001	MDA AA	186
36-3126	36-001	MDA AA	187
36-3126	36-001	MDA AA	188
36-3126	36-001	MDA AA	189
36-3126	36-001	MDA AA	190
36-3126	36-001	MDA AA	191
36-3126	36-001	MDA AA	192
36-3126	36-001	MDA AA	193
36-3126	36-001	MDA AA	194
Covered Excavation	36-002	Sump	175
Covered Excavation	36-002	Sump	176
Covered Excavation	36-002	Sump	177
Excavation	36-002	Sump	161
Excavation	36-002	Sump	162
Excavation	36-002	Sump	167
Excavation	36-002	Sump	168
Excavation	36-002	Sump	173
Excavation	36-002	Sump	174
HE Spot Test	36-004	Firing Sites	178
Support Zone	36-003(b)	Septic Tank	95
Water Station	36-004	Firing Sites	179

Summary of 1994 Photo Documentation by PRS Number

Summary of 1994 Photo Documentation

PRS #	PRS Name	Location ID #	Photo ID #
36-001	MDA AA	36-3125	180
36-001	MDA AA	36-3125	181
36-001	MDA AA	36-3125	182
36-001	MDA AA	36-3125	183
36-001	MDA AA	36-3125	184
36-001	MDA AA	36-3125	185
36-001	MDA AA	36-3125	186
36-001	MDA AA	36-3126	187
36-001	MDA AA	36-3126	188
36-001	MDA AA	36-3126	189
36-001	MDA AA	36-3126	190
36-001	MDA AA	36-3126	191
36-001	MDA AA	36-3126	192
36-001	MDA AA	36-3126	193
36-001	MDA AA	36-3126	194
36-002	Sump	36-3001	159
36-002	Sump	36-3001	160
36-002	Sump	36-3002	163
36-002	Sump	36-3002	164
36-002	Sump	36-3003	165
36-002	Sump	36-3003	166
36-002	Sump	36-3004	169
36-002	Sump	36-3004	170
36-002	Sump	36-3005	171
36-002	Sump	36-3005	172
36-002	Sump	Covered Excavation	175
36-002	Sump	Covered Excavation	176
36-002	Sump	Covered Excavation	177
36-002	Sump	Excavation	161
36-002	Sump	Excavation	162
36-002	Sump	Excavation	167
36-002	Sump	Excavation	168
36-002	Sump	Excavation	173
36-002	Sump	Excavation	174
36-003(a)	Leachfield	36-3052	208
36-003(a)	Leachfield	36-3052	209
36-003(a)	Leachfield	36-3052	210
36-003(a)	Leachfield	36-3052	211
36-003(a)	Leachfield	36-3053	195
36-003(a)	Leachfield	36-3053	196
36-003(a)	Leachfield	36-3053	197
36-003(a)	Leachfield	36-3054	198
36-003(a)	Leachfield	36-3054	199
36-003(a)	Leachfield	36-3055	200
36-003(a)	Leachfield	36-3055	201

Summary of 1994 Photo Documentation

PRS #	PRS Name	Location ID #	Photo ID #
36-003(a)	Leachfield	36-3056	202
36-003(a)	Leachfield	36-3056	203
36-003(a)	Leachfield	36-3056	204
36-003(a)	Leachfield	36-3056	205
36-003(a)	Leachfield	36-3057	206
36-003(a)	Leachfield	36-3057	207
36-003(a)	Septic Tank	36-3094	1
36-003(a)	Septic Tank	36-3094	2
36-003(b)	Septic Tank	36-3099-36-3102	93
36-003(b)	Septic Tank	36-3099-36-3102	94
36-003(b)	Septic Tank	36-3099-36-3102	96
36-003(b)	Septic Tank	36-3099-36-3102	97
36-003(b)	Septic Tank	36-3104	98
36-003(b)	Septic Tank	36-3104	99
36-003(b)	Septic Tank	36-3104	100
36-003(b)	Septic Tank	36-3105	101
36-003(b)	Septic Tank	36-3105	102
36-003(b)	Septic Tank	36-3105	103
36-003(b)	Septic Tank	36-3105	104
36-003(b)	Septic Tank	36-3105	105
36-003(b)	Septic Tank	36-3106	106
36-003(b)	Septic Tank	36-3106	107
36-003(b)	Septic Tank	36-3106	108
36-003(b)	Septic Tank	36-3107	109
36-003(b)	Septic Tank	36-3107	110
36-003(b)	Septic Tank	36-3107	111
36-003(b)	Septic Tank	Support Zone	95
36-004	Firing Sites	36-3070	147
36-004	Firing Sites	36-3070	148
36-004	Firing Sites	36-3070	149
36-004	Firing Sites	36-3071	150
36-004	Firing Sites	36-3071	151
36-004	Firing Sites	36-3071	152
36-004	Firing Sites	36-3072	153
36-004	Firing Sites	36-3072	154
36-004	Firing Sites	36-3072	155
36-004	Firing Sites	36-3073	156
36-004	Firing Sites	36-3073	157
36-004	Firing Sites	36-3073	158
36-004	Firing Sites	36-3074	112
36-004	Firing Sites	36-3074	113
36-004	Firing Sites	36-3074	114
36-004	Firing Sites	36-3074	115
36-004	Firing Sites	36-3075	116
36-004	Firing Sites	36-3075	117

Summary of 1994 Photo Documentation

PRS #	PRS Name	Location ID #	Photo ID #
36-004	Firing Sites	36-3076	118
36-004	Firing Sites	36-3076	119
36-004	Firing Sites	36-3076	120
36-004	Firing Sites	36-3077	121
36-004	Firing Sites	36-3077	122
36-004	Firing Sites	36-3077	123
36-004	Firing Sites	36-3078	132
36-004	Firing Sites	36-3078	133
36-004	Firing Sites	36-3078	134
36-004	Firing Sites	36-3079	129
36-004	Firing Sites	36-3079	130
36-004	Firing Sites	36-3079	131
36-004	Firing Sites	36-3080	126
36-004	Firing Sites	36-3080	127
36-004	Firing Sites	36-3080	128
36-004	Firing Sites	36-3081	124
36-004	Firing Sites	36-3081	125
36-004	Firing Sites	36-3115	144
36-004	Firing Sites	36-3115	145
36-004	Firing Sites	36-3115	146
36-004	Firing Sites	36-3116	141
36-004	Firing Sites	36-3116	142
36-004	Firing Sites	36-3116	143
36-004	Firing Sites	36-3117	138
36-004	Firing Sites	36-3117	139
36-004	Firing Sites	36-3117	140
36-004	Firing Sites	36-3118	135
36-004	Firing Sites	36-3118	136
36-004	Firing Sites	36-3118	137
36-004	Firing Sites	HE Spot Test	178
36-004	Firing Sites	Water Station	179
36-005	Boneyard	36-3018	31
36-005	Boneyard	36-3018	32
36-005	Boneyard	36-3019	33
36-005	Boneyard	36-3019	34
36-005	Boneyard	36-3019	35
36-005	Boneyard	36-3020	36
36-005	Boneyard	36-3020	37
36-005	Boneyard	36-3020	38
36-005	Boneyard	36-3021	39
36-005	Boneyard	36-3021	40
36-005	Boneyard	36-3021	41
36-005	Boneyard	36-3022	42
36-005	Boneyard	36-3022	43
36-005	Boneyard	36-3022	44

PRS #	PRS Name	Location ID #	Photo ID #
36-005	Boneyard	36-3023	45
36-005	Boneyard	36-3023	46
36-005	Boneyard	36-3023	47
36-005	Boneyard	36-3024	48
36-005	Boneyard	36-3024	49
36-005	Boneyard	36-3024	50
36-005	Boneyard	36-3024	51
36-005	Boneyard	36-3024	52
36-005	Boneyard	36-3024	53
36-005	Boneyard	36-3025	54
36-005	Boneyard	36-3025	55
36-005	Boneyard	36-3025	56
36-005	Boneyard	36-3026	83
36-005	Boneyard	36-3026	84
36-005	Boneyard	36-3026	85
36-005	Boneyard	36-3026	86
36-005	Boneyard	36-3034	5
36-005	Boneyard	36-3034	6
36-005	Boneyard	36-3034	7
36-005	Boneyard	36-3035	8
36-005	Boneyard	36-3035	9
36-005	Boneyard	36-3035	10
36-005	Boneyard	36-3036	11
36-005	Boneyard	36-3036	12
36-005	Boneyard	36-3036	13
36-005	Boneyard	36-3037	14
36-005	Boneyard	36-3037	15
36-005	Boneyard	36-3037	16
36-005	Boneyard	36-3038	17
36-005	Boneyard	36-3038	18
36-005	Boneyard	36-3038	19
36-005	Boneyard	36-3039	20
36-005	Boneyard	36-3039	21
36-005	Boneyard	36-3039	22
36-005	Boneyard	36-3040	23
36-005	Boneyard	36-3040	24
36-005	Boneyard	36-3040	25
36-005	Boneyard	36-3040	26
36-005	Boneyard	36-3041	27
36-005	Boneyard	36-3041	28
36-005	Boneyard	36-3041	29
36-005	Boneyard	36-3041	30
36-005	Boneyard	36-3042	57
36-005	Boneyard	36-3042	58
36-005	Boneyard	36-3042	59

PRS #	PRS Name	Location ID #	Photo ID #
36-005	Boneyard	36-3045	60
36-005	Boneyard	36-3045	61
36-005	Boneyard	36-3045	62
36-005	Boneyard	36-3046	63
36-005	Boneyard	36-3046	64
36-005	Boneyard	36-3046	65
36-005	Boneyard	36-3047	66
36-005	Boneyard	36-3047	67
36-005	Boneyard	36-3047	68
36-005	Boneyard	36-3048	69
36-005	Boneyard	36-3048	70
36-005	Boneyard	36-3048	71
36-005	Boneyard	36-3049	72
36-005	Boneyard	36-3049	73
36-005	Boneyard	36-3049	74
36-005	Boneyard	36-3050	75
36-005	Boneyard	36-3050	76
36-005	Boneyard	36-3050	77
36-005	Boneyard	36-3050	78
36-005	Boneyard	36-3050	79
36-005	Boneyard	36-3051	80
36-005	Boneyard	36-3051	81
36-005	Boneyard	36-3051	82
36-005	Boneyard	36-3052	87
36-005	Boneyard	36-3052	88
36-005	Boneyard	36-3052	89
36-005	Boneyard	36-3054	90
36-005	Boneyard	36-3054	91
36-005	Boneyard	36-3054	92
C-36-003	Photo Outfall	36-3108	3
C-36-003	Photo Outfall	36-3108	4
C-36-003	Photo Outfall	36-3112	212
C-36-003	Photo Outfall	36-3113	213
C-36-003	Photo Outfall	36-3113	214

Summary of 1994 Photo Documentation by PRS Name

Summary of 1994 Photo Documentation

PRS Name	Location ID #	PRS #	Photo ID #
Boneyard	36-3018	36-005	31
Boneyard	36-3018	36-005	32
Boneyard	36-3019	36-005	33
Boneyard	36-3019	36-005	34
Boneyard	36-3019	36-005	35
Boneyard	36-3020	36-005	36
Boneyard	36-3020	36-005	37
Boneyard	36-3020	36-005	38
Boneyard	36-3021	36-005	39
Boneyard	36-3021	36-005	40
Boneyard	36-3021	36-005	41
Boneyard	36-3022	36-005	42
Boneyard	36-3022	36-005	43
Boneyard	36-3022	36-005	44
Boneyard	36-3023	36-005	45
Boneyard	36-3023	36-005	46
Boneyard	36-3023	36-005	47
Boneyard	36-3024	36-005	48
Boneyard	36-3024	36-005	49
Boneyard	36-3024	36-005	50
Boneyard	36-3024	36-005	51
Boneyard	36-3024	36-005	52
Boneyard	36-3024	36-005	53
Boneyard	36-3025	36-005	54
Boneyard	36-3025	36-005	55
Boneyard	36-3025	36-005	56
Boneyard	36-3026	36-005	83
Boneyard	36-3026	36-005	84
Boneyard	36-3026	36-005	85
Boneyard	36-3026	36-005	86
Boneyard	36-3034	36-005	5
Boneyard	36-3034	36-005	6
Boneyard	36-3034	36-005	7
Boneyard	36-3035	36-005	8
Boneyard	36-3035	36-005	9
Boneyard	36-3035	36-005	10
Boneyard	36-3036	36-005	11
Boneyard	36-3036	36-005	12
Boneyard	36-3036	36-005	13
Boneyard	36-3037	36-005	14
Boneyard	36-3037	36-005	15
Boneyard	36-3037	36-005	16
Boneyard	36-3038	36-005	17
Boneyard	36-3038	36-005	18
Boneyard	36-3038	36-005	19

Summary of 1994 Photo Documentation

PRS Name	Location ID #	PRS #	Photo ID #
Boneyard	36-3039	36-005	20
Boneyard	36-3039	36-005	21
Boneyard	36-3039	36-005	22
Boneyard	36-3040	36-005	23
Boneyard	36-3040	36-005	24
Boneyard	36-3040	36-005	25
Boneyard	36-3040	36-005	26
Boneyard	36-3041	36-005	27
Boneyard	36-3041	36-005	28
Boneyard	36-3041	36-005	29
Boneyard	36-3041	36-005	30
Boneyard	36-3042	36-005	57
Boneyard	36-3042	36-005	58
Boneyard	36-3042	36-005	59
Boneyard	36-3045	36-005	60
Boneyard	36-3045	36-005	61
Boneyard	36-3045	36-005	62
Boneyard	36-3046	36-005	63
Boneyard	36-3046	36-005	64
Boneyard	36-3046	36-005	65
Boneyard	36-3047	36-005	66
Boneyard	36-3047	36-005	67
Boneyard	36-3047	36-005	68
Boneyard	36-3048	36-005	69
Boneyard	36-3048	36-005	70
Boneyard	36-3048	36-005	71
Boneyard	36-3049	36-005	72
Boneyard	36-3049	36-005	73
Boneyard	36-3049	36-005	74
Boneyard	36-3050	36-005	75
Boneyard	36-3050	36-005	76
Boneyard	36-3050	36-005	77
Boneyard	36-3050	36-005	78
Boneyard	36-3050	36-005	79
Boneyard	36-3051	36-005	80
Boneyard	36-3051	36-005	81
Boneyard	36-3051	36-005	82
Boneyard	36-3052	36-005	87
Boneyard	36-3052	36-005	88
Boneyard	36-3052	36-005	89
Boneyard	36-3054	36-005	90
Boneyard	36-3054	36-005	91
Boneyard	36-3054	36-005	92
Firing Sites	36-3070	36-004	147
Firing Sites	36-3070	36-004	148

Summary of 1994 Photo Documentation

PRS Name	Location ID #	PRS #	Photo ID #
Firing Sites	36-3070	36-004	149
Firing Sites	36-3071	36-004	150
Firing Sites	36-3071	36-004	151
Firing Sites	36-3071	36-004	152
Firing Sites	36-3072	36-004	153
Firing Sites	36-3072	36-004	154
Firing Sites	36-3072	36-004	155
Firing Sites	36-3073	36-004	156
Firing Sites	36-3073	36-004	157
Firing Sites	36-3073	36-004	158
Firing Sites	36-3074	36-004	112
Firing Sites	36-3074	36-004	113
Firing Sites	36-3074	36-004	114
Firing Sites	36-3074	36-004	115
Firing Sites	36-3075	36-004	116
Firing Sites	36-3075	36-004	117
Firing Sites	36-3076	36-004	118
Firing Sites	36-3076	36-004	119
Firing Sites	36-3076	36-004	120
Firing Sites	36-3077	36-004	121
Firing Sites	36-3077	36-004	122
Firing Sites	36-3077	36-004	123
Firing Sites	36-3078	36-004	132
Firing Sites	36-3078	36-004	133
Firing Sites	36-3078	36-004	134
Firing Sites	36-3079	36-004	129
Firing Sites	36-3079	36-004	130
Firing Sites	36-3079	36-004	131
Firing Sites	36-3080	36-004	126
Firing Sites	36-3080	36-004	127
Firing Sites	36-3080	36-004	128
Firing Sites	36-3081	36-004	124
Firing Sites	36-3081	36-004	125
Firing Sites	36-3115	36-004	144
Firing Sites	36-3115	36-004	145
Firing Sites	36-3115	36-004	146
Firing Sites	36-3116	36-004	141
Firing Sites	36-3116	36-004	142
Firing Sites	36-3116	36-004	143
Firing Sites	36-3117	36-004	138
Firing Sites	36-3117	36-004	139
Firing Sites	36-3117	36-004	140
Firing Sites	36-3118	36-004	135
Firing Sites	36-3118	36-004	136
Firing Sites	36-3118	36-004	137

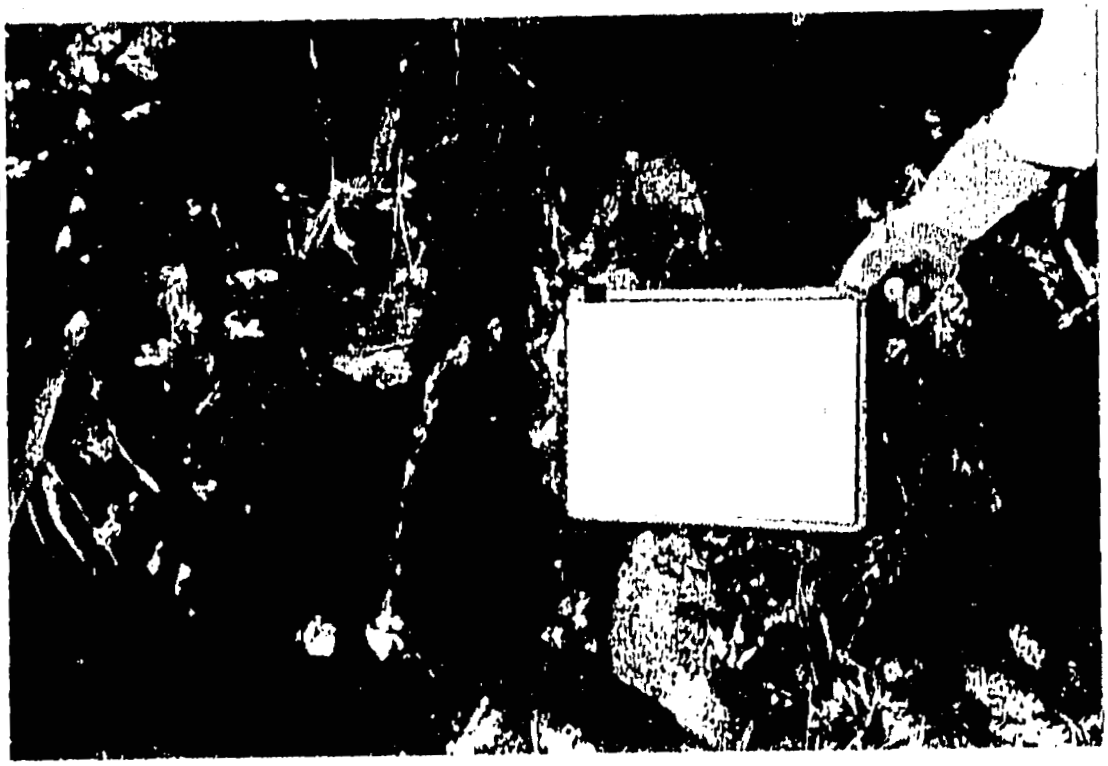
Summary of 1994 Photo Documentation

PRS Name	Location ID #	PRS #	Photo ID #
Firing Sites	HE Spot Test	36-004	178
Firing Sites	Water Station	36-004	179
Leachfield	36-3052	36-003(a)	208
Leachfield	36-3052	36-003(a)	209
Leachfield	36-3052	36-003(a)	210
Leachfield	36-3052	36-003(a)	211
Leachfield	36-3053	36-003(a)	195
Leachfield	36-3053	36-003(a)	196
Leachfield	36-3053	36-003(a)	197
Leachfield	36-3054	36-003(a)	198
Leachfield	36-3054	36-003(a)	199
Leachfield	36-3055	36-003(a)	200
Leachfield	36-3055	36-003(a)	201
Leachfield	36-3056	36-003(a)	202
Leachfield	36-3056	36-003(a)	203
Leachfield	36-3056	36-003(a)	204
Leachfield	36-3056	36-003(a)	205
Leachfield	36-3057	36-003(a)	206
Leachfield	36-3057	36-003(a)	207
MDA AA	36-3125	36-001	180
MDA AA	36-3125	36-001	181
MDA AA	36-3125	36-001	182
MDA AA	36-3125	36-001	183
MDA AA	36-3125	36-001	184
MDA AA	36-3125	36-001	185
MDA AA	36-3125	36-001	186
MDA AA	36-3126	36-001	187
MDA AA	36-3126	36-001	188
MDA AA	36-3126	36-001	189
MDA AA	36-3126	36-001	190
MDA AA	36-3126	36-001	191
MDA AA	36-3126	36-001	192
MDA AA	36-3126	36-001	193
MDA AA	36-3126	36-001	194
Photo Outfall	36-3108	C-36-003	3
Photo Outfall	36-3108	C-36-003	4
Photo Outfall	36-3112	C-36-003	212
Photo Outfall	36-3113	C-36-003	213
Photo Outfall	36-3113	C-36-003	214
Septic Tank	36-3094	36-003(a)	1
Septic Tank	36-3094	36-003(a)	2
Septic Tank	36-3099-36-3102	36-003(b)	93
Septic Tank	36-3099-36-3102	36-003(b)	94
Septic Tank	36-3099-36-3102	36-003(b)	96
Septic Tank	36-3099-36-3102	36-003(b)	97

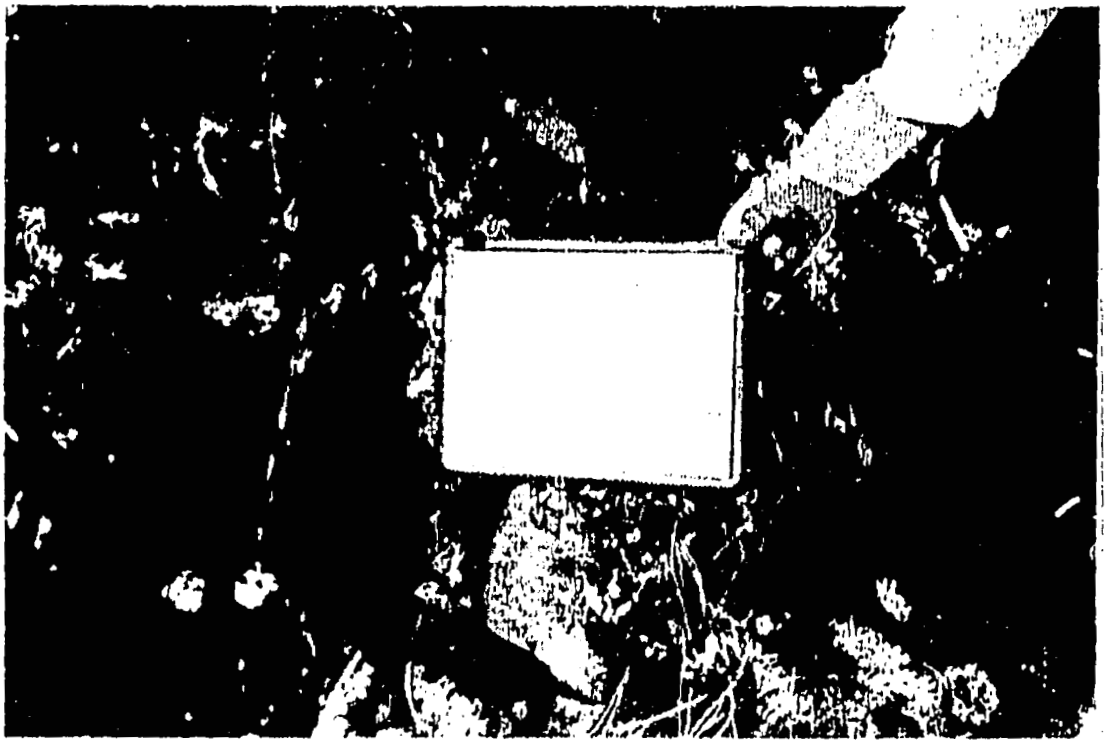
PRS Name	Location ID #	PRS #	Photo ID #
Septic Tank	36-3104	36-003(b)	98
Septic Tank	36-3104	36-003(b)	99
Septic Tank	36-3104	36-003(b)	100
Septic Tank	36-3105	36-003(b)	101
Septic Tank	36-3105	36-003(b)	102
Septic Tank	36-3105	36-003(b)	103
Septic Tank	36-3105	36-003(b)	104
Septic Tank	36-3105	36-003(b)	105
Septic Tank	36-3106	36-003(b)	106
Septic Tank	36-3106	36-003(b)	107
Septic Tank	36-3106	36-003(b)	108
Septic Tank	36-3107	36-003(b)	109
Septic Tank	36-3107	36-003(b)	110
Septic Tank	36-3107	36-003(b)	111
Septic Tank	Support Zone	36-003(b)	95
Sump	36-3001	36-002	159
Sump	36-3001	36-002	160
Sump	36-3002	36-002	163
Sump	36-3002	36-002	164
Sump	36-3003	36-002	165
Sump	36-3003	36-002	166
Sump	36-3004	36-002	169
Sump	36-3004	36-002	170
Sump	36-3005	36-002	171
Sump	36-3005	36-002	172
Sump	Covered Excavation	36-002	175
Sump	Covered Excavation	36-002	176
Sump	Covered Excavation	36-002	177
Sump	Excavation	36-002	161
Sump	Excavation	36-002	162
Sump	Excavation	36-002	167
Sump	Excavation	36-002	168
Sump	Excavation	36-002	173
Sump	Excavation	36-002	174

1. Photo shows septic tank [PRS 36-003(a)] East of Building 1, TA-36, taken before sampling. Photo taken facing East by Ken McFadden at 12:21 on 7/21/94.

2. Photo of septic tank [PRS 36-003(a)] East of Building 1 and surrounding area. Photo taken facing East by Ken McFadden at 12:21 on 7/21/94.



3. Photo shows outfall (PRS C-36-003) north of Building 1 TA-36. Photo taken facing South by Ken McFadden at 11:00 On 7/25/94.

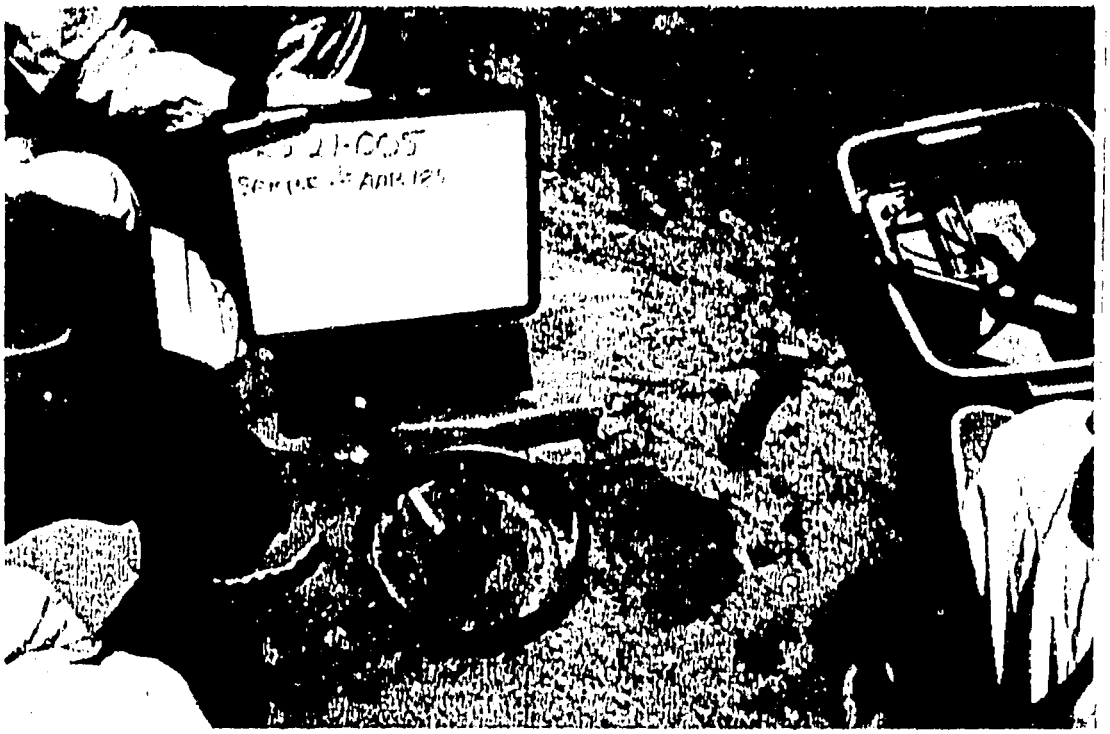


4. Photo of outfall (PRS C-36-003) taken close-up before sampling. Photo taken facing South by Ken McFadden at 11:00 on 7/25/94.

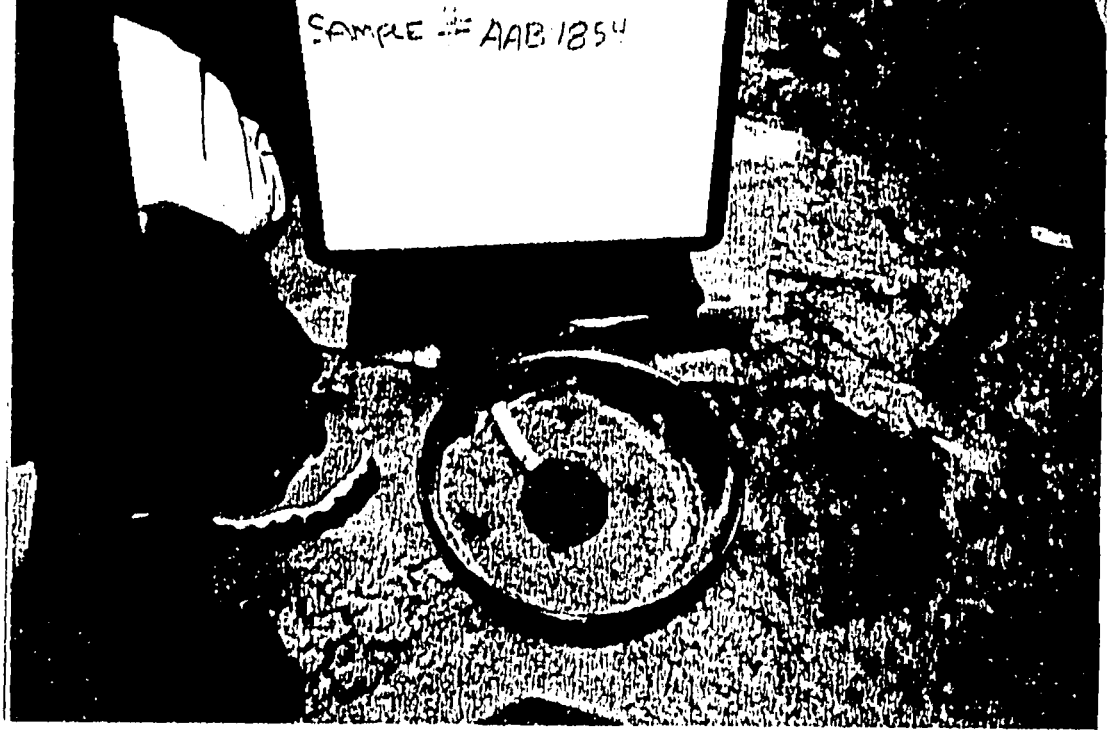
5. Photo of sample AAB1852 taken close-up during sampling process showing GM pancake probe. Photo shows stainless steel bowl used for homogenizing soil. Photo taken facing Southeast by Ken McFadden at 12:14 on 7/28/94.

6. Photo of sample AAB1852 and shows plastic sheet used for high explosives (HE) visual inspection. Photo taken facing Southeast by Ken McFadden at 12:14 on 7/28/94.

7. Photo of area surrounding sample AAB1852 taken during sampling process. Stored equipment in photo was typical at Boneyard Area. Photo taken facing due East by Ken McFadden at 12:14 on 7/28/94.

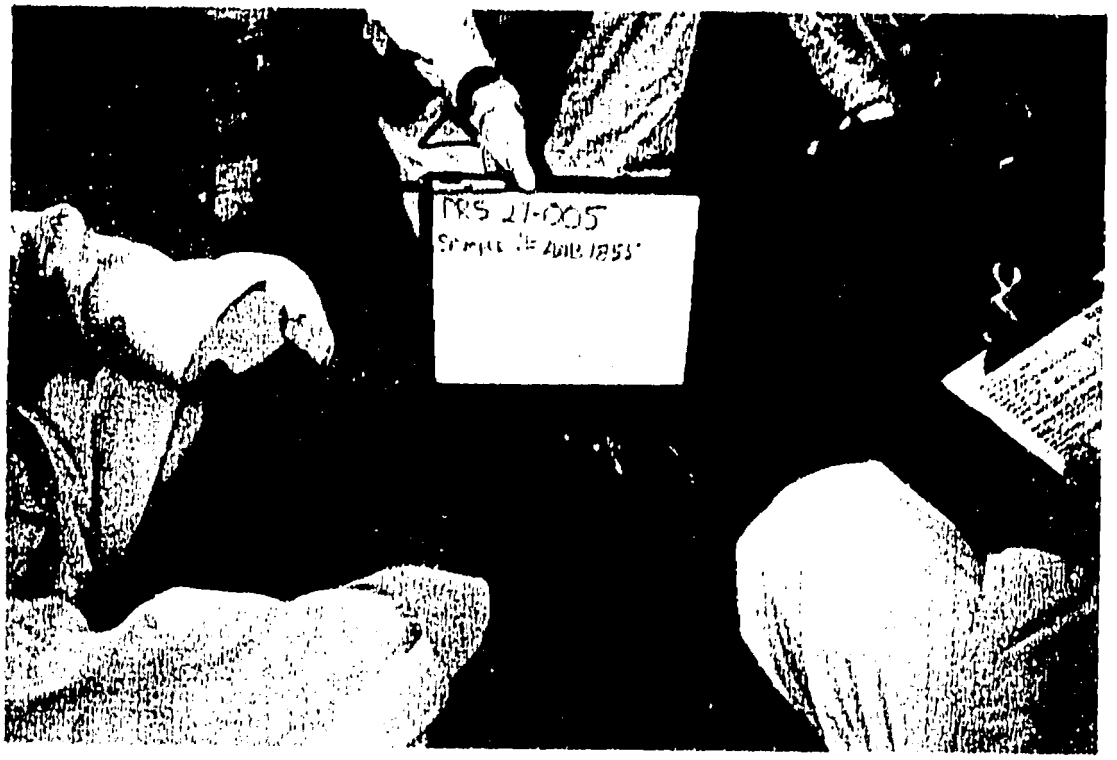


8. Photo shows sample AAB1854. Plastic tubs were used to transport equipment such as the HNu meter (shown in photo) used to detect organic vapors. Photo taken facing North by Ken McFadden at 12:40 on 7/28/94.

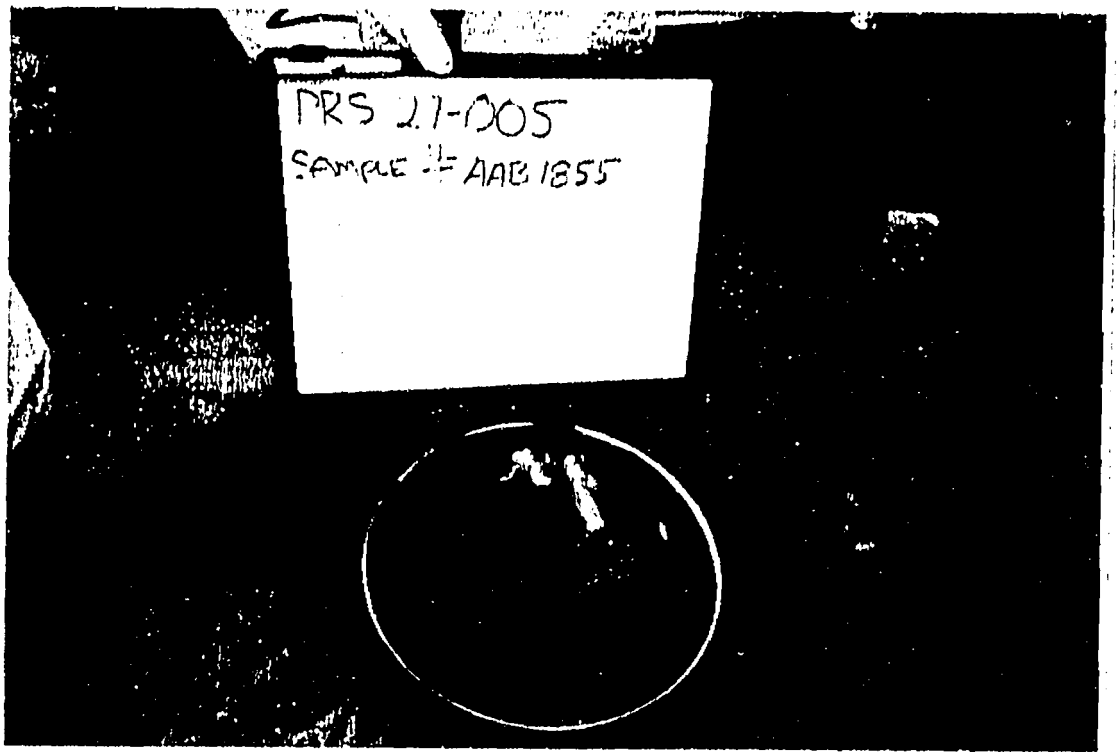


9. Photo of sample AAB1854 during monitoring process. Steel toe safety shoes were required for access into exclusion zone (EZ). Photo taken facing North by Ken McFadden at 12:40 on 7/28/94.

10. Photo of area surrounding sample AAB1854. Photo shows plastic crates used to transport sampling equipment. Photo taken facing North by Ken McFadden at 12:40 on 7/28/94.



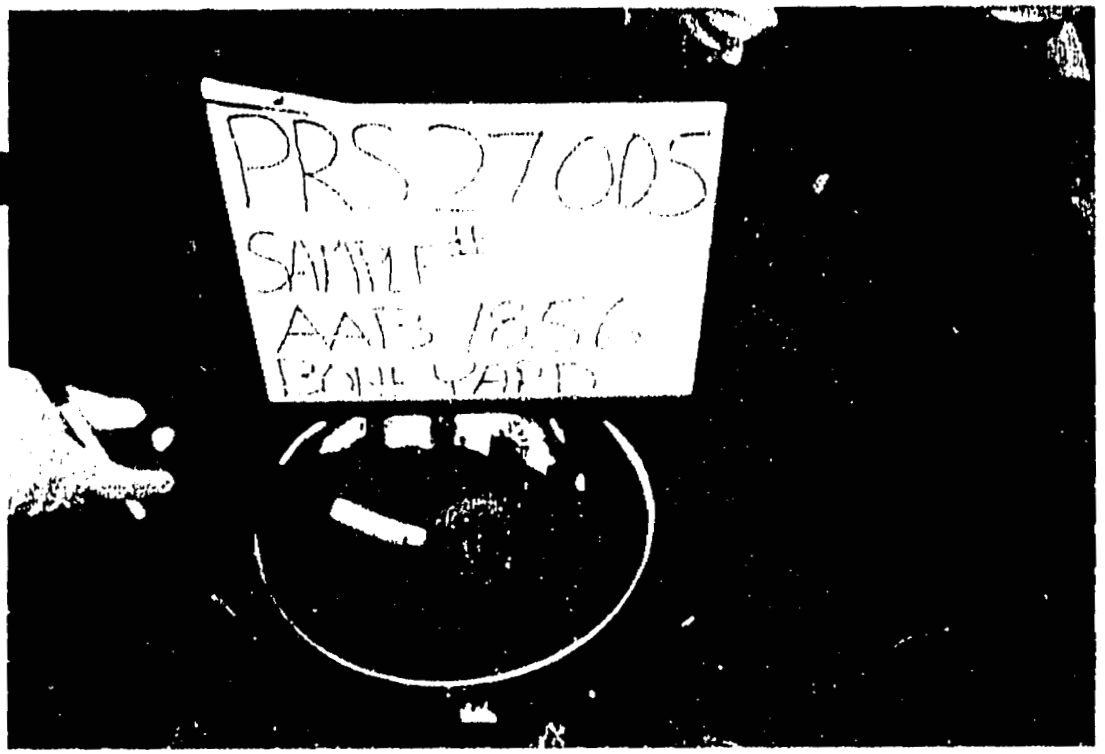
11. Photo of sample AAB1855. Laytex neoprene gloves over vinyl gloves was required for the sampler, while other personnel in exclusion zone were required to wear two layers of vinyl gloves as shown in photo. Photo taken facing Northeast by Ken McFadden at 12:57 on 7/28/94.



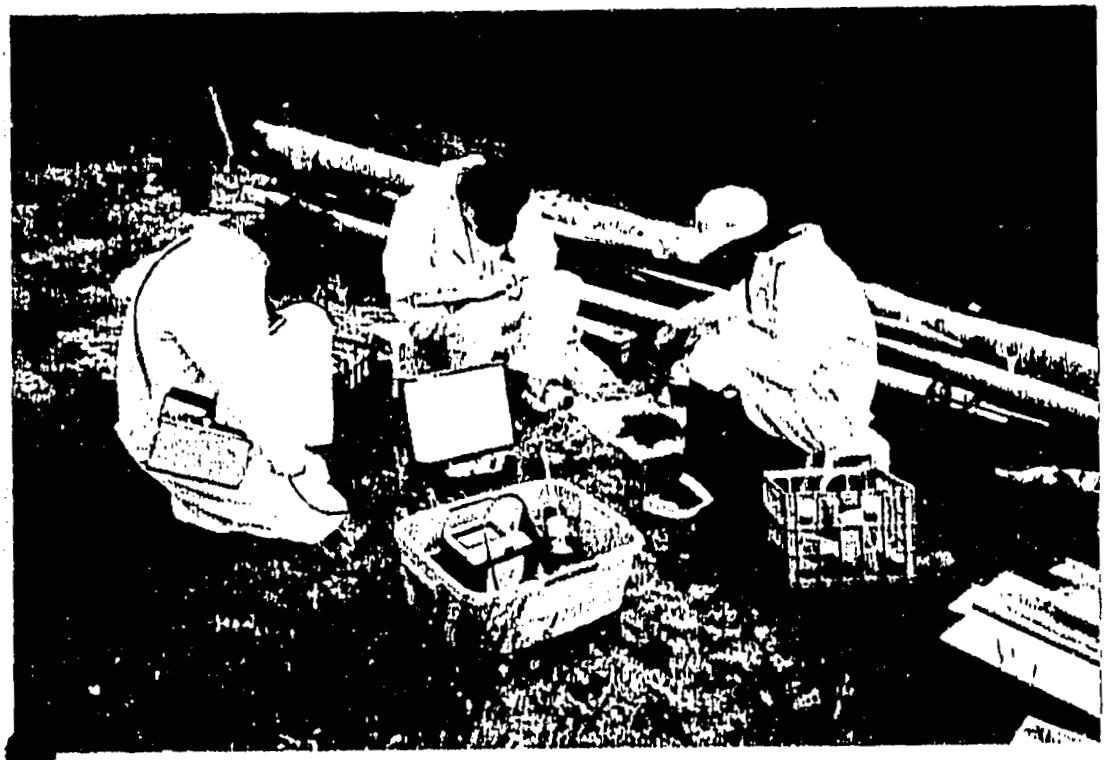
12. Photo of sample AAB1855 taken close-up during sampling process. Some sample locations were previously surveyed and staked as shown in photo. Photo taken facing Northeast by Ken McFadden at 12:57 on 7/28/94.

13. Photo of area surrounding sample AAB1855. Photo taken facing Northeast by Ken McFadden at 12:57 on 7/28/94.

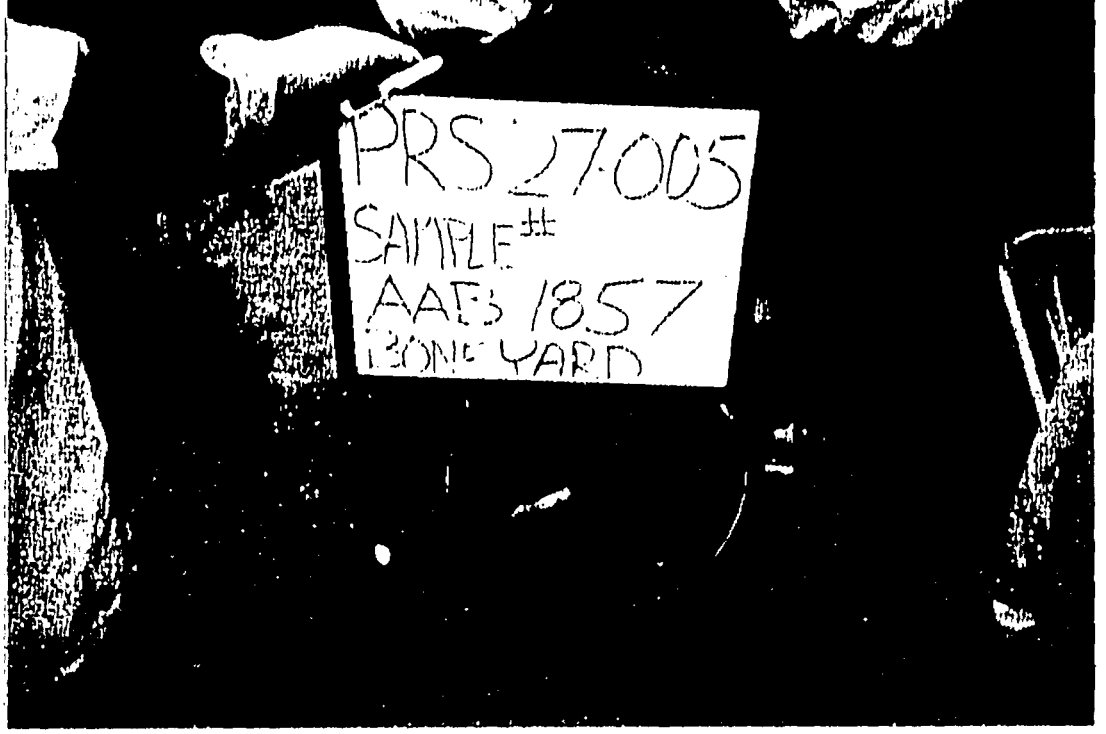
14. Photo of sample AAB1856. Bowl readings were taken near sample location as shown. Photo taken facing Northeast by Ken McFadden at 13:15 on 7/28/94.



15. Photo of sample AAB1856. As noted in sample collection logs, different textures of soil were encountered. Photo taken facing Northeast by Ken McFadden at 13:15 on 7/28/94.



16. Photo of area surrounding sample AAB1856. Monitoring results, soil descriptions and location, weather conditions, and time were recorded before sample collection. Photo taken facing Northeast by Ken McFadden at 13:15 on 7/28/94.

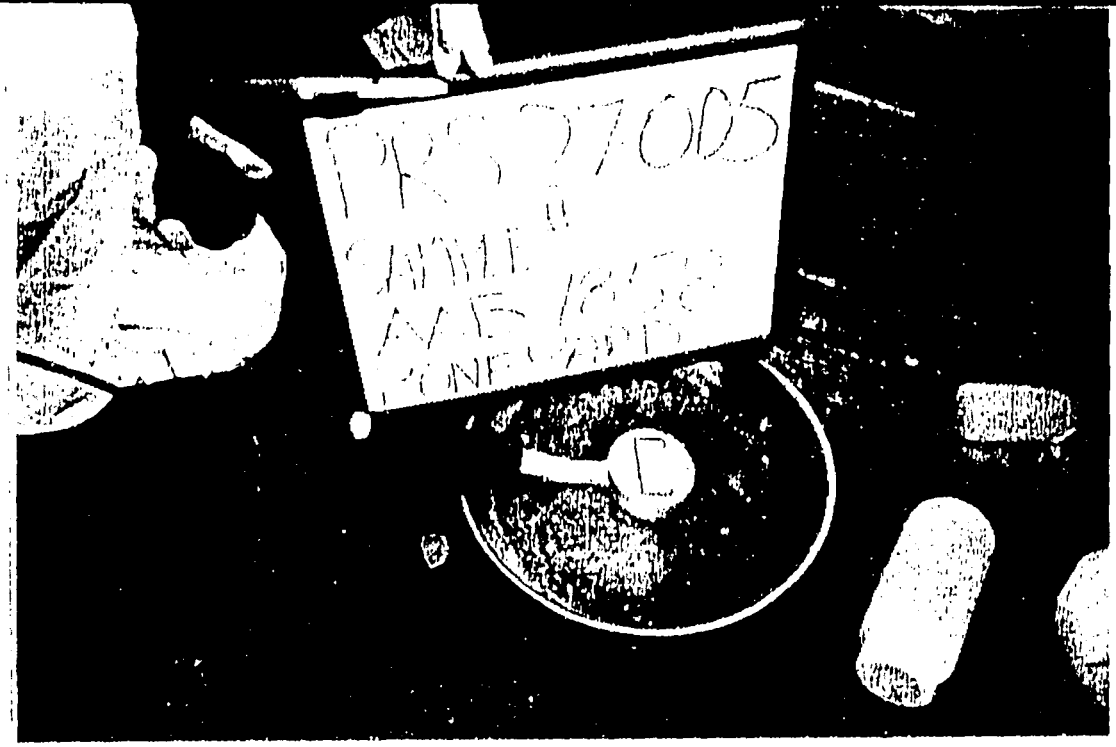


17. Photo of sample AAB1857. Personnel that were not collecting samples, were required to wear two layers of vinyl gloves, as shown in photo by health physics technician. Photo taken facing North by Ken McFadden at 13:31 on 7/28/94.

18. Photo of sample AAB1857. The Health Physics Technician kept his own log book of daily activities. Photo taken facing North by Ken McFadden at 13:31 on 7/28/94.

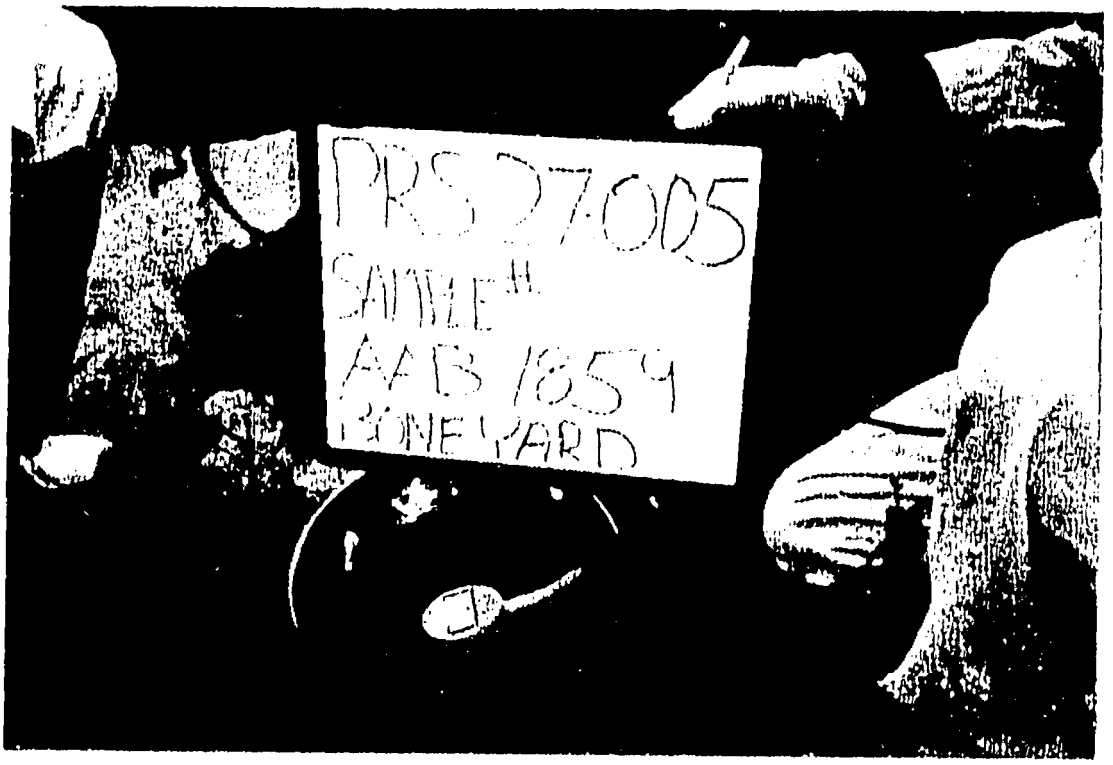
19. Photo of area surrounding sample AAB1857. A description of trees and vegetation surrounding the sample location, was also recorded. Photo taken facing North by Ken McFadden at 13:31 on 7/28/94.

20. Photo of sample AAB1858 taken. Bottle sets of each sample location were prepared prior to sampling. Photo taken facing Northeast by Ken McFadden at 14:18 on 7/28/94.



21. Photo of sample AAB1858 taken close-up during sampling process. A detailed soil description was required at each sample location. Photo taken facing Northeast by Ken McFadden at 14:18 on 7/28/94.

22. Photo of area surrounding sample AAB1858. Forest litter and organics are visible in this photo. Photo taken facing Northeast by Ken McFadden at 14:18 on 7/28/94.



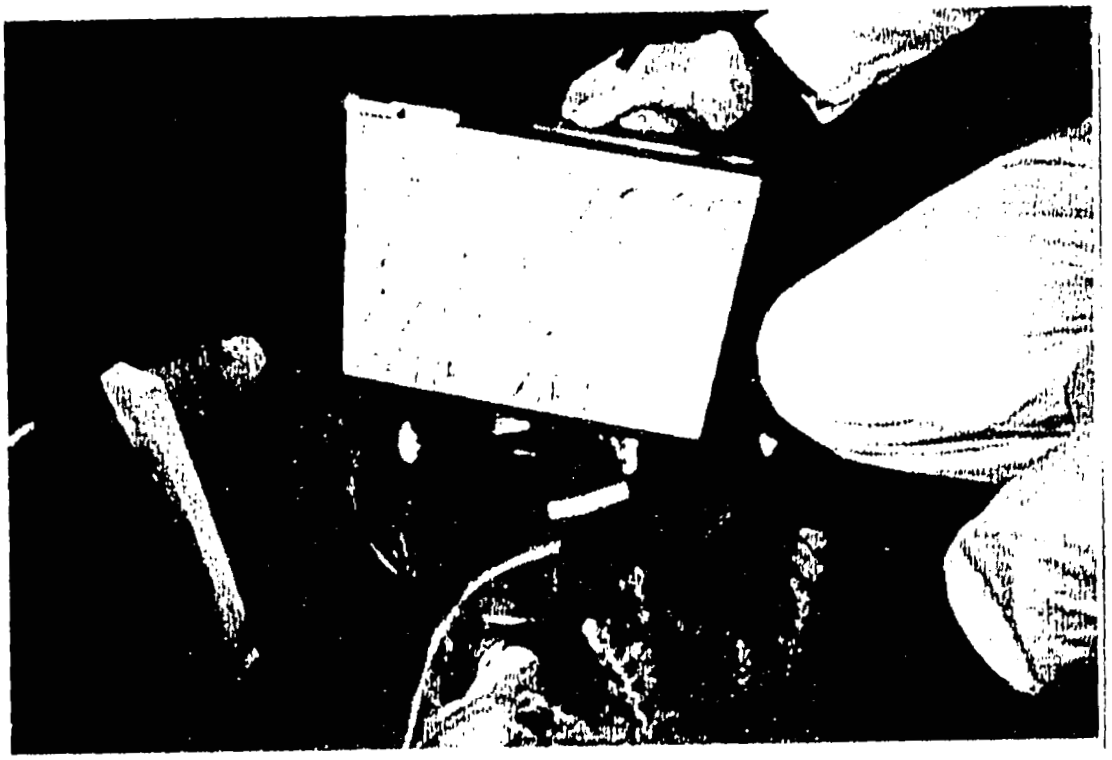
23. Photo of sample AAB1859. All sample numbers were furnished by The Laboratory's CST-3 group. Photo taken facing Northeast by Ken McFadden at 14:35 on 7/28/94.

24. Photo of sample AAB1859. The Boneyard Area had a large amount of tree cover as shown in photo. Photo taken facing Northeast by Ken McFadden at 14:35 on 7/28/94.

25. Photo of area surrounding sample AAB1859 taken during sampling process. Photo taken facing Northeast by Ken McFadden at 14:35 on 7/28/94.

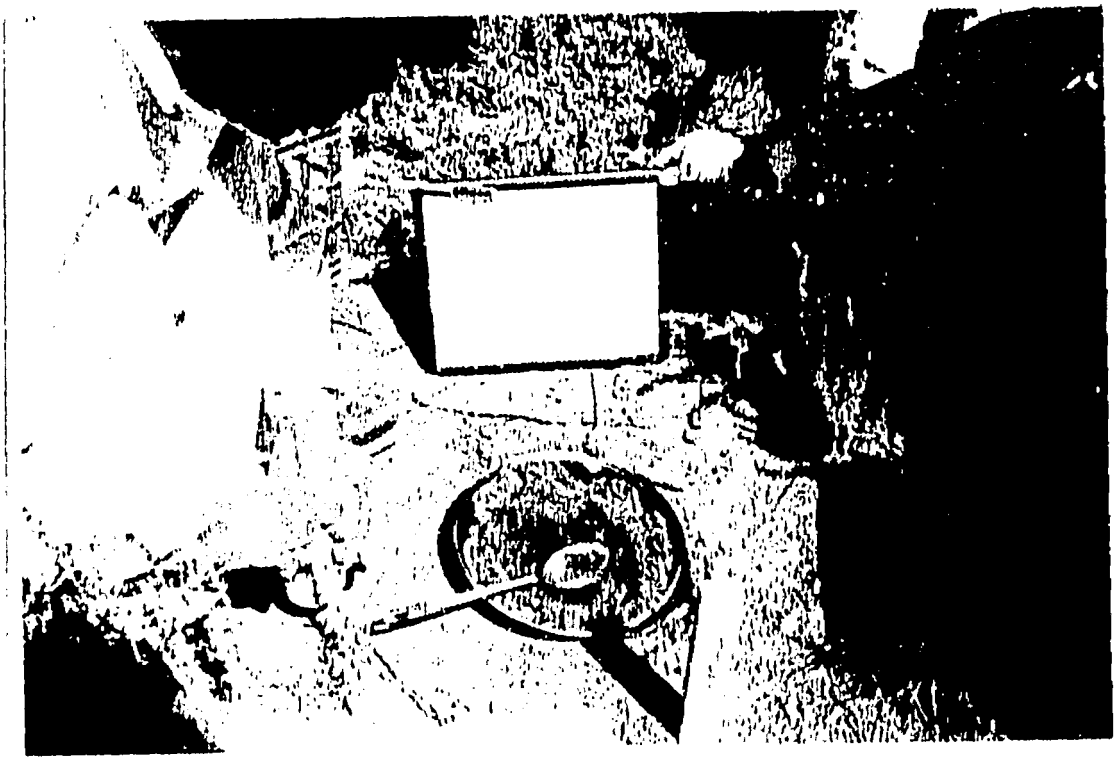
26. Photo of sampling activities (PRS 27-005) and area surrounding sample. Photo taken facing Northeast by Ken McFadden On 7/28/94.

27. Photo of sample AAB1860. Many sample locations ended up being very close to stored equipment as shown in photo. Photo taken facing North by Ken McFadden at 14:49 on 7/28/94.



28. Photo of sample AAB1860 taken close-up during screening process showing GM pancake probe. Photo taken facing North by Ken McFadden at 14:49 on 7/28/94.

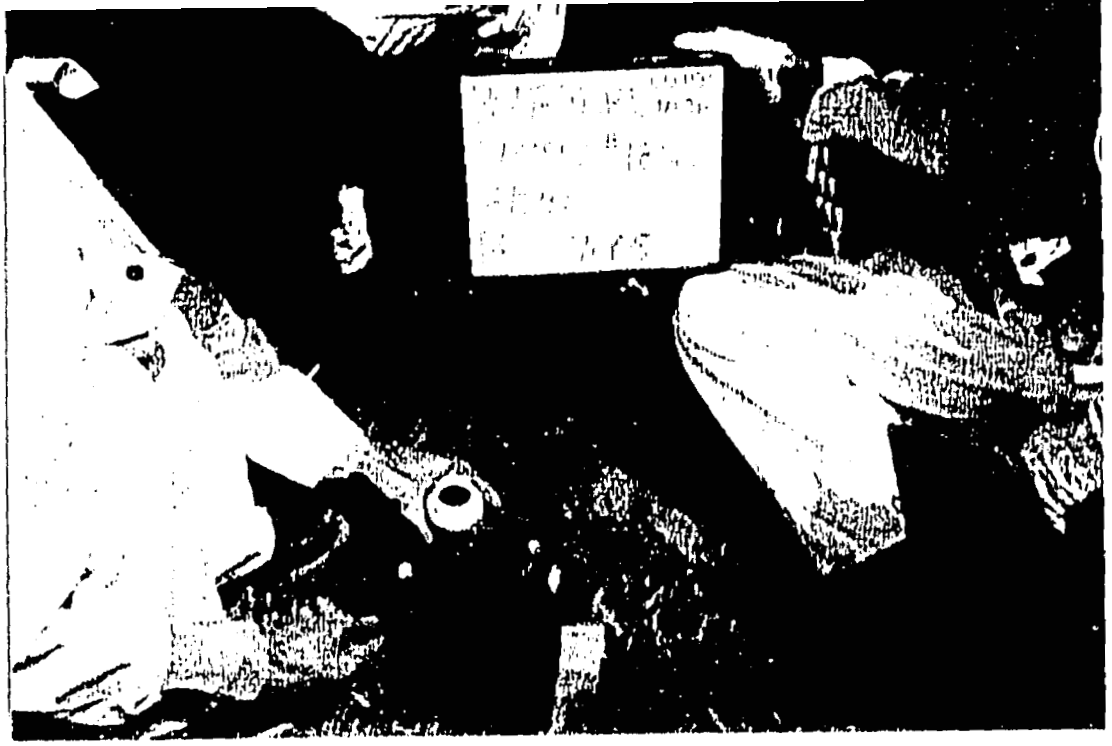
29. Photo of area surrounding sample AAB1860. Photo taken facing North by Ken McFadden at 14:49 7/28/94.



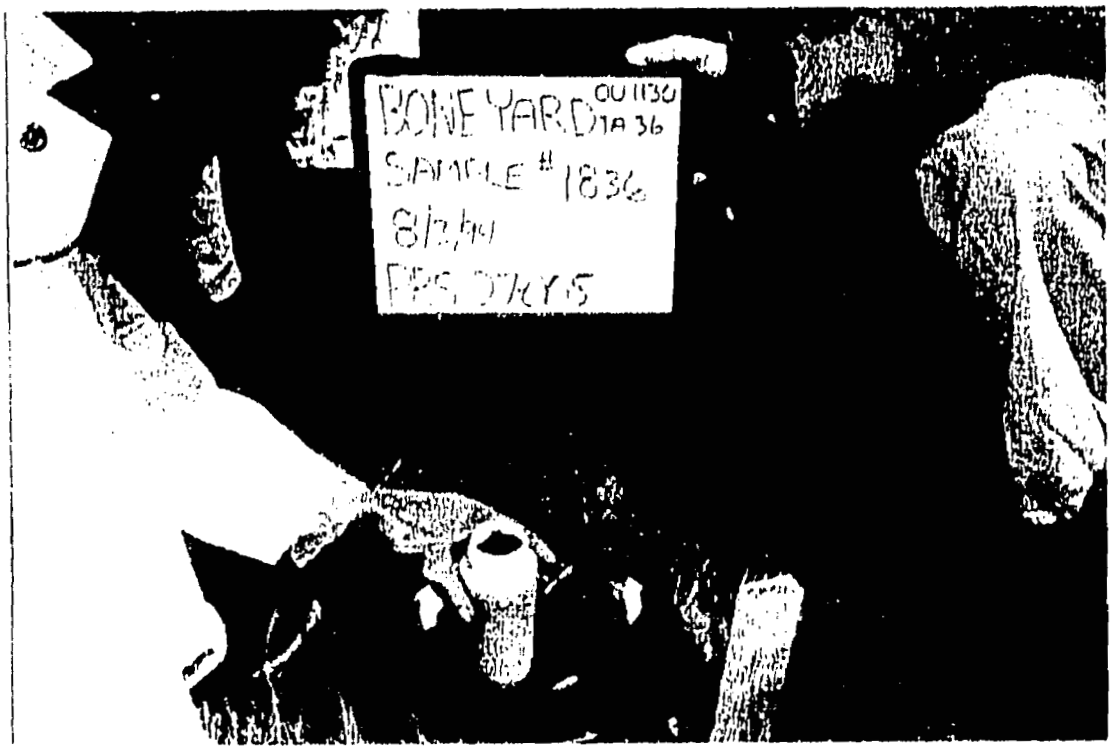
30. Photo of sampling activities (PRS 27-005). Photo taken facing Northeast by Ken McFadden at 10:40 on 8/3/94.

31. Photo of sampling activities (PRS 27-005). Where duplicate samples were taken additional soil was collected in order to have enough to fill bottle sets. Quality assurance samples were collected at a minimum frequency of 1 per 20 samples. Photo taken facing Northeast by Ken McFadden at 10:40 on 8/3/94.

32. Photo of sampling activities (PRS 27-005). Photo taken facing Northeast by Ken McFadden at 10:40 on 8/3/94.

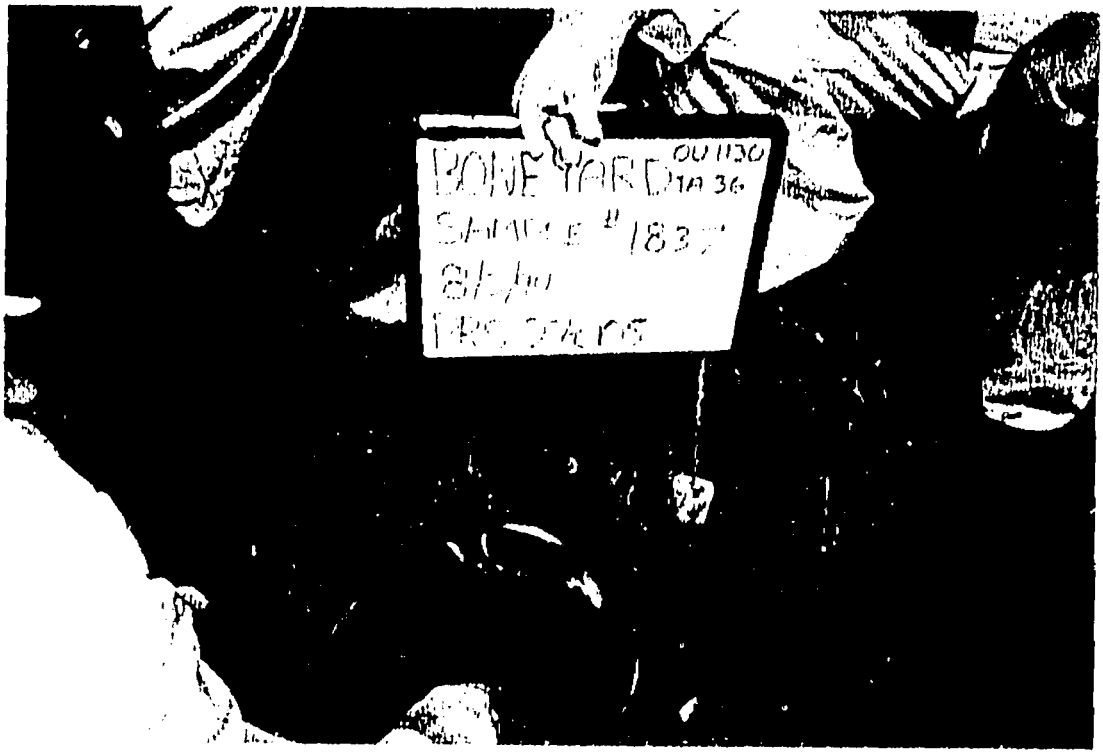


33. Photo of sample AAB1836 taken during sampling process. Photo taken facing Northeast by Ken McFadden at 11:06 on 8/3/94.



34. Photo of sample AAB1836 and sample bottles being filled. Photo taken facing Northeast by Ken McFadden at 11:06 on 8/3/94.

35. Photo of area surrounding sample AAB1836. In this photo a spray bottle is visible inside the blue tub. Water was used to minimize dust while samples were being collected. Photo taken facing Northeast by Ken McFaddon at 11:06 on 8/3/94.



36. Photo of sample AAB1837 taken close-up as soil was being homogenized. Photo taken facing Northwest by Ken McFaddon at 11:21 on 8/3/94.

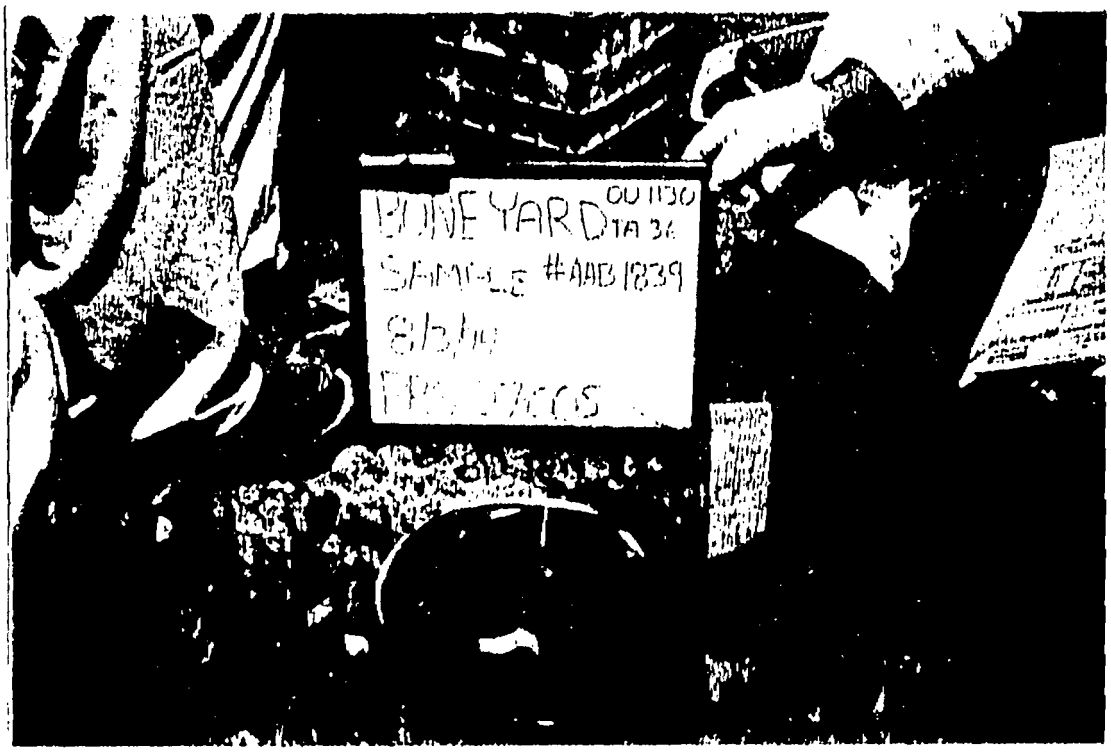
37. Photo of sample AAB1837 taken during sampling process. Photo taken facing Northwest by Ken McFadden at 11:21 on 8/3/94.

38. Photo of area surrounding sample AAB1837. Photo taken facing Northeast by Ken McFadden at 11:21 on 8/3/94.

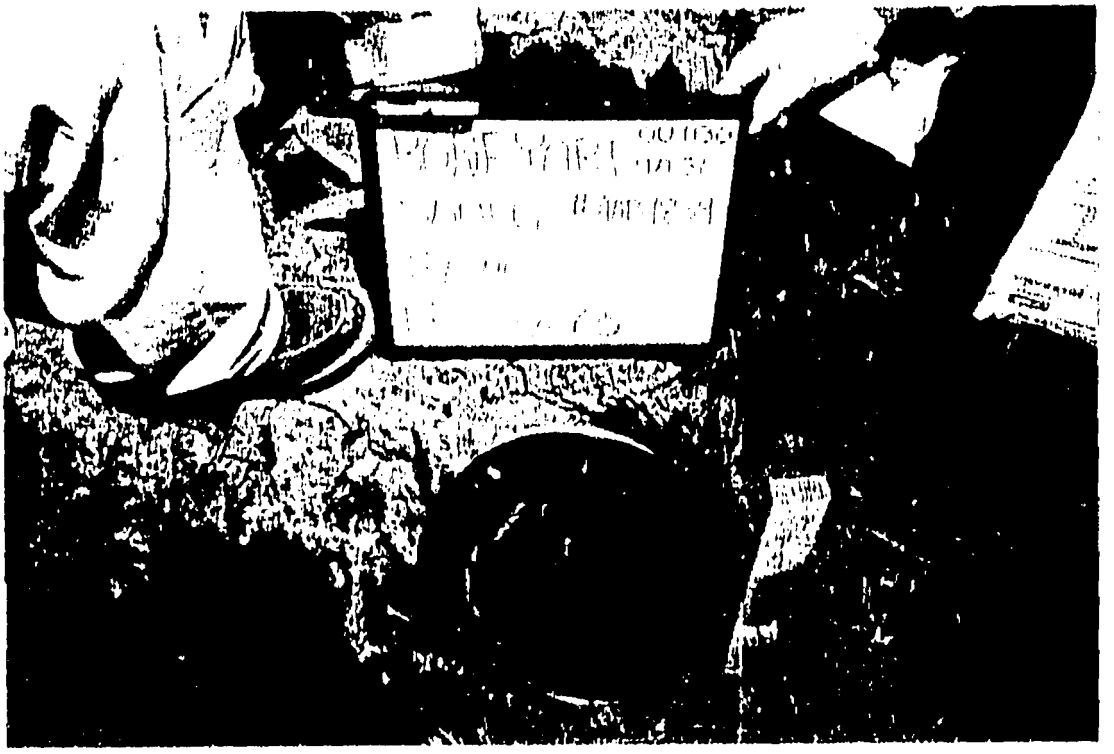
39. Photo shows soil used for sample AAB1838. Photo taken facing East by Ken McFadden at 11:35 on 8/3/94.

40. Photo of screening process for sample AAB1838. Photo taken facing East by Ken McFadden at 11:35 on 8/3/94.

41. Photo of area surrounding sample AAB1838. Photo taken facing East by Ken McFadden at 11:35 on 8/3/94.

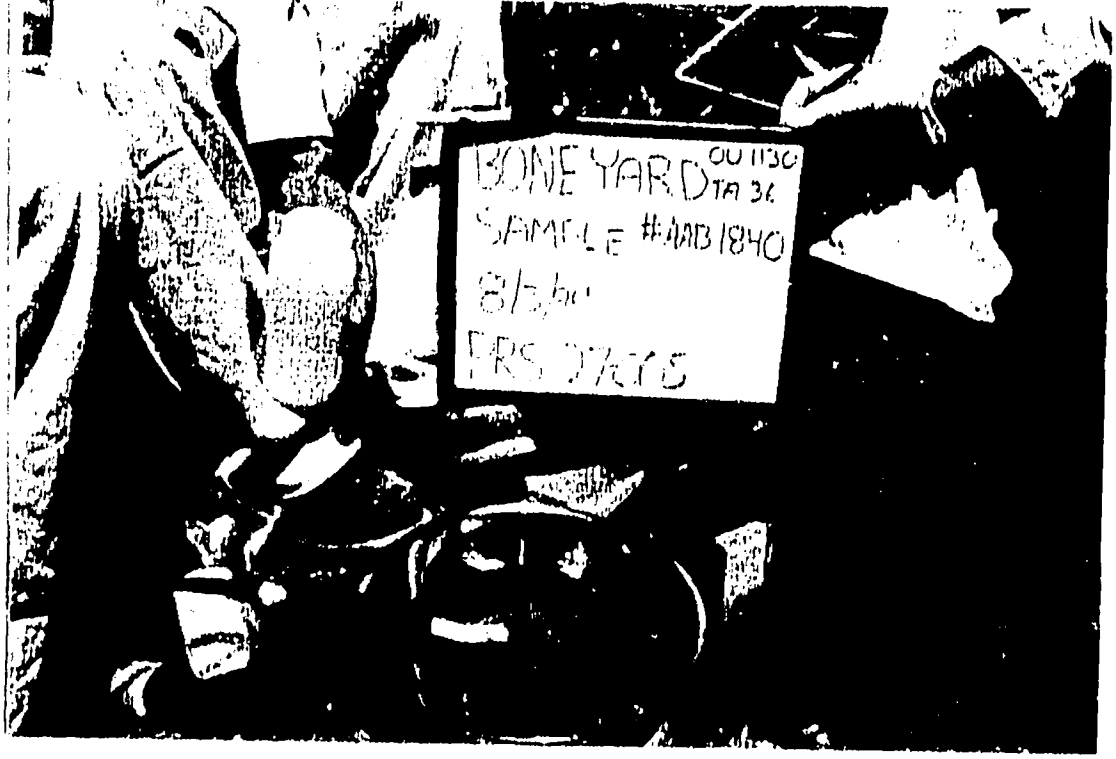


42. Photo of sample AAB1839 taken during sampling process. Some sample locations produced rich dark soil as shown in this photo. Photo taken facing East by Ken McFadden at 11:48 on 8/3/94.



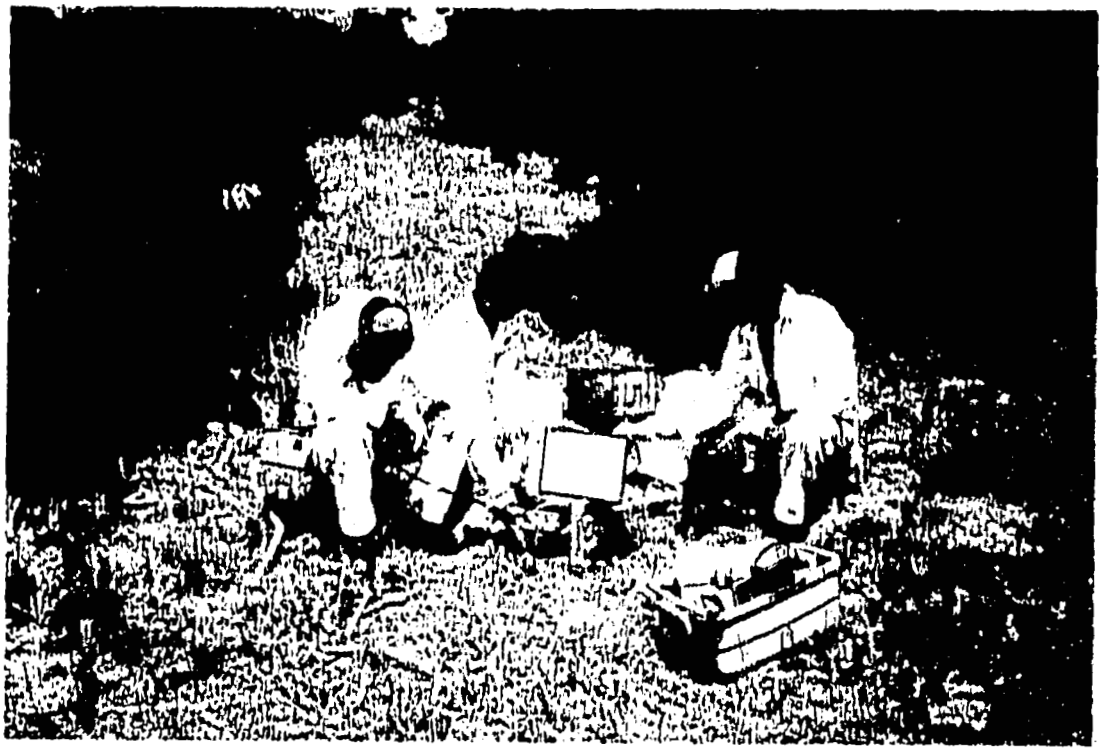
43. Photo of soil for sample AAB1839 after being homogenized. Photo taken facing East by Ken McFadden at 11:48 on 8/3/94.

44. Photo of area surrounding sample AAB1839. Photo taken facing East by Ken McFadden at 11:48 on 8/3/84.



45. Photo of sample AAB1840 taken close-up during screening process showing GM pancake probe. Photo taken facing North by Ken McFadden at 12:00 on 8/3/94.

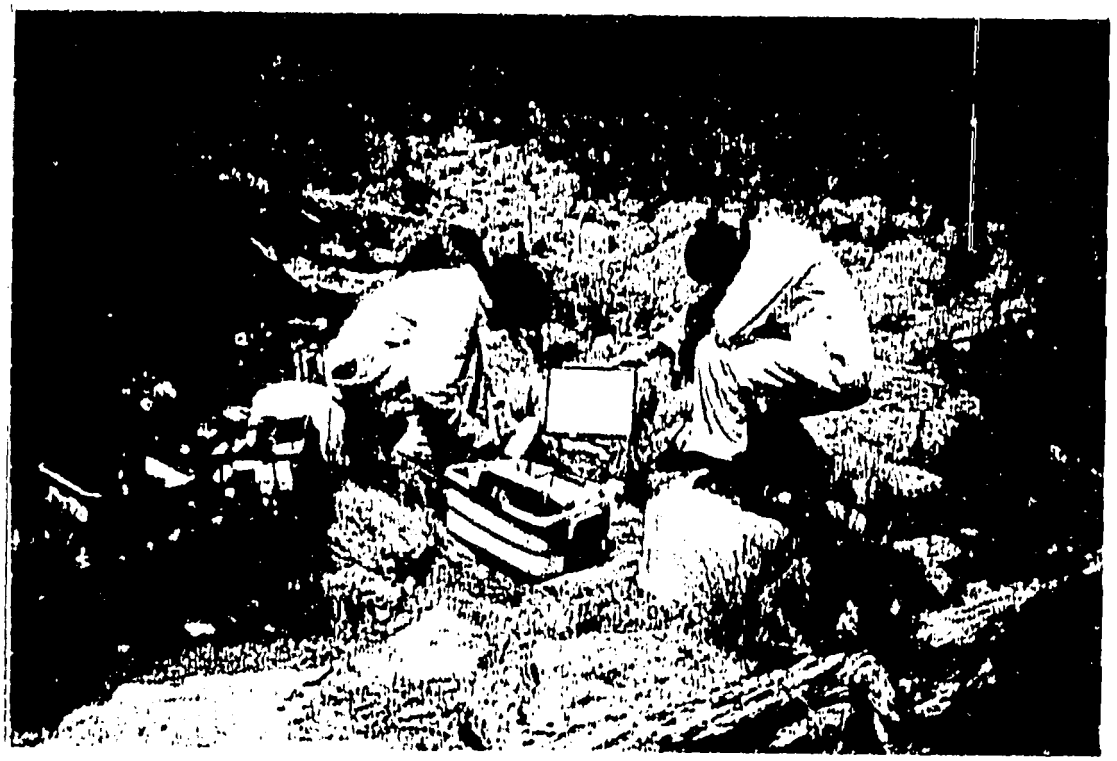
46. Photo of sample AAB1840 taken during screening process while samplers wait to complete sample collection. Photo taken facing North by Ken McFadden at 12:00 on 8/3/94.



47. Photo of area surrounding sample AAB1840 taken during sampling process. Photo taken facing North by Ken McFadden at 12:00 on 8/3/94.

48. Photo shows sample AAB1841 taken close-up. Photo taken facing Northwest by Ken McFadden at 12:13 on 8/3/94.

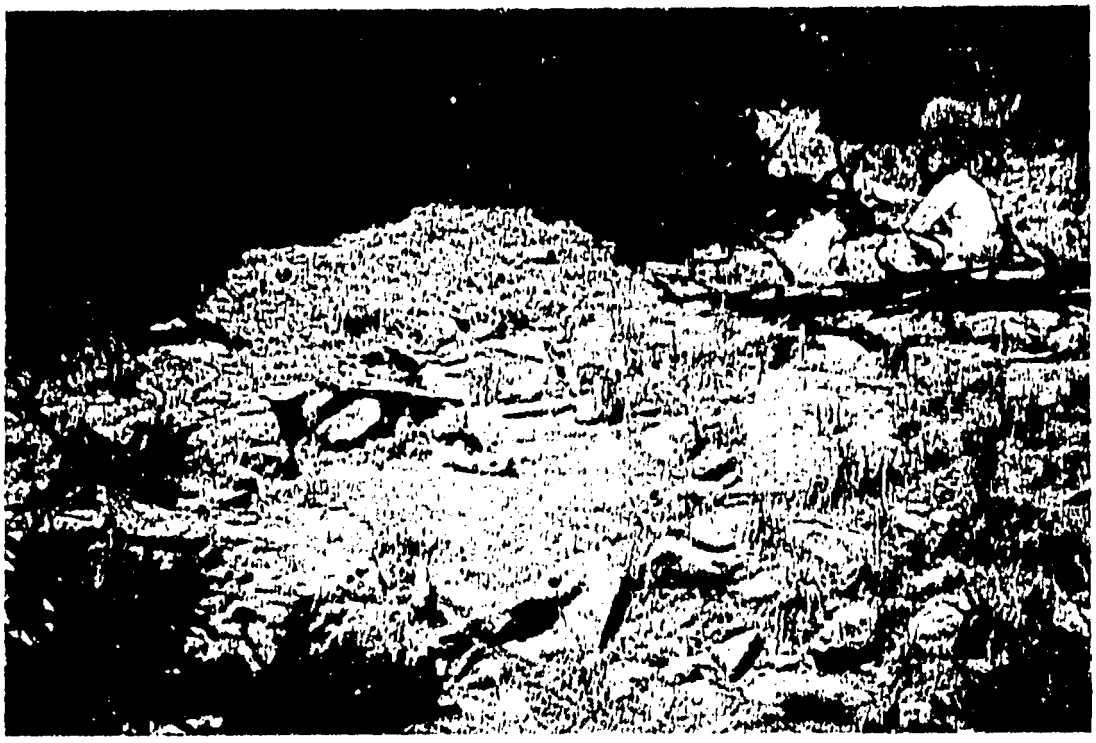
49. Photo of sample AAB1841. At many locations soil had to be collected between tuff boulders as shown at this location. Photo taken facing Northwest by Ken McFadden at 12:13 on 8/3/94.



50. Photo of area surrounding sample AAB1841 taken during sampling process. In this photo samples were collected form drainage channel below Boneyard Area. Photo taken facing Northwest by Ken McFadden at 12:13 on 8/3/94.

51. Photo of area surrounding sample AAB1841 taken during sampling process. Photo taken facing Northwest by Ken McFadden at 12:13 on 8/3/94.

52. Photo of area surrounding sample AAB1841. This photo shows terrain that was typical at the Boneyard Area. The contamination reduction zone is visible in the background. Photo taken facing Northwest by Ken McFadden at 12:13 on 8/3/94.

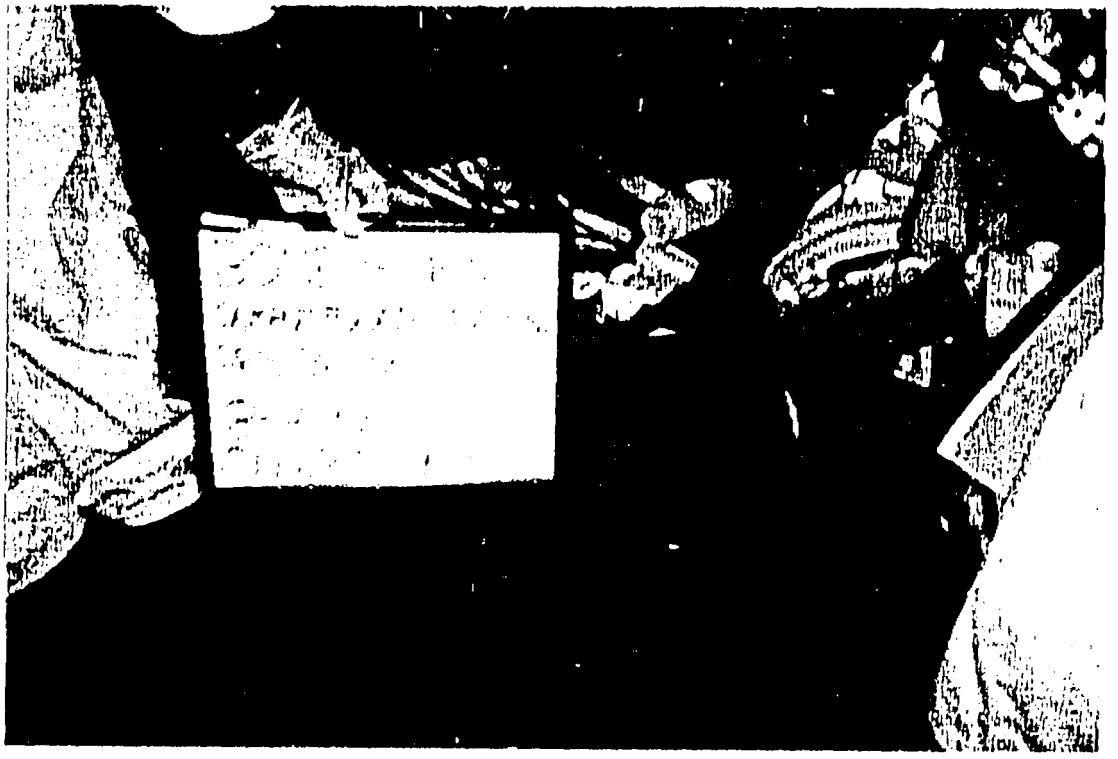


53. Photo of sampling activities (PRS 27-005). Exposed tuff boulders make it evident that the soil/tuff interface was shallow at this location. Photo taken facing West by Ken McFadden at 12:13 on 8/3/94.

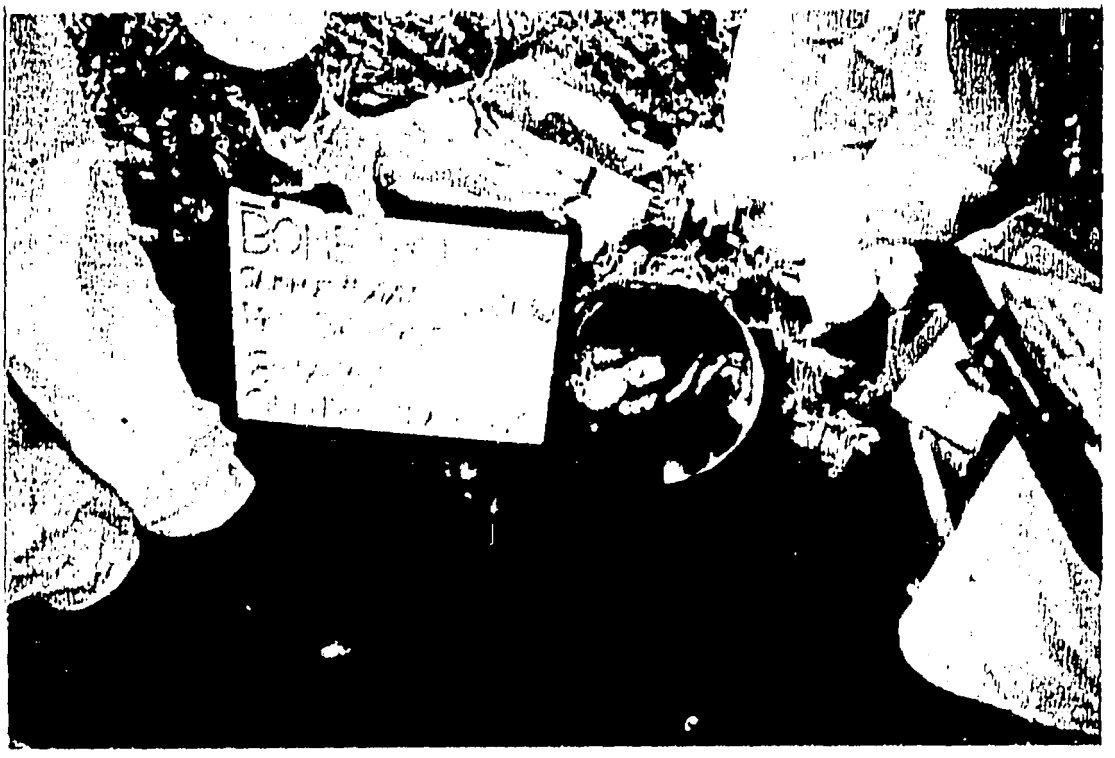
54. Photo shows homogenized soil for sample AAB1842 taken close-up. Photo taken facing Southeast by Ken McFadden at 12:27 on 8/3/94.

55. Photo of sample AAB1842 taken during sampling process. Photo taken facing Southeast by Ken McFadden at 12:27 on 8/3/94.

56. Photo of area surrounding sample AAB1842. Photo taken facing Southeast by Ken McFadden at 12:27 on 8/3/94.



57. Photo of samples AAB1861 & AAB1862 taken close-up during sampling process. Photo taken facing South by Ken McFadden at 10:37 on 8/4/94.



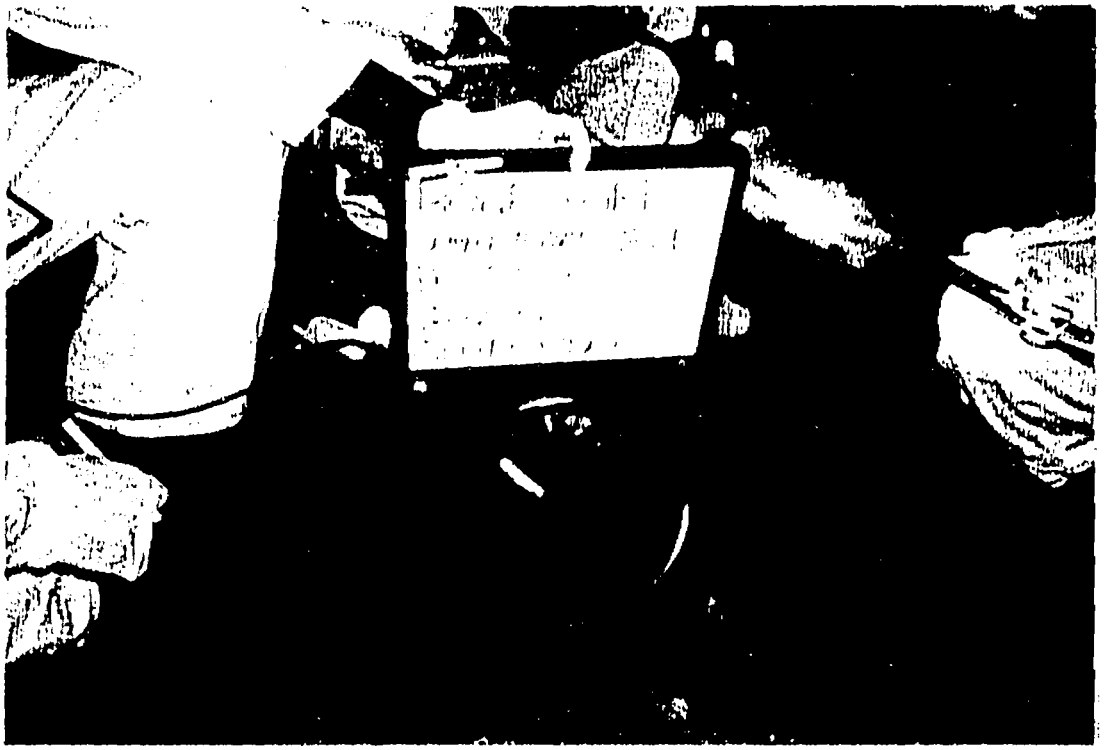
58. Photo of samples AAB1861 & AAB1862 taken during sampling process. Photo taken facing South by Ken McFadden at 10:37 on 8/4/94.

59. Photo of area surrounding samples AAB1861 & AAB1862. Photo taken facing South by Ken McFadden at 10:37 on 8/4/94.

60. Photo of soil used for sample AAB1863 taken close-up during screening process showing GM pancake probe. Photo taken facing West by Ken McFadden at 10:58 on 8/4/94.

61. Photo of sample AAB1863 taken close-up. Photo taken facing West by Ken McFadden at 10:58 on 8/3/94.

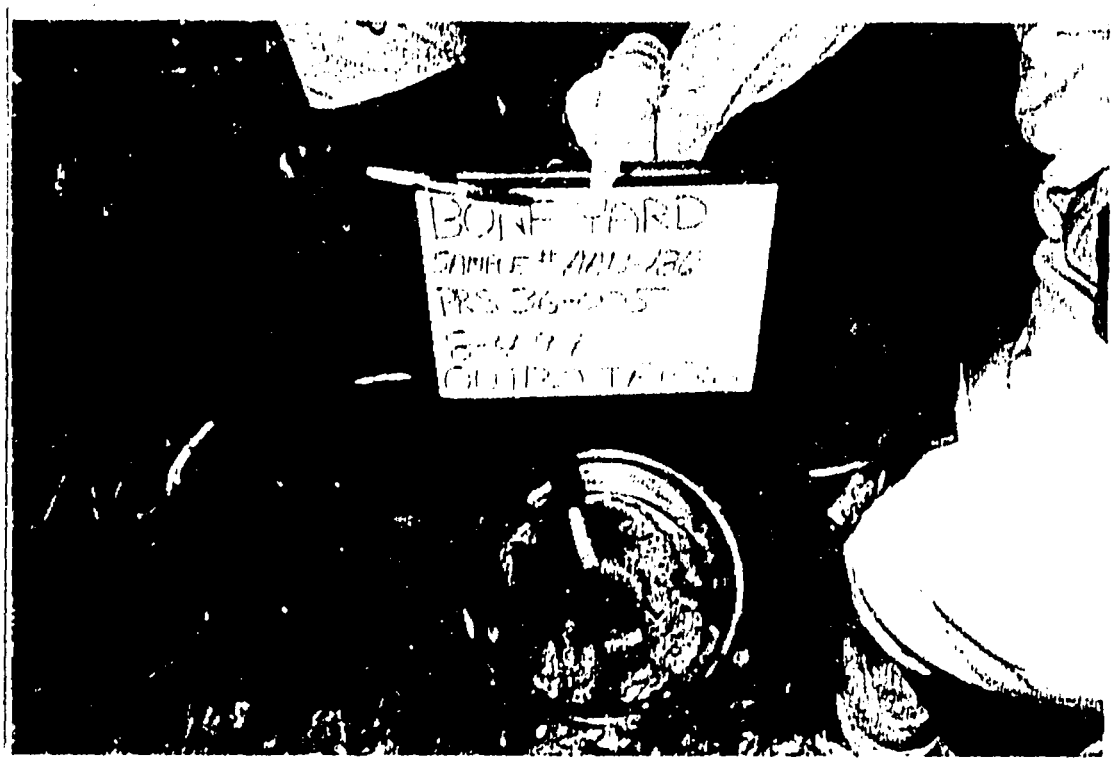
62. Photo of area surrounding sample AAB1863. Photo taken facing West by Ken McFadden at 10:58 on 8/4/94.



63. Photo of sample AAB1864 taken close-up. Photo taken facing South by Ken McFadden at 11:13 on 8/4/94.

64. Photo of sample AAB1864 taken during sampling process. Stainless steel spoons and bowls were categorized as dedicated equipment, therefore they were never reused. Photo taken facing South by Ken McFadden at 11:13 on 8/4/94.

65. Photo of area surrounding sample AAB1864 taken during sampling process. Photo taken facing South by Ken McFadden at 11:13 on 8/4/94.



66. Photo of sample AAB1865 taken close-up during screening process showing GM pancake probe. Photo taken facing South by Ken McFadden at 11:32 on 8/4/94.

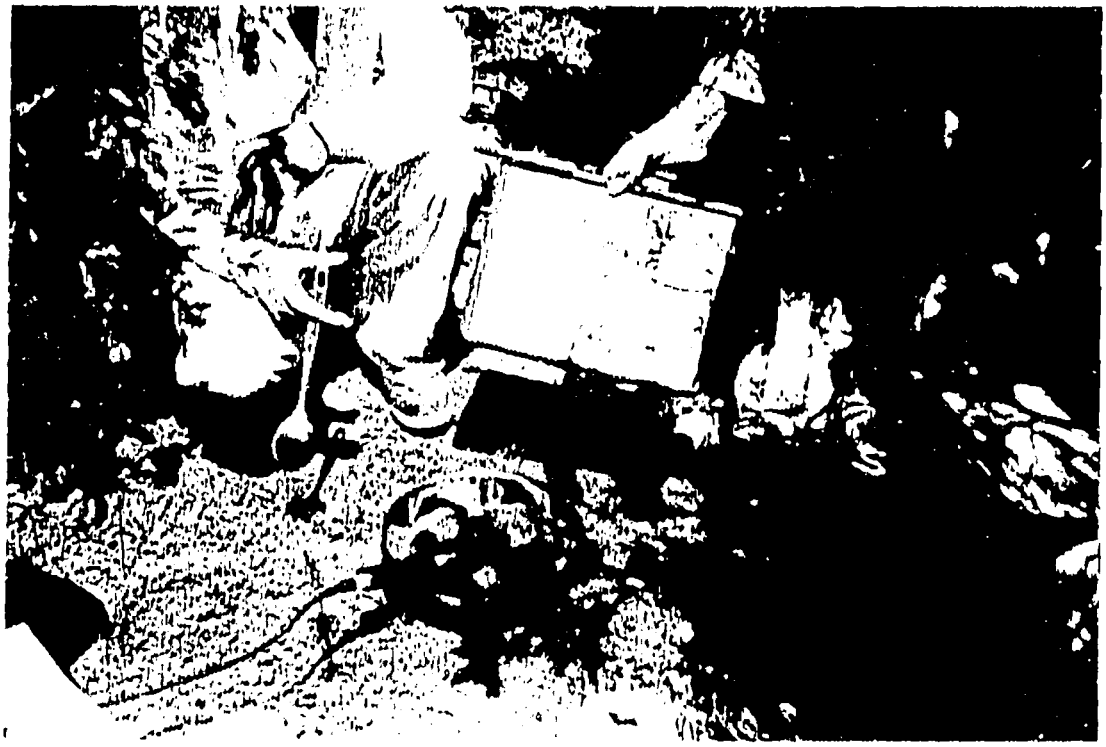
67. Photo of sample AAB1865. Photo taken facing South by Ken McFadden at 11:32 on 8/4/94.

68. Photo of area surrounding sample AAB1865 taken during sampling process. Photo taken facing Southwest by Ken McFadden at 11:32 on 8/4/94.

69. Photo of sample AAB1866 taken close-up during screening process. Photo taken facing West by Ken McFadden at 11:46 on 8/4/94.

70. Photo of sample AAB1866 taken during screening process. Photo taken facing West by Ken McFadden at 11:46 on 8/4/94.

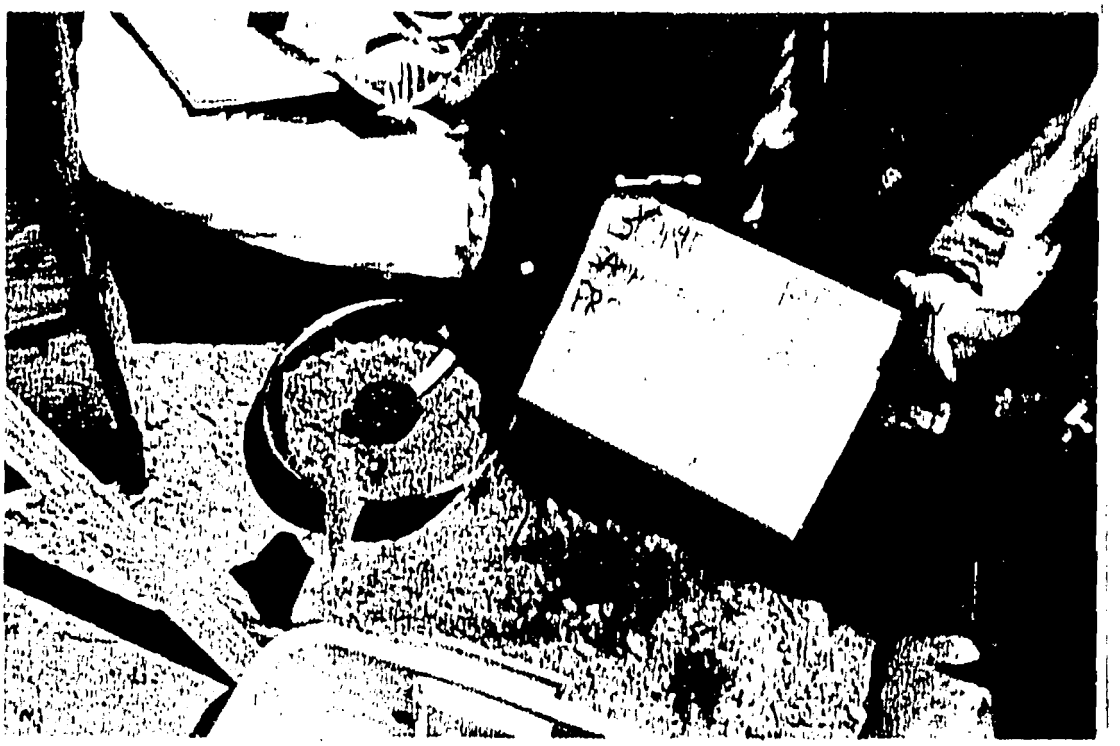
71. Photo of area surrounding sample AAB1866 taken during sampling process. Photo taken facing West by Ken McFadden at 11:46 on 8/4/94.



72. Photo of sample AAB1867. Photo taken facing North by Ken McFadden at 12:01 on 8/4/94.

73. Photo of sample AAB1867 taken close-up. Photo taken facing North by Ken McFadden at 12:01 on 8/4/94.

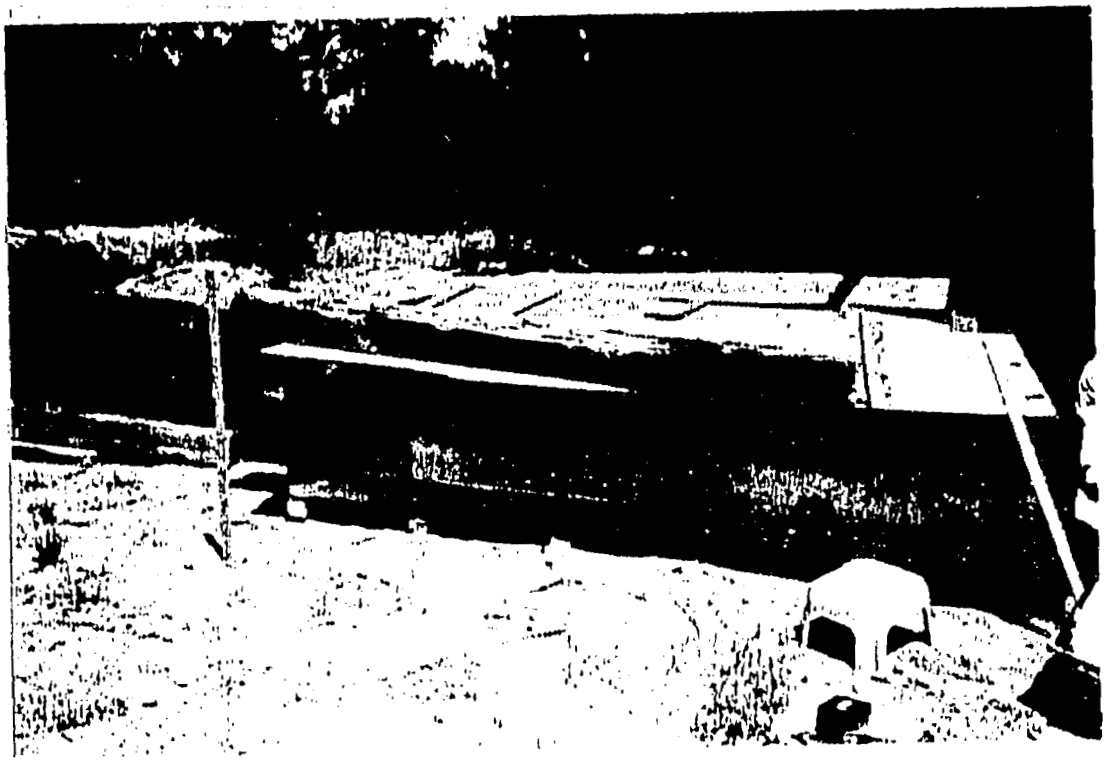
74. Photo of area surrounding sample AAB1867 taken during sampling process. Photo taken facing North by Ken McFadden at 12:01 on 8/4/94.



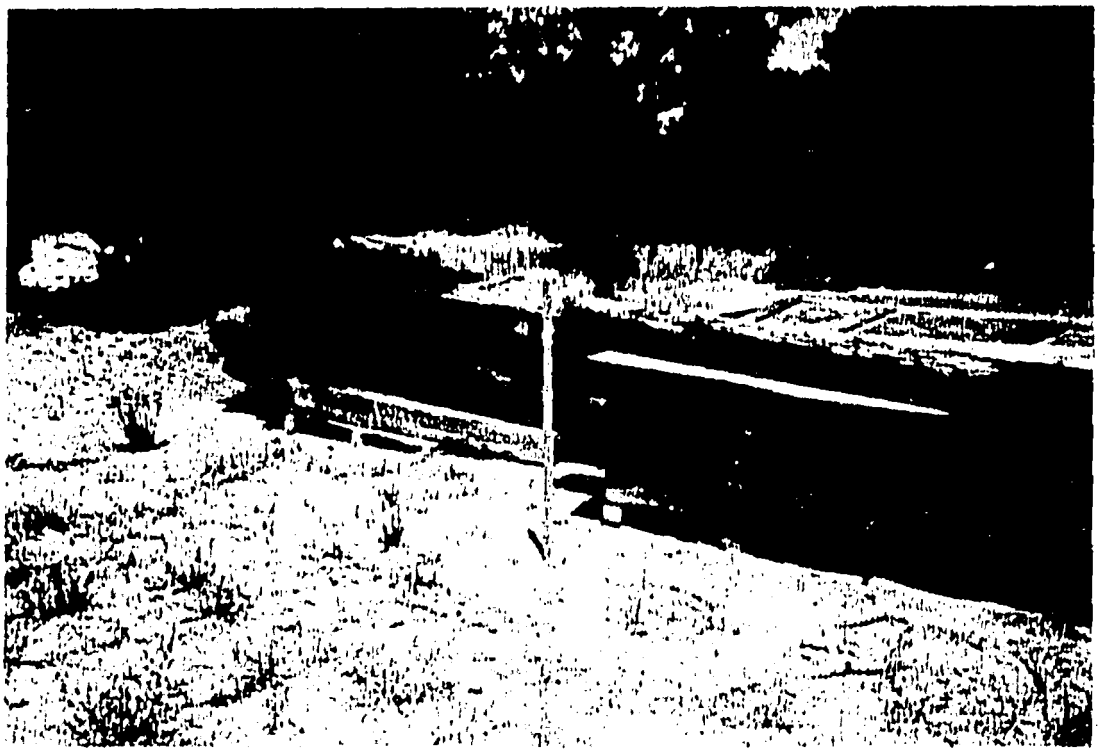
75. Photo of sample AAB1868. Photo taken facing North by Ken McFadden at 12:15 on 8/4/94.

76. Photo of sample AAB1868. Photo taken facing North by Ken McFadden at 12:15 on 8/4/94.

77. Photo of area surrounding sample AAB1868 taken during sampling process. Photo taken facing North by Ken McFadden at 12:15 on 8/4/94.



78. Photo of Boneyard Area west of sample AAB1868. Photo taken facing Northwest by Ken McFadden 8/4/94.

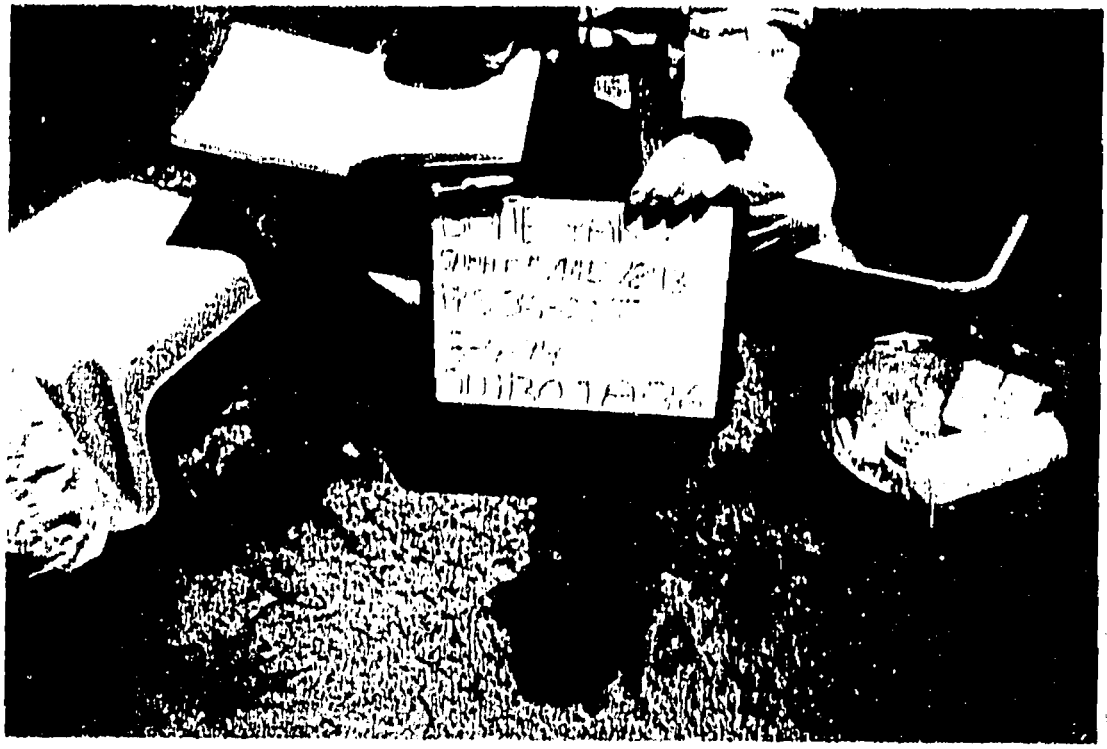


79. Photo of Boneyard Area west of sample AAB1868. Photo taken facing Northwest by Ken McFadden on 8/4/94.

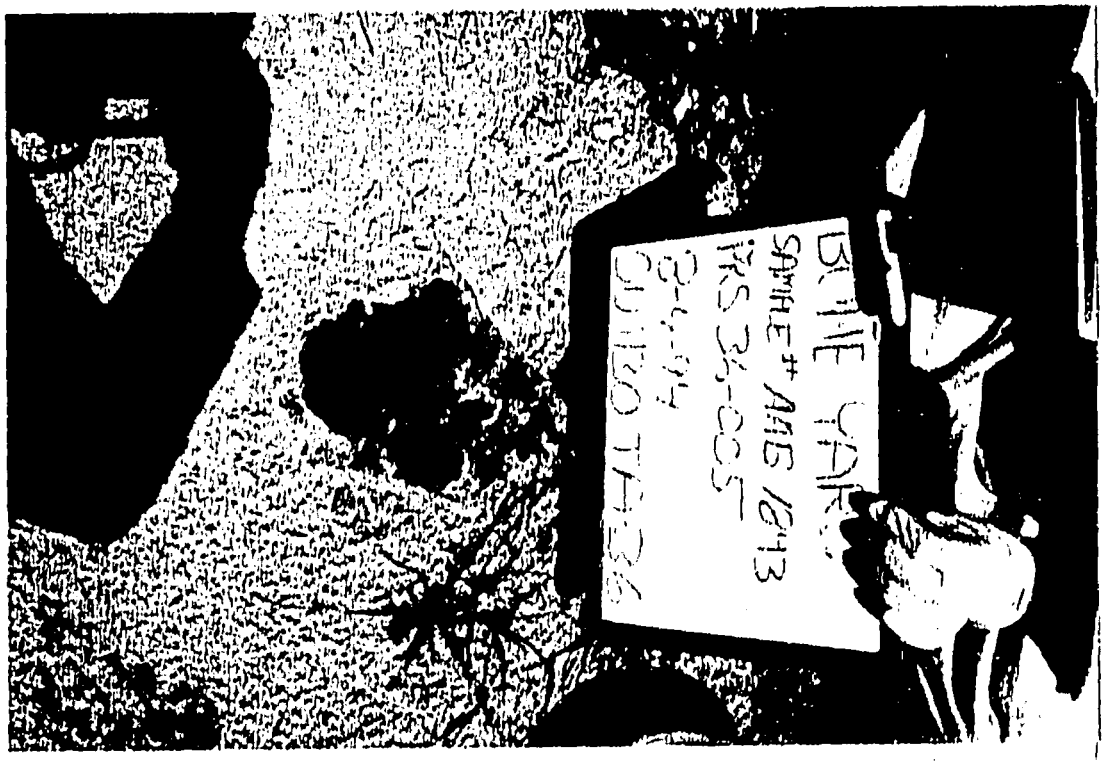
80. Photo of sample AAB1869 taken close-up during sampling process. Photo taken facing East by Ken McFadden at 12:29 on 8/4/94.

81. Photo of sample AAB1869 taken during sampling process. After screening and homogenization soil was transferred from bowl directly to sample bottles. Photo taken facing East by Ken McFadden at 12:29 on 8/4/94.

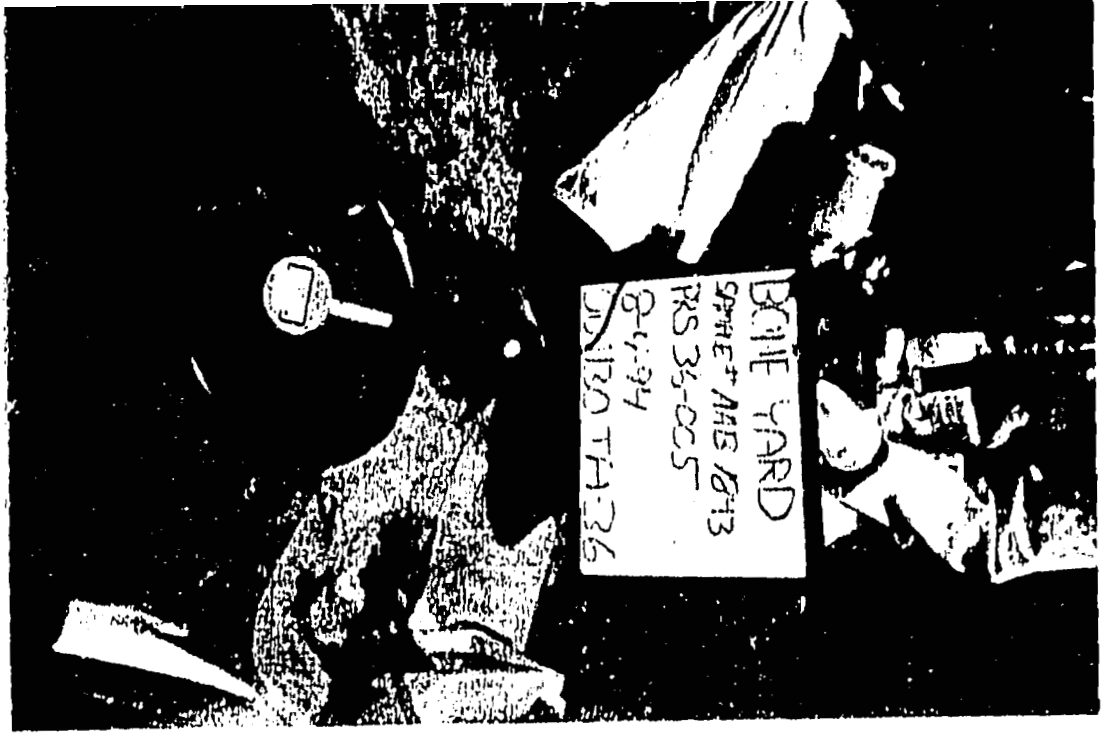
82. Photo of area surrounding sample AAB1869. On hot dry days one of the Site Safety Officer's duties was to look out for symptoms of dehydration and sun stroke in members of sampling crew. Photo taken facing East by Ken McFadden at 12:29 on 8/4/94.



83. Photo of discolored area before sampling (sample AAB1843). Where any visible staining was observed a sample was collected. Photo taken facing North by Ken McFadden at 13:48 on 8/4/94.



84. Photo of discolored area prior to sampling (sample AAB1843) taken close-up. Photo taken facing North by Ken McFadden at 13:48 on 8/4/94.



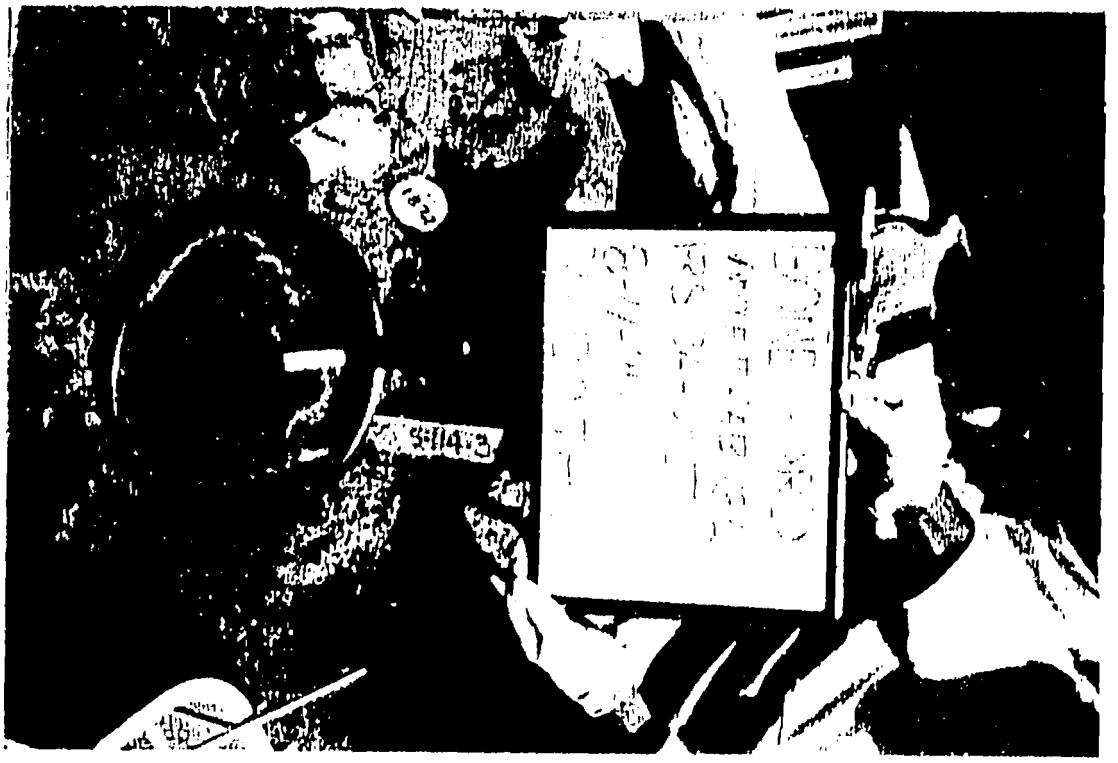
85. Photo of sample AAB1843. Photo taken facing North by Ken McFadden at 13:48 on 8/4/94.

86. Photo of sampling area (PRS 36-005) taken during sampling process. Photo taken facing West by Ken McFadden at 13:48 on 8/4/94.

87. Photo of samples AAB1870 and AAB1871 taken close-up. Photo taken facing East by Ken McFadden at 14:13 on 8/4/94.

88. Photo of samples AAB1870 and AAB1871. Photo taken facing East by Ken McFadden at 14:13 on 8/4/94.

89. Photo of area surrounding samples AAB1870 & AAB1871 taken during sampling process. Photo taken facing East by Ken McFadden at 14:13 on 8/4/94.



90. Photo of sample AAB1872 taken close-up during sampling process. Photo taken facing East by Ken McFadden at 14:28 on 8/4/94.

91. Photo of sample AAB1872 taken close-up. Photo taken facing East by Ken McFadden at 14:28 on 8/4/94.

92. Photo of area surrounding sample AAB1872. Photo taken facing East by Ken McFadden at 14:28 on 8/4/94.

93. Photo of septic tank (samples AAB1879 through AAB1884). Photo shows HNu meter used to detect organic vapors and the combustible gas/oxygen meter used to check for lower explosion limits (LEL's) and percent of oxygen in tank after it was opened. Photo taken facing North by Ken McFadden at 10:59 on 8/5/94.

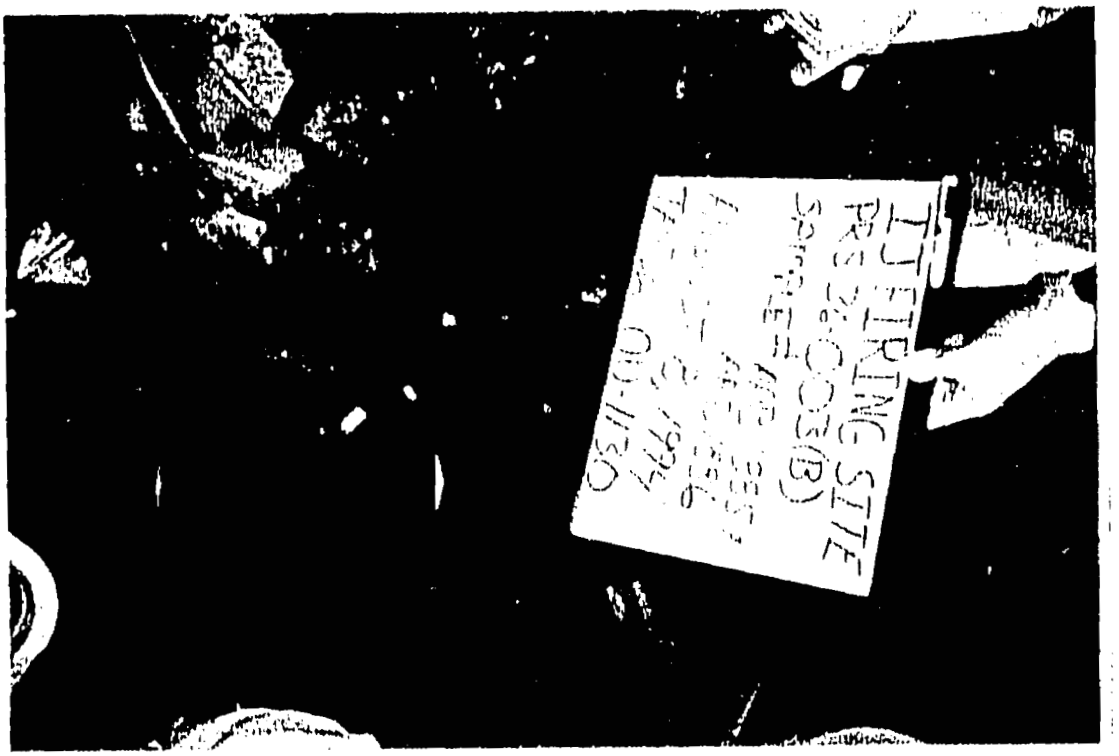
94. Photo of septic tank (samples AAB1879 through AAB1884) taken during sampling process. Photo shows Scoop Sampler used to sample at septic tanks. Sludge and fluids were transferred from sampler directly to sample bottles. Photo taken facing North by Ken McFadden at 10:59 on 8/5/94.

95. Photo of field sampling activities (PRS 36-003(b)) showing contamination reduction zone. A moving van was used during the sampling season for transporting equipment and housing computer hardware. The support zone is also visible in the photo. Photo taken facing West by Ken McFadden at 11:05 on 8/5/94.

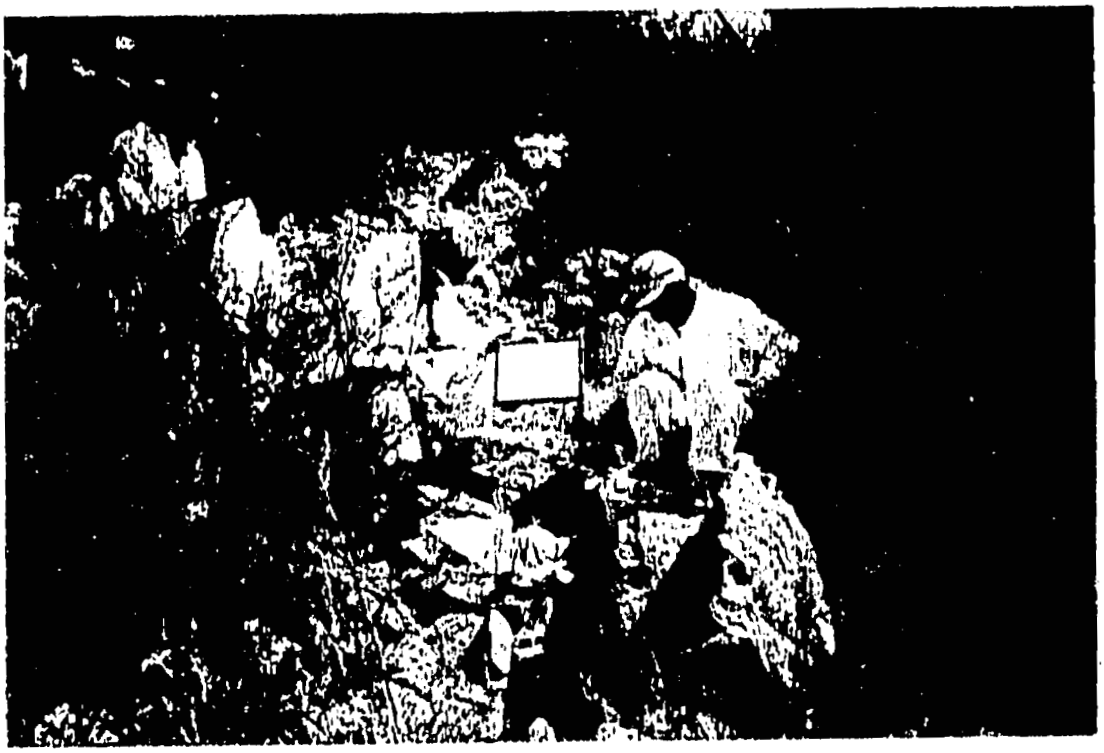
96. Photo of septic tank sampling (PRS 36-003(b)). Photo was taken as the Scoop Sampler was being inserted into the tank. Photo taken facing South by Ken McFadden at 11:05 on 8/5/94.

97. Photo of septic tank sampling (PRS 30-003(b)). Photo taken facing South by Ken McFadden at 11:05 on 8/5/94.

98. Photo of samples AAB1885 & AAB1886 taken close-up during sampling process. Photo was taken as samplers prepare to take another QA duplicate sample. Photo taken facing North by Ken McFadden at 11:11 on 8/5/94.



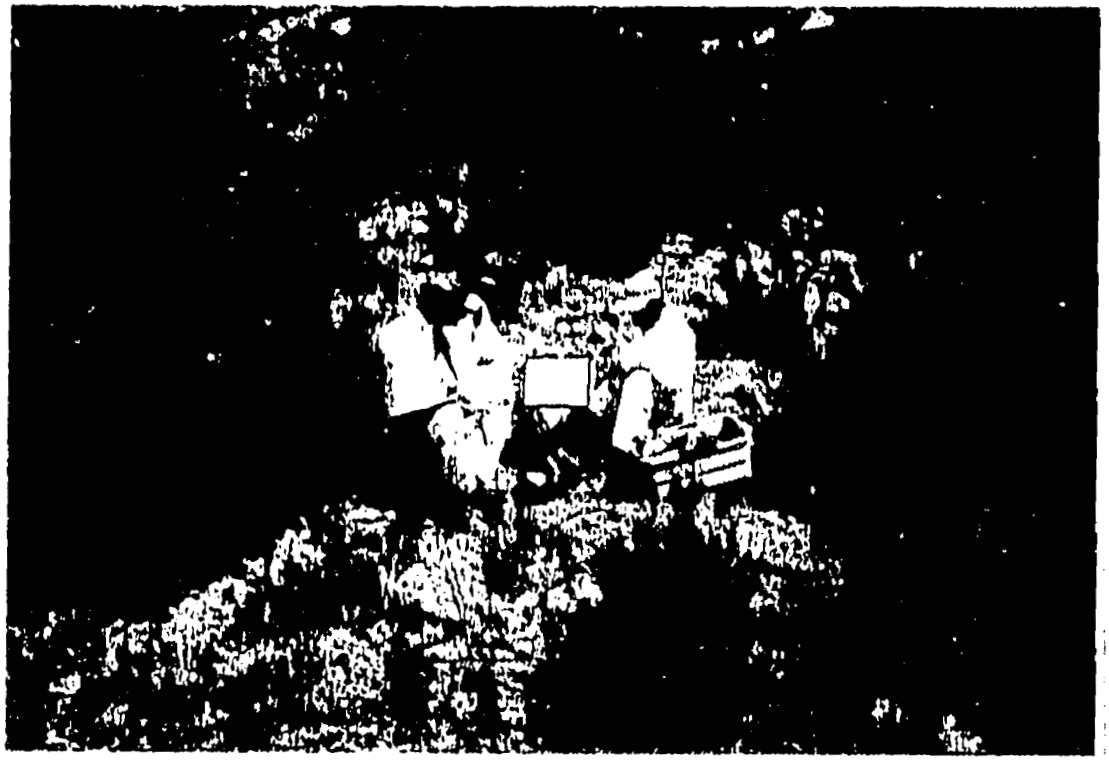
99. Photo of samples AAB1885 & AAB1886 taken close-up during sampling process. Photo taken facing North by Ken McFadden at 11:11 on 8/5/94.



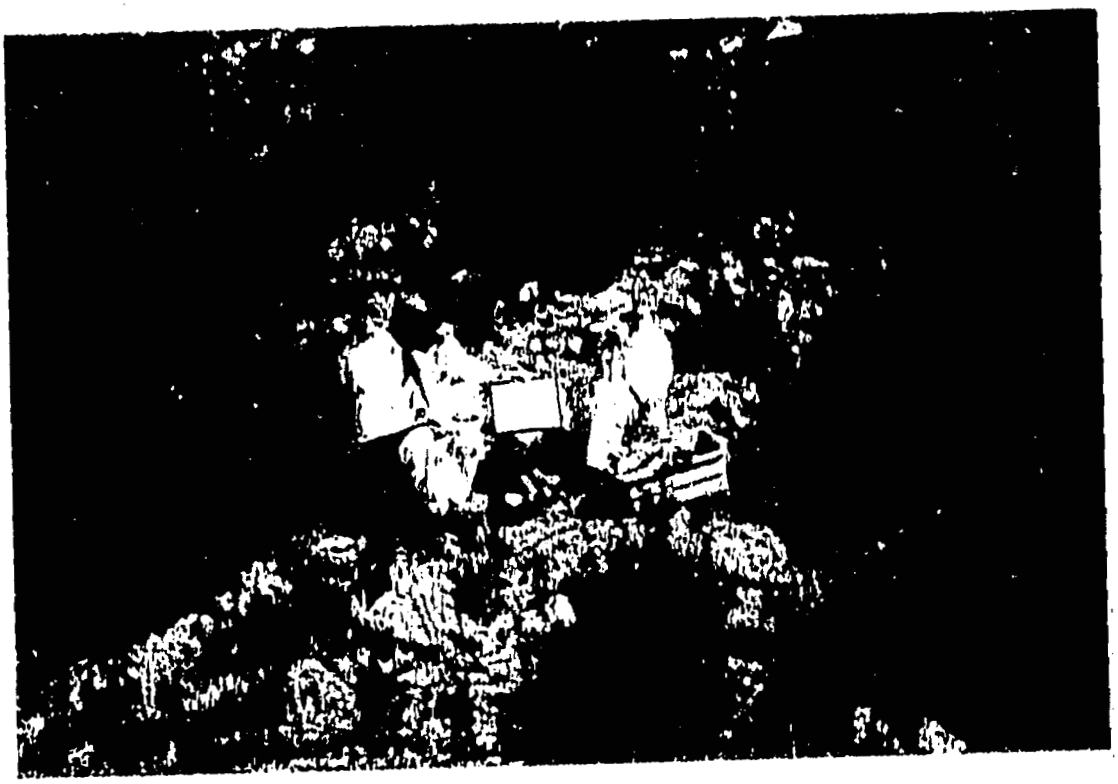
100. Photo of area surrounding samples AAB1885 & AAB1886 taken during sampling process. Photo shows rough terrain which was typical below most firing sites. Photo taken facing North by Ken McFadden at 11:11 on 8/5/94.

101. Photo of sample AAB1887 taken close-up during sampling process. Photo taken facing North by Ken McFadden at 11:30 on 8/5/94.

102. Photo of sample AAB1887 taken during sampling process. Photo taken facing North by Ken McFadden at 11:30 on 8/8/94.

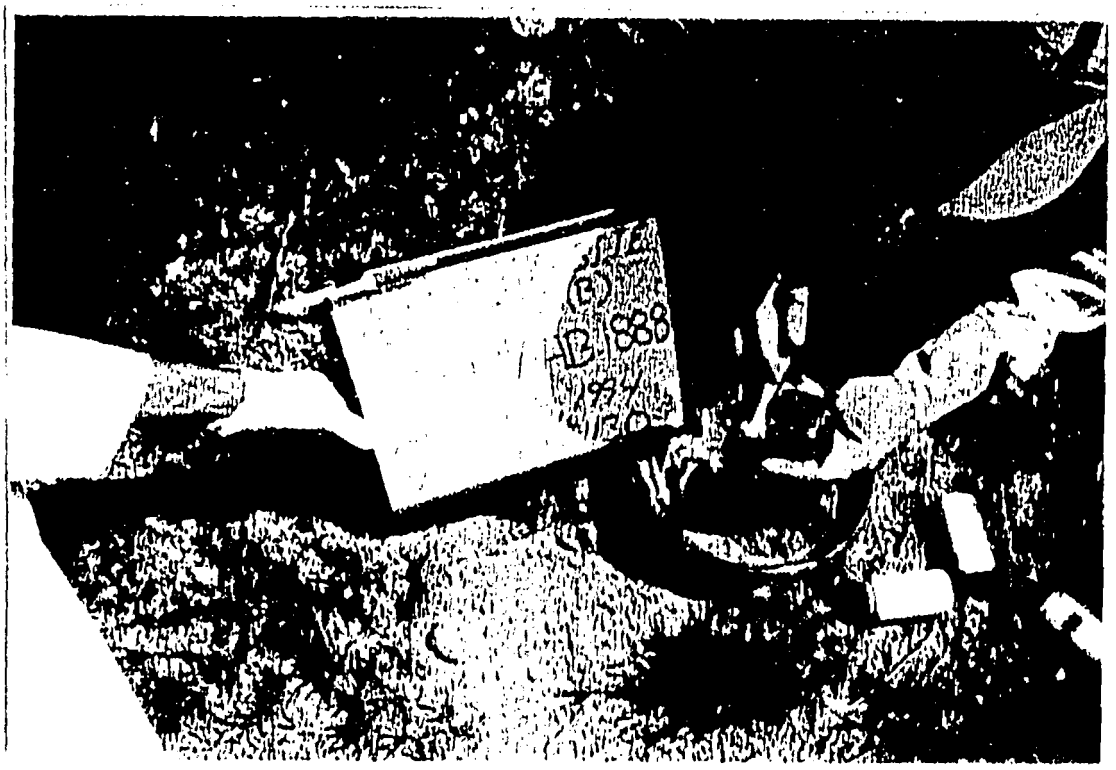


103. Photo of area surrounding sample AAB1887 taken during sampling process. Photo taken facing North by Ken McFadden at 11:30 8/8/94.



104. Photo of area surrounding sample AAB1887 taken during sampling process. Photo taken facing North by Ken McFadden at 11:30 on 8/8/94.

105. Photo of area surrounding sample AAB1887 taken during sampling process. Photo shows approximate location of I-J Firing Site outfall. Outfall was never found but samples were collected from area below site. Photo taken facing North by Ken McFadden on 8/8/94.

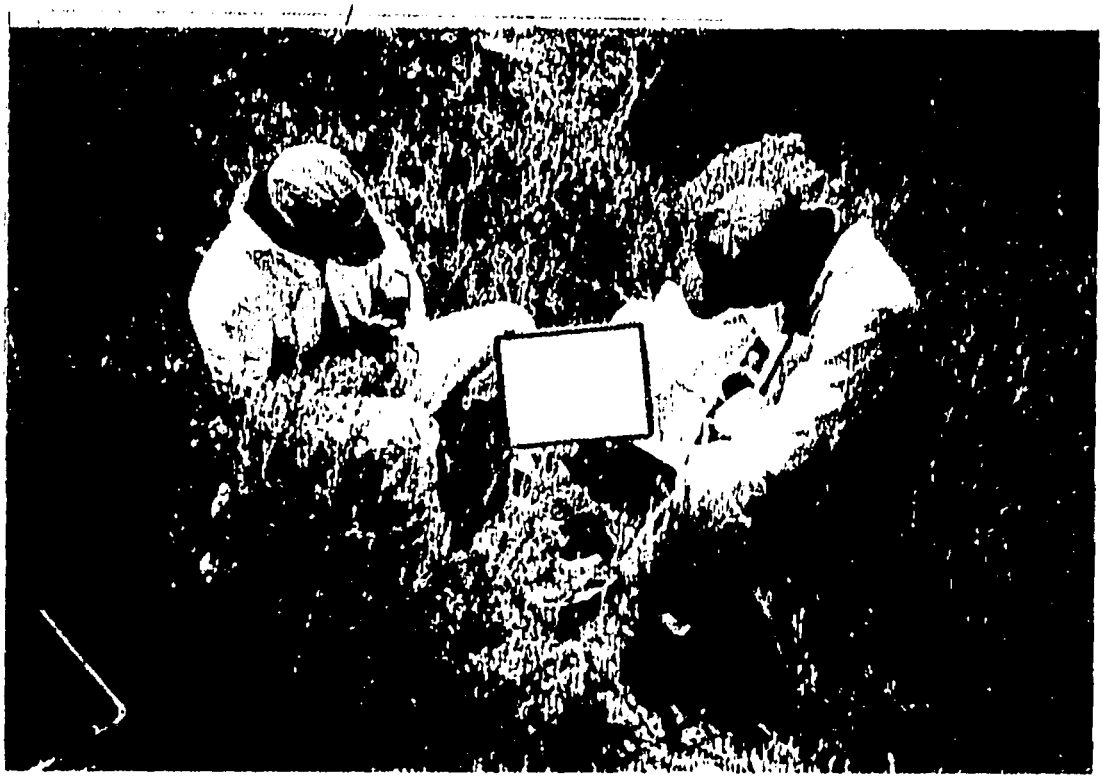


106. Photo of sample AAB1888 taken during sampling process. Photo taken facing North by Ken McFadden at 11:41 on 8/8/94.

107. Photo of sample AAB1888 taken close-up during sampling process. After necessary information was recorded and screening was performed, samplers filled bottle sets with the homogenized soil. Photo taken facing North by Ken McFadden at 11:41 on 8/8/94.

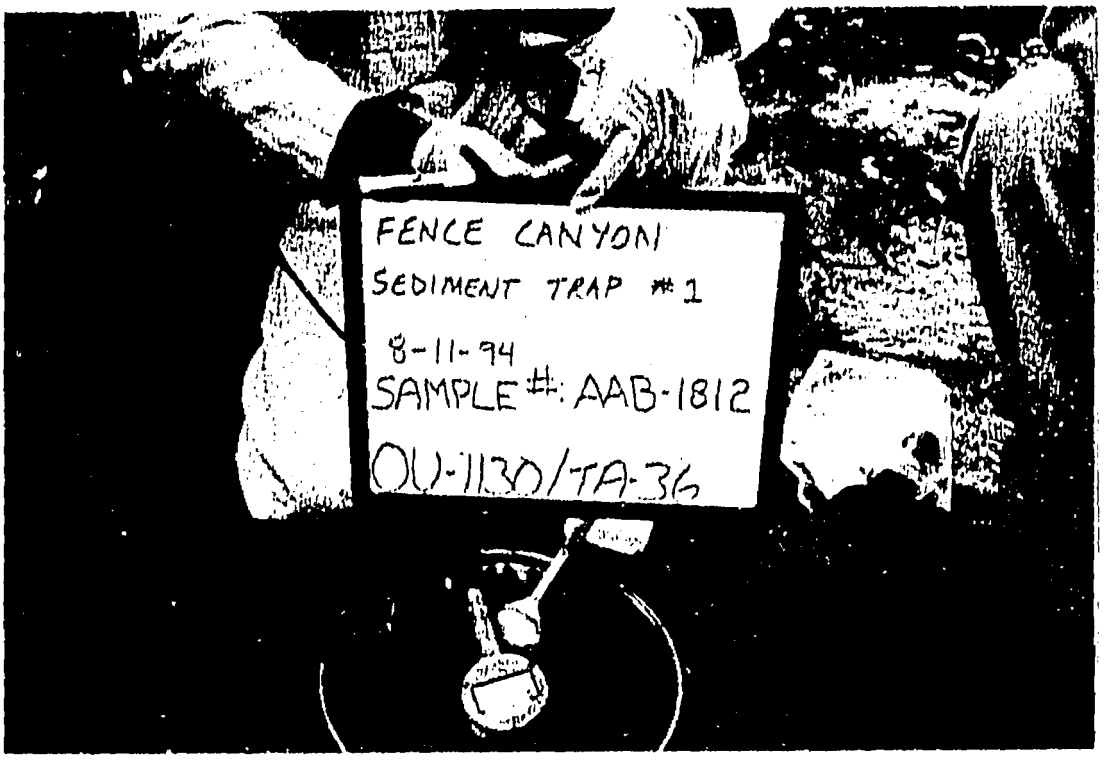
108. Photo of area surrounding sample AAB1888 taken during sampling process. Photo taken facing North by Ken McFadden at 11:41 on 8/8/94.

109. Photo of sample AAB1889 taken close-up during screening process. Photo taken facing South by Ken McFadden at 11:52 on 8/8/94.



110. Photo of sample AAB1889 taken during sampling process. At many locations thick vegetation was encountered as shown in photo. Photo taken facing South by Ken McFadden at 11:52 on 8/8/94.

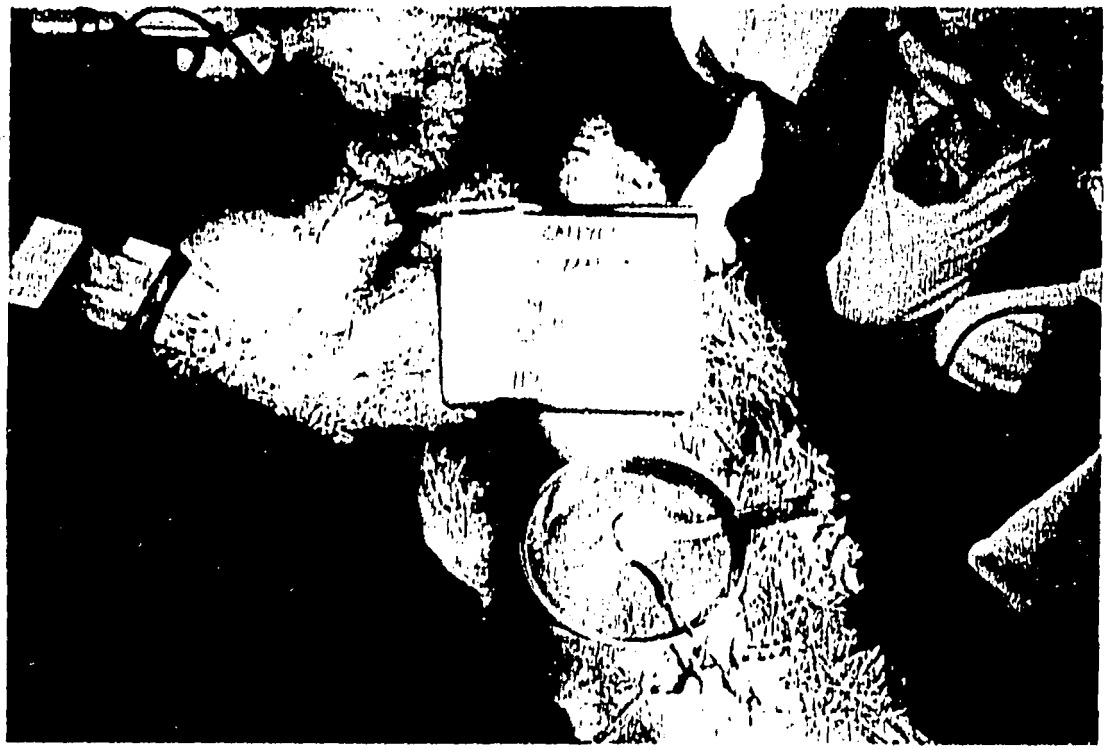
111. Photo of area surrounding sample AAB1889 taken during sampling process. All pertinent information was documented in sample collection logs and later entered to a computer in the office. Photo taken facing South by Ken McFadden at 11:52 on 8/8/94.



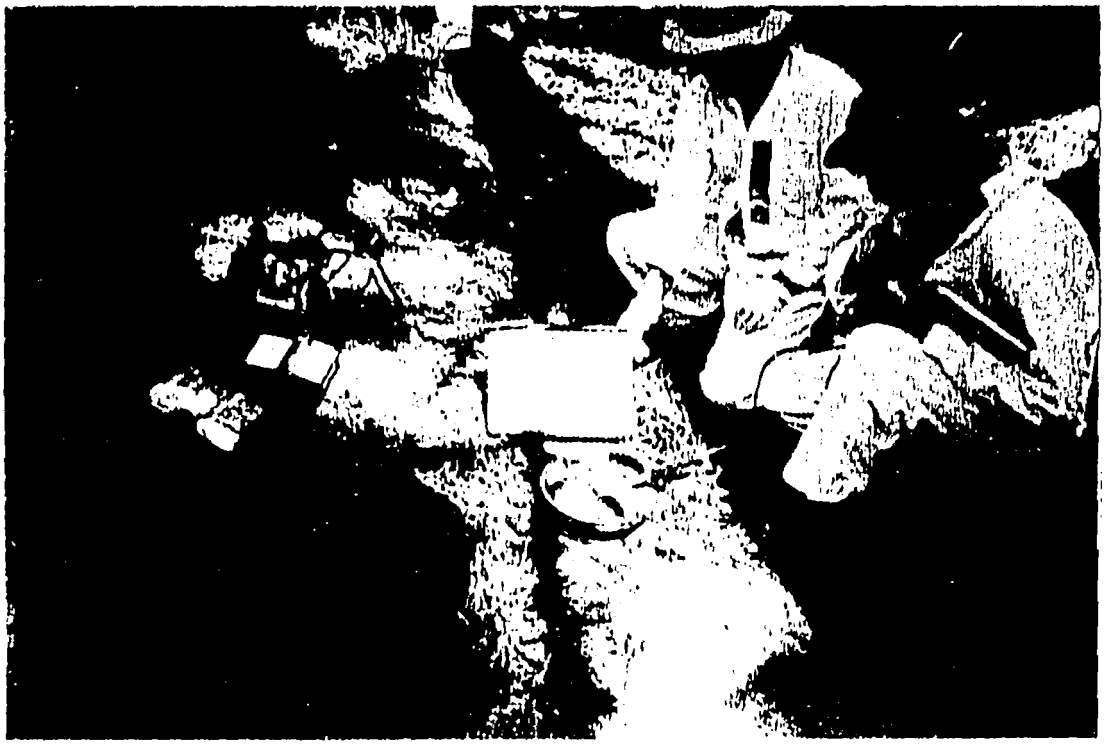
112. Photo of sample AAB1812 taken close-up during sampling process. First photo of canyon surface samples shows well sorted fine to medium sands typical of canyon drainages. Photo taken facing due East by Ken McFadden at 10:50 on 8/11/94.

113. Photo of sample AAB1812. Photo taken facing due East by Ken McFadden at 10:50 on 8/11/94.

114. Photo of area surrounding sample AAB1812 taken during sampling process. Personnel that performed canyon surface sampling consisted of the Alternate Field Team Leader, the Site Safety Officer, a Health Physics Technician, and two samplers. Photo taken facing due East by Ken McFadden at 10:50 on 8/11/94.



115. Photo of sample AAB1813 taken close-up during screening process using a GM pancake probe. Photo taken facing West by Ken McFadden at 11:04 on 8/11/94.



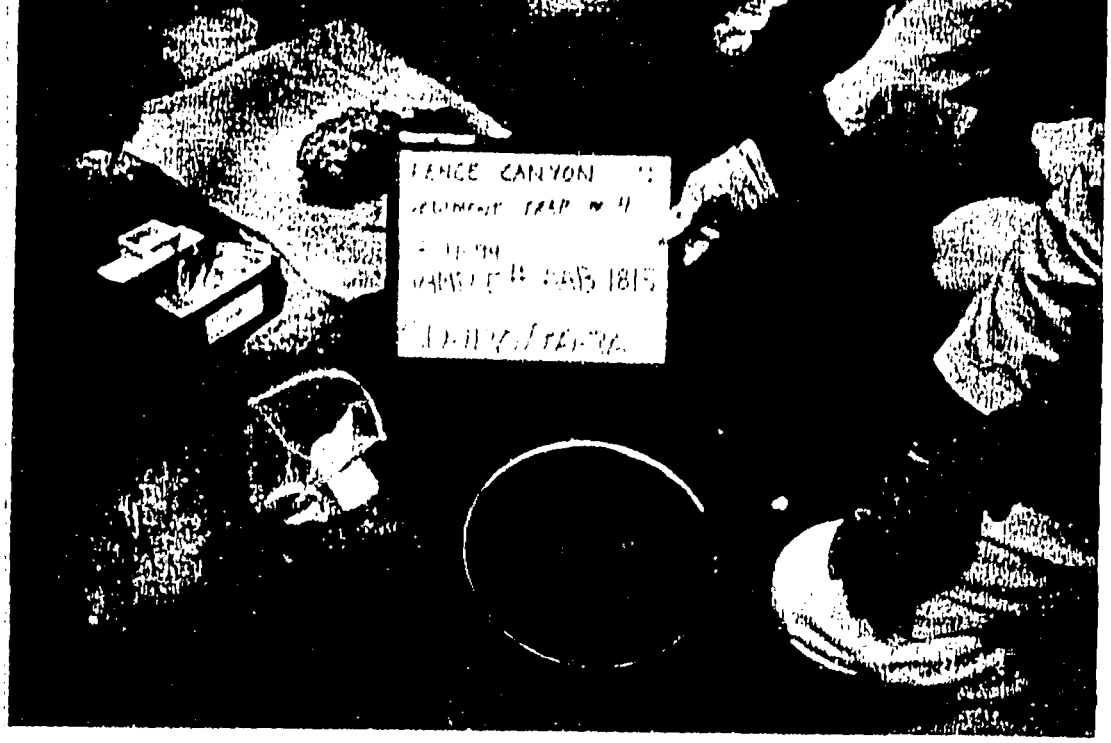
116. Photo of sample AAB1813. Photo taken facing West by Ken McFadden at 11:04 on 8/11/94.

117. Photo of area surrounding sample AAB1813 taken during sampling process. Photo shows backpacks used to transport equipment required to perform canyon surface sampling, which included the HNu meter, HE spot test kit, first aid kit, spoons, bowls, and bottle sets. Photo taken facing West by Ken McFadden at 11:04 on 8/11/94.

118. Photo of sample AAB1814 taken close-up. Photo taken facing North by Ken McFadden at 11:23 on 8/11/94.

119. Photo of sample AAB1814 taken during screening process. Photo taken facing North by Ken McFadden at 11:23 on 8/11/94.

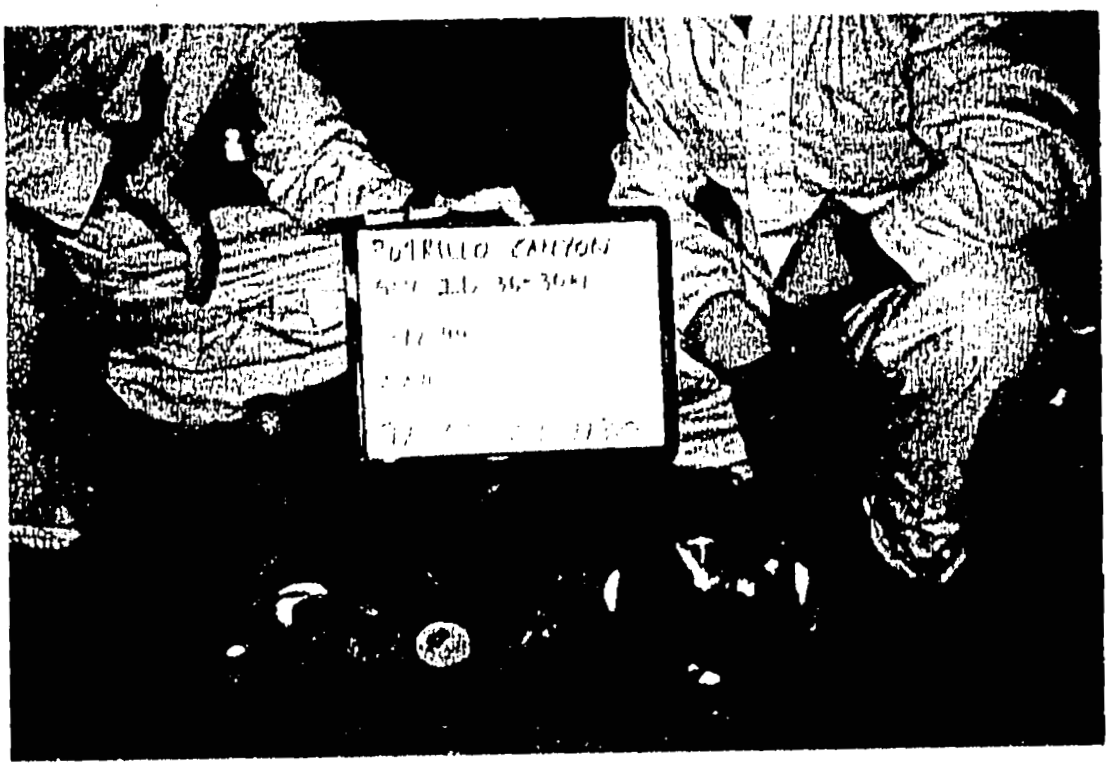
120. Photo of area surrounding sample AAB1814 taken during sampling process. Photo taken facing North by Ken McFadden at 11:23 on 8/11/94.



121. Photo of sample AAB1815 taken close-up during sample process. Photo shows high explosives visual inspection and spot test in progress Photo taken facing Northwest by Ken McFadden at 11:38 on 8/11/94.

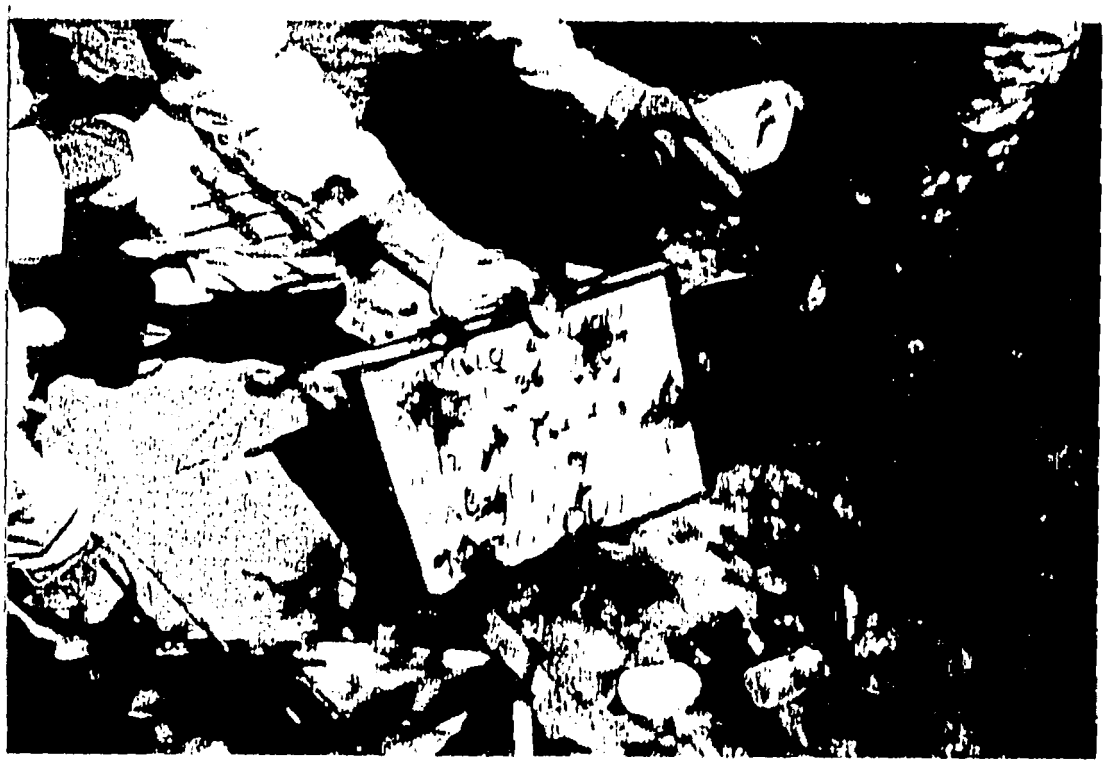
122. Photo of sample AAB1815 taken during sampling process. All canyon locations were collected outside firing site hazardous radii. Photo taken facing Northwest by Ken McFadden at 11:38 on 8/11/94.

123. Photo of area surrounding sample AAB1815 taken during sampling process. Photo taken facing Northwest by Ken McFadden at 11:38 on 8/11/94.

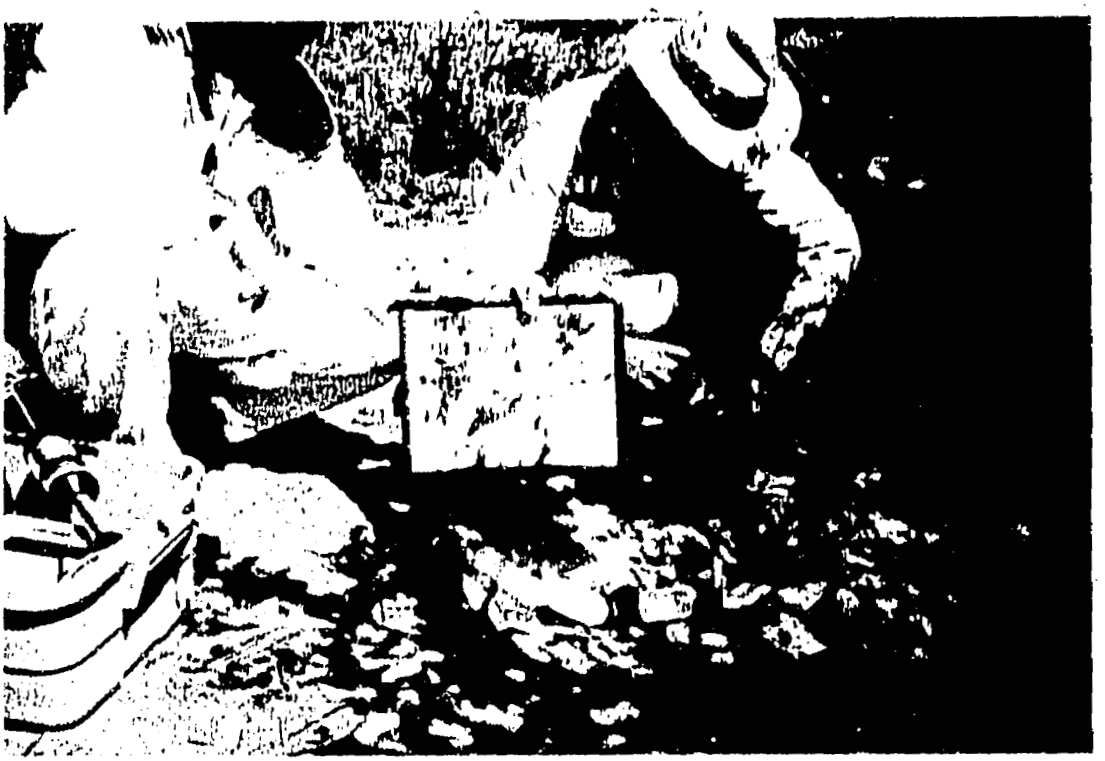


124. Photo of sample AAB1820 taken close-up during sampling process. Photo shows a complete bottle set for a canyon drainage surface sample. Photo taken facing West by Ken McFadden at 10:54 on 8/12/94.

125. Photo of sample AAB1820 taken during sampling process. Photo taken facing West by Ken McFadden at 10:54 on 8/12/94.



126. Photo of sample AAB1819 taken close-up during sampling process. Photo taken facing North by Ken McFadden at 11:08 on 8/12/94.



127. Photo of sample AAB1819 taken during sampling process. Photo taken facing North by Ken McFadden at 11:08 on 8/12/94.

128. Photo of area surrounding sample AAB1819 taken during sampling process. Photo taken facing North by Ken McFadden at 11:08 on 8/12/94.

129. Photo of sample AAB1818 taken close-up during sampling process showing GM pancake probe. Well sorted fine sands are visible in photo. Photo taken facing West by Ken McFadden at 11:21 on 8/12/94.

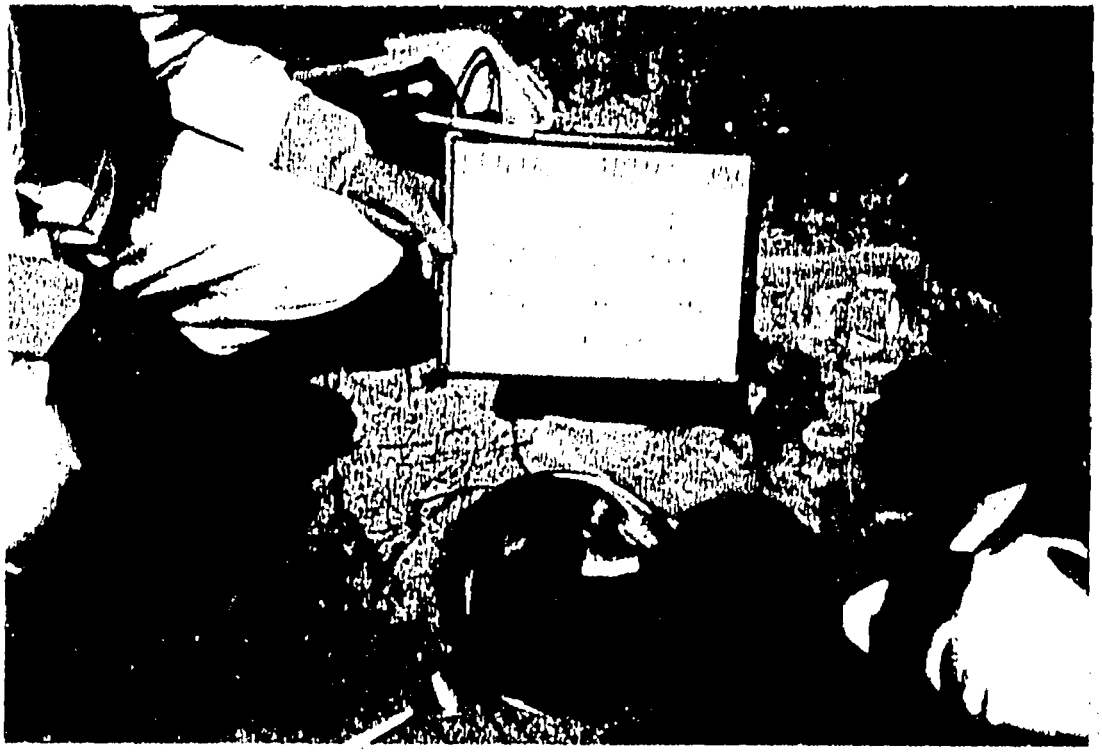
130. Photo of sample AAB1818 taken during sampling process. Photo taken facing West by Ken McFadden at 11:21 on 8/12/94.

131. Photo of area surrounding sample AAB1818 taken during sampling process. Sample locations in canyons were set in areas where sediment catchment occurred, or where contaminants would most likely exist. Photo taken facing West by Ken McFadden at 11:21 on 8/12/94.

132. Photo of samples AAB1817 & AAB1816 taken close-up during sampling process. Photo taken facing West by Ken McFadden at 11:33 on 8/12/94.

133. Photo of samples AAB1817 & AAB1816 taken during sampling process. Photo taken facing West by Ken McFadden at 11:33 on 8/12/94.

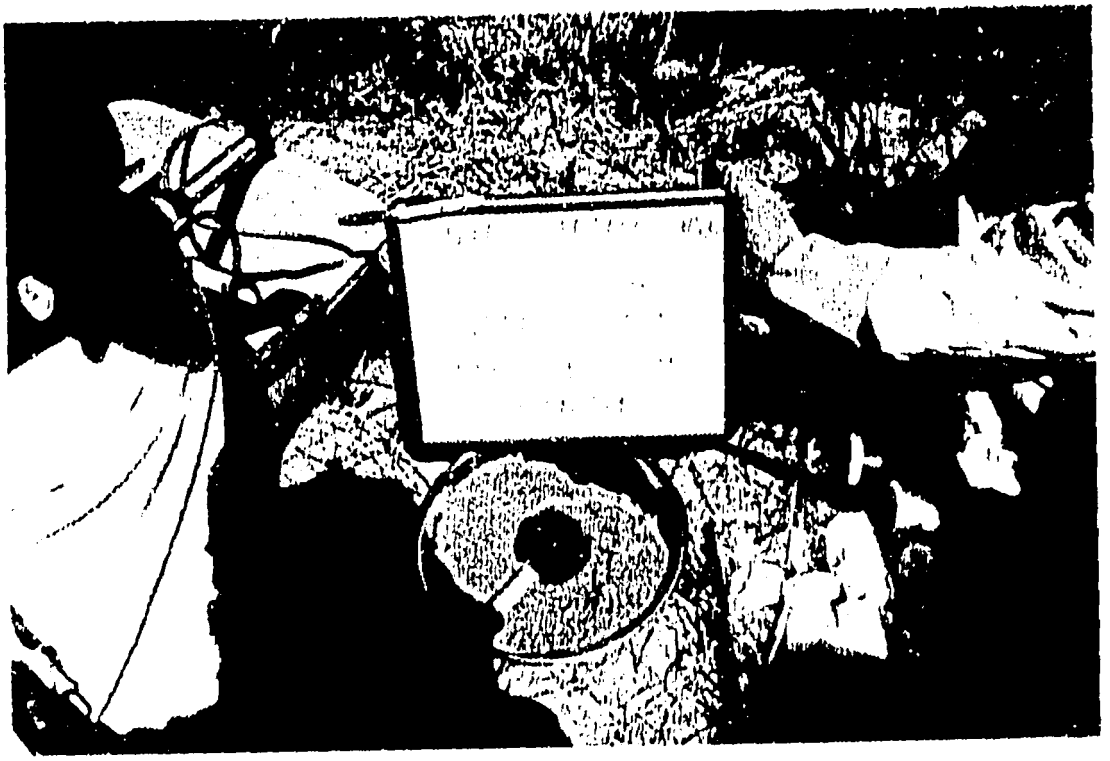
134. Photo of area surrounding samples AAB1817 & AAB1816 taken during sampling process. Photo taken facing West by Ken McFadden at 11:33 on 8/12/94.



135. Photo of sample AAB1942 taken close-up. Photo taken facing West by Ken McFadden at 10:52 on 8/16/94.

136. Photo of sample AAB1942 taken during sampling process showing GM pancake probe. Photo taken facing West by Ken McFadden at 10:52 on 8/16/94.

137. Photo of area surrounding sample AAB1942 taken during sampling process. Photo taken facing West by Ke McFadden at 10:52 on 8/16/94.



138. Photo of sample AAB1941 taken close-up during screening process. Photo taken facing West by Ken McFa at 11:12 on 8/16/94.

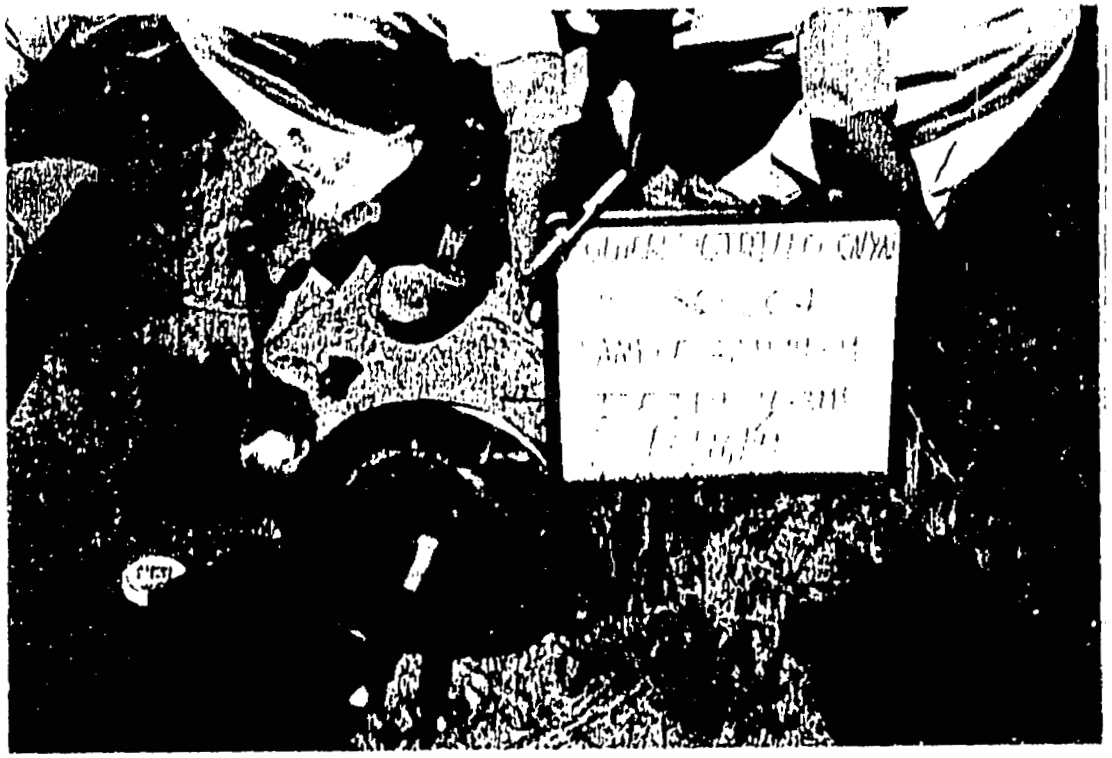
139. Photo of sample AAB1941. Photo taken facing West by Ken McFadden at 11:12 on 8/16/94.

140. Photo of area surrounding sample AAB1841 taken during sampling process. In one area of Lower Potrillo Canyon the drainage channel was difficult to locate. Samples were located where run-off would most likely occur. Photo taken facing West by Ken McFadden at 11:12 on 8/16/94.

141. Photo of sample AAB1940. After a layer of soil was used for HE visual inspection surface samples were collec up to 6in deep as shown in photo. Photo taken facing West by Ken McFaddon at 11:20 on 8/10/94.

142. Photo of sample AAB1940 taken during sampling process. Photo taken facing West by Ken McFaddon at 1:12 on 8/16/94.

143. Photo of area surrounding sample AAB1940 taken during sampling process. Photo shows area of Lower Potrillo Canyon where drainage channel was less defined. Photo taken facing West by Ken McFadden at 11:26 on 8/16/94.



144. Photo of sample AAB1939 taken close-up. Photo taken facing West (upstream) by Ken McFadden at 11:40 on 8/16/94.

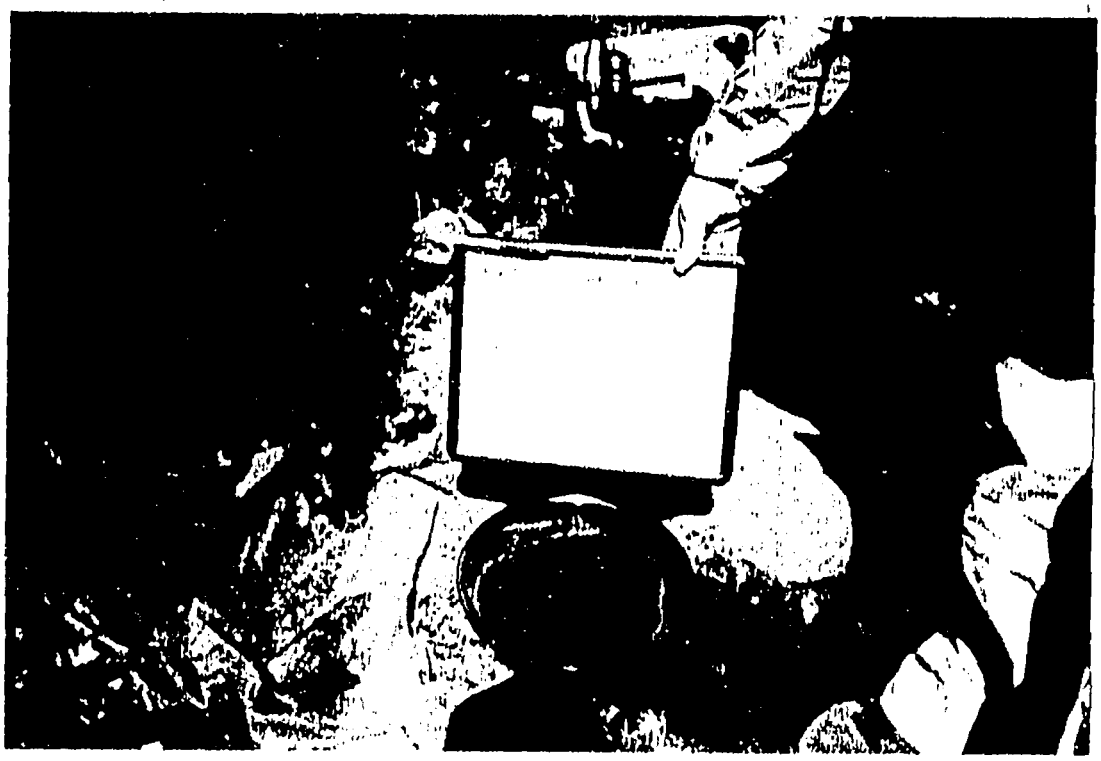
145. Photo of sample AAB1939 taken close-up during sampling process. A stake depicting the edge of Lower Slobbovia hazardous radius is visible in photo behind samplers. Photo taken facing West (upstream) by Ken McFadden at 11:40 on 8/16/94.

146. Photo of area surrounding sample AAB1939 taken during sampling process. Photo shows sampler with backpack strapped on. Photo taken facing West (upstream) by Ken McFadden at 11:40 on 8/16/94.

147. Photo of sample AAB1808 (sample number wrong in photo) taken close-up. Photo taken facing North by Ken McFadden at 11:00 on 8/16/94.

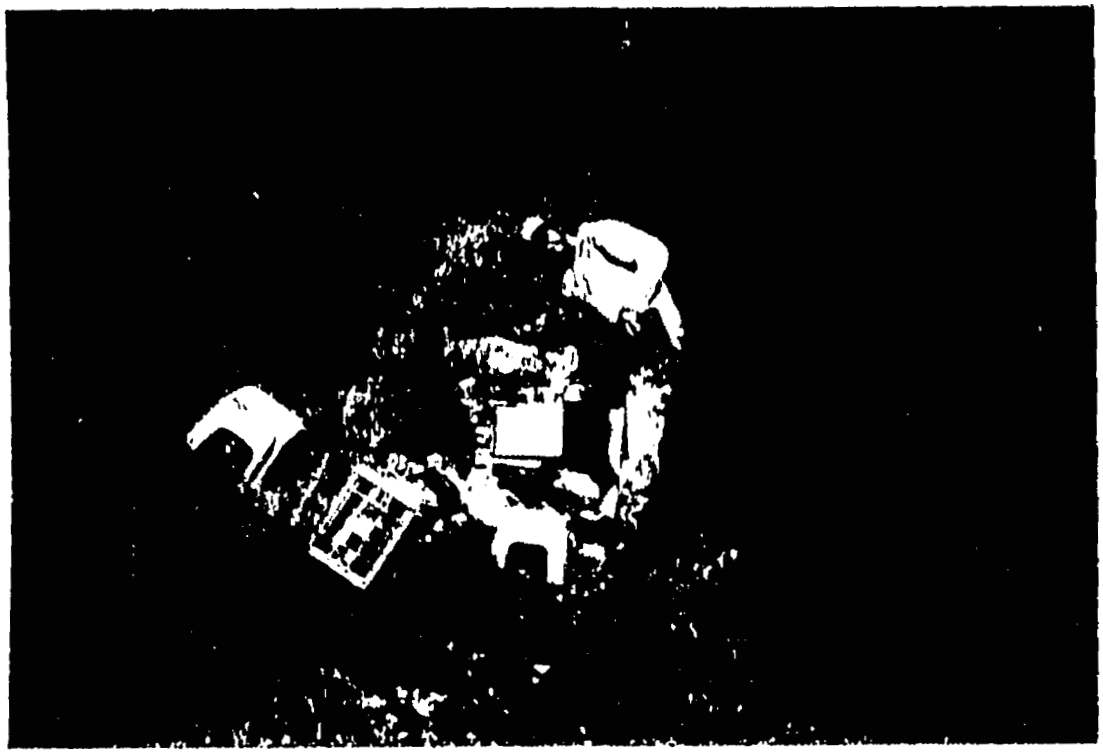
148. Photo of sample AAB1808 (sample number wrong in photo). Photo shows location of hazardous radii in Water Canyon. Samples were collected downstream (southeast) from stake. Photo taken facing North by Ken McFadden at 11:00 on 8/22/94.

149 Photo of area surrounding sample AAB1808 (sample number wrong in photo). Photo taken facing North by K McFadden at 11:00 on 8/22/94.

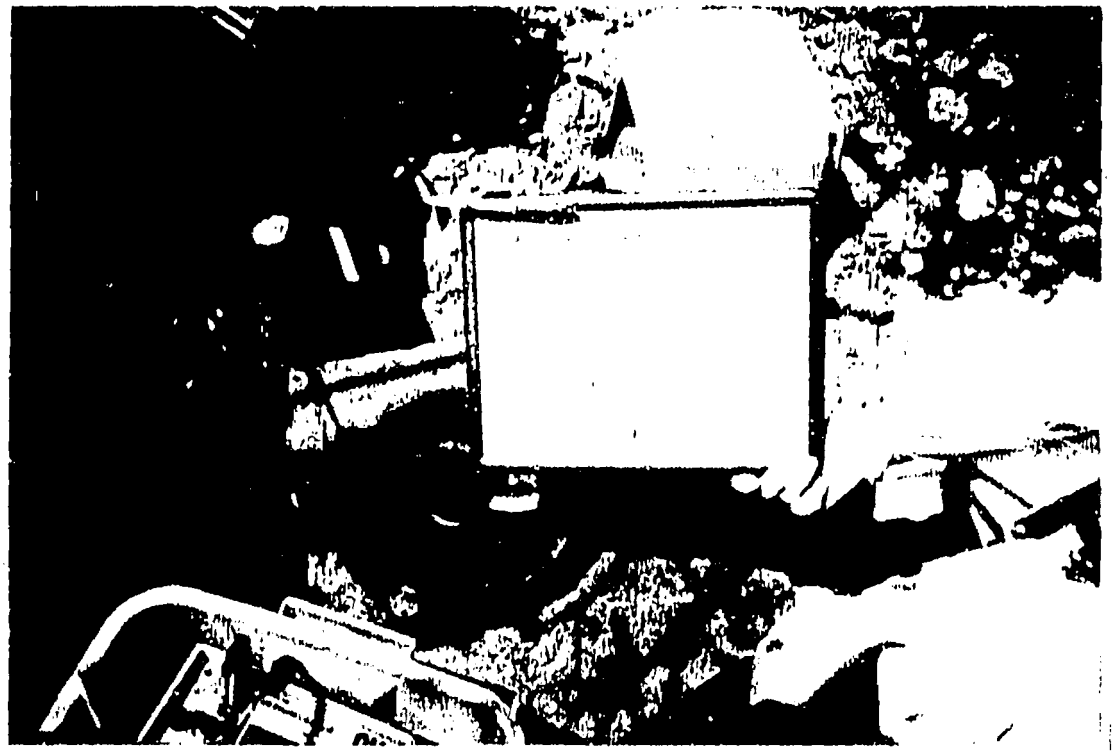


150. Photo of sample AAB1809 (sample number wrong in photo) taken close-up during sampling process. Photo identifies well sorted coarse sands encountered at Water Canyon. Photo taken facing West by Ken McFadde 11:18 on 8/22/94.

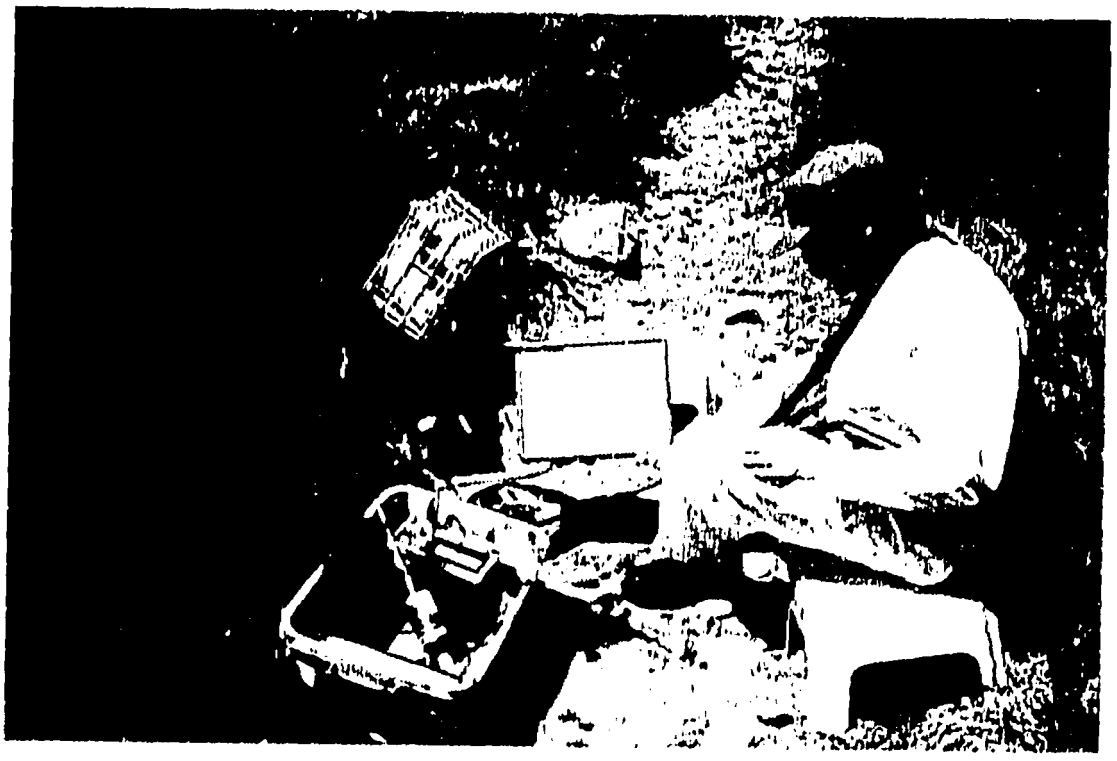
151. Photo of sample AAB1809 (sample number wrong in photo) demonstrates the requirement of collecting VOC samples first. Photo taken facing West by Ken McFadden at 11:18 on 8/22/94.



152. Photo of area surrounding sample AAB1809 (sample number wrong in photo). Photo taken facing West by Ken McFadden at 11:18 on 8/22/94.



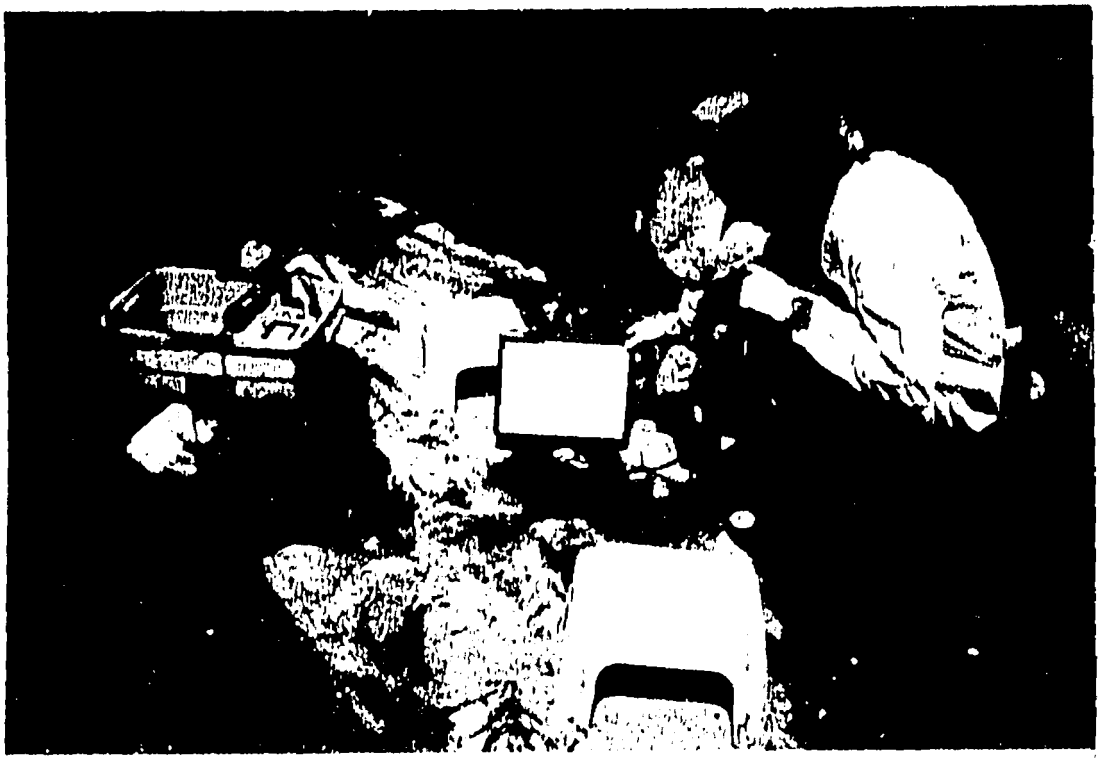
153. Photo of sample AAB1810 (sample number wrong in photo) taken close-up during bowl screening process. Photo taken facing Southwest by Ken McFadden at 11:41 on 8/22/94.



154. Photo of sample AAB1810 (sample number wrong in photo). Photo taken facing Southwest by Ken McFadde 11:41 on 8/22/94.

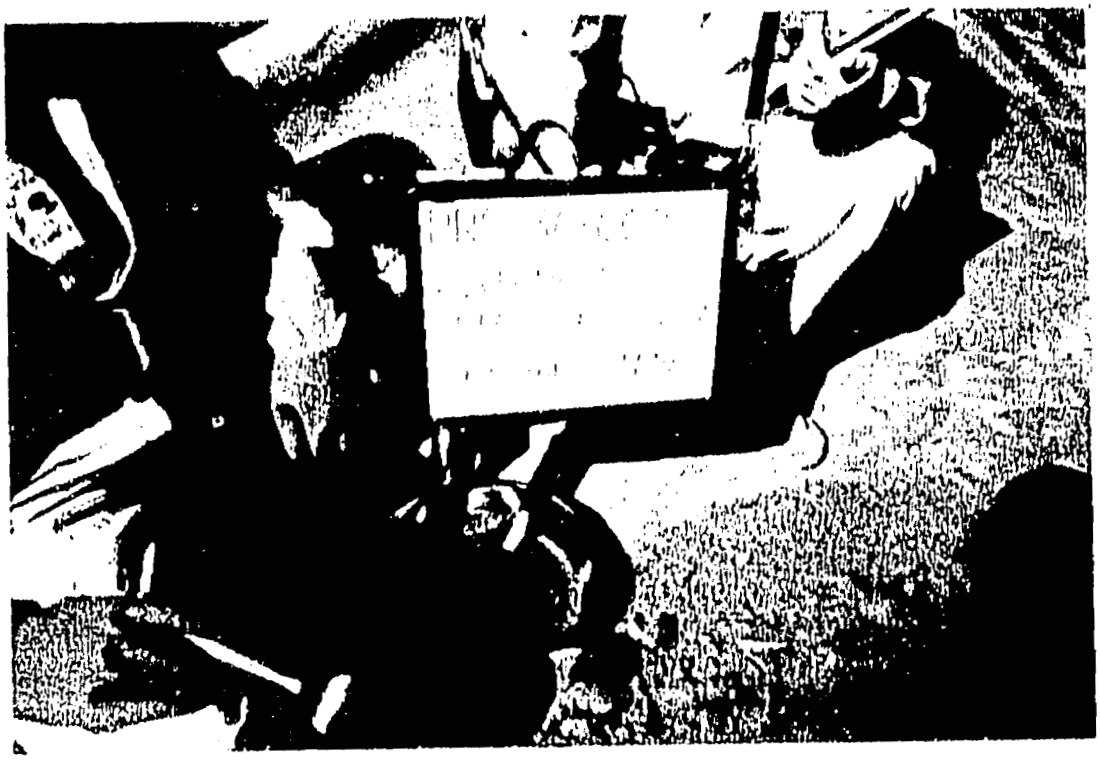
155. Photo of area surrounding sample AAB1810 (sample number wrong in photo), including a rocky section of the Water Canyon drainage channel. Photo taken facing Southwest by Ken McFadden at 11:41 on 8/22/94.

156. Photo of sample AAB1811 (sample number wrong in photo) taken close-up. Photo taken facing West by Ken McFadden at 11:00 on 8/22/94.



157. Photo of sample AAB1811 (sample number wrong in photo) taken during sampling process. Soil on the plast sheet in photo was visually inspected for high explosives. Photo taken facing West by Ken McFadden at 12: 8/22/94.

158 Photo of area surrounding sample AAB1811 (sample number wrong in photo). Sediment build up is evident i photo. Photo taken facing West by Ken McFadden at 12:00 on 8/22/94.



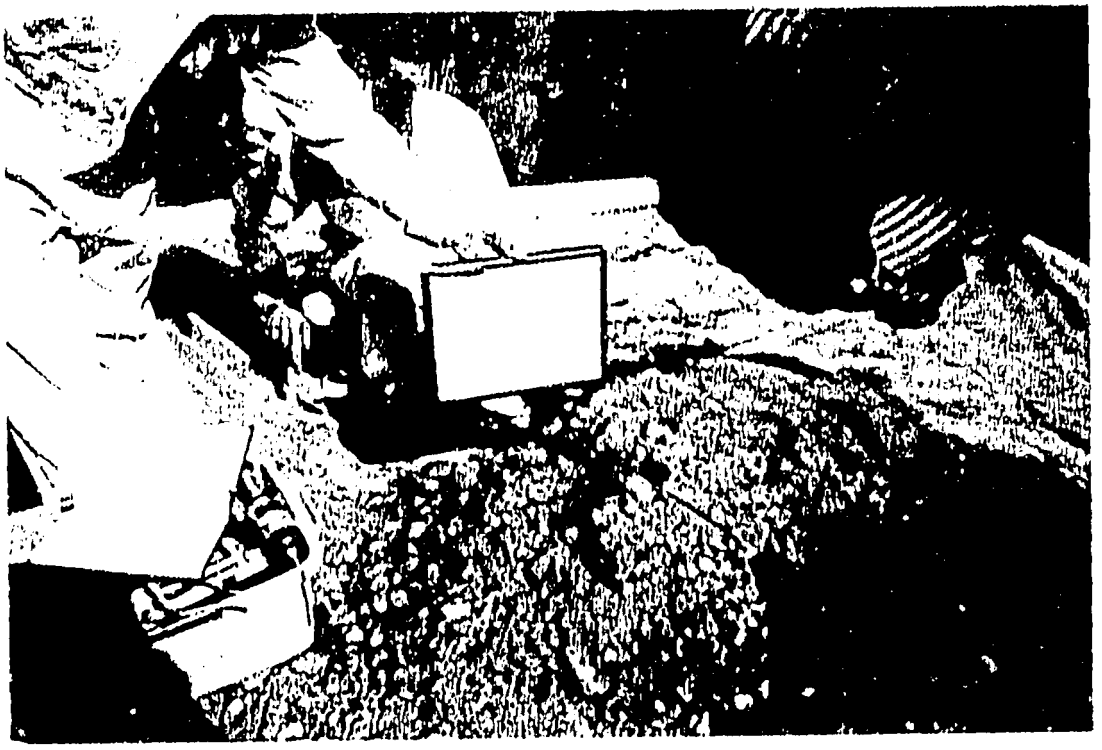
159. Photo of sample AAB1801 with in curbed area. Photo taken facing West by Ken McFadden at 14:19 on 9/13/94.

160. Photo of sample AAB1801 shows material taken from sump excavation with in curbed area. Photo taken facing West by Ken McFadden at 14:19 on 9/13/94.

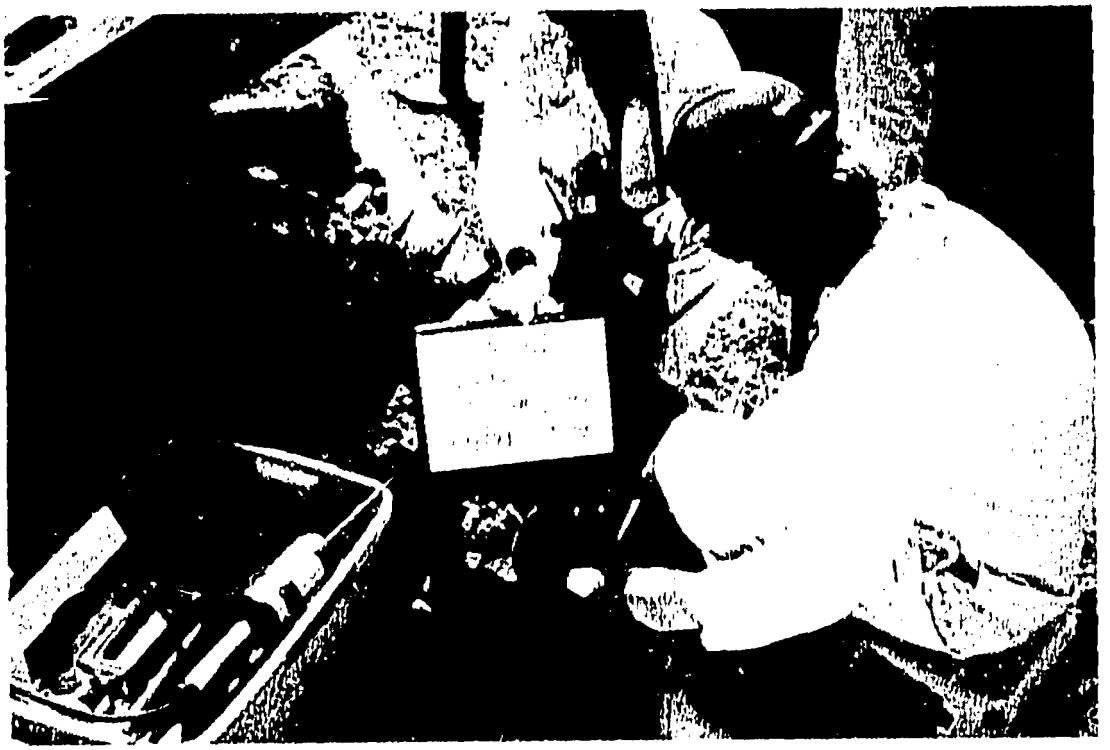
161. Photo of sump excavation (PRS 36-002). Not shown is a blast shield attached to the back hoe, which was constructed from a sheet of 1/2 in thick Lexan plastic. Photo taken facing Southeast by Ken McFadden at 14 on 9/13/94.

162. Photo of sump excavation (PRS 36-002). A visual inspection for high explosives was conducted throughout excavation activities. Photo taken facing Southeast by Ken McFadden at 14:20 on 9/13/94.

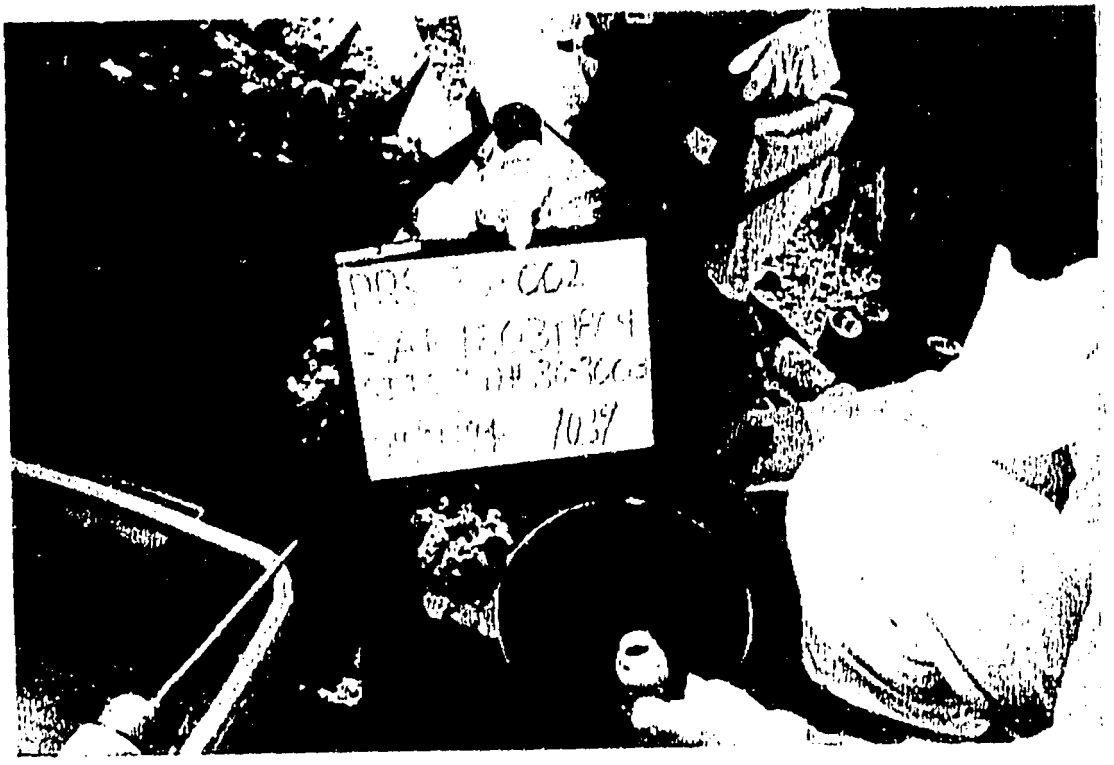
163. Photo of sample AAB1802 as sampler prepared to seal plastic bag used for rad van aliquot. Photo taken facing North to Northwest by Ken McFadden at 10:19 on 9/14/94.



164. Photo of sample AAB1802. Photo shows corrugated pipe removed from sump during excavation. Photo taken facing North to Northwest by Ken McFadden at 10:19 on 9/14/94.

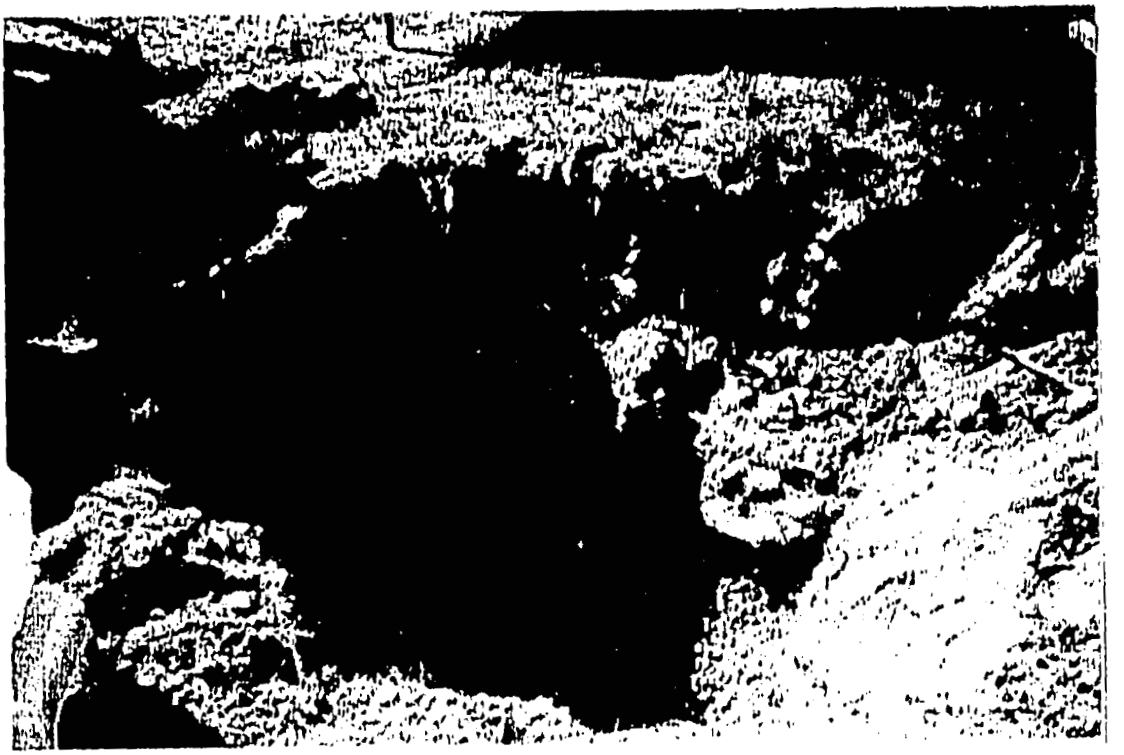


165. Photo of samples AAB1803 & AAB1804 taken during sampling process. Ear protection was required, while machinery was running, during excavation activities. Photo taken facing East by Ken McFadden at 10:39 on 9/14/94.

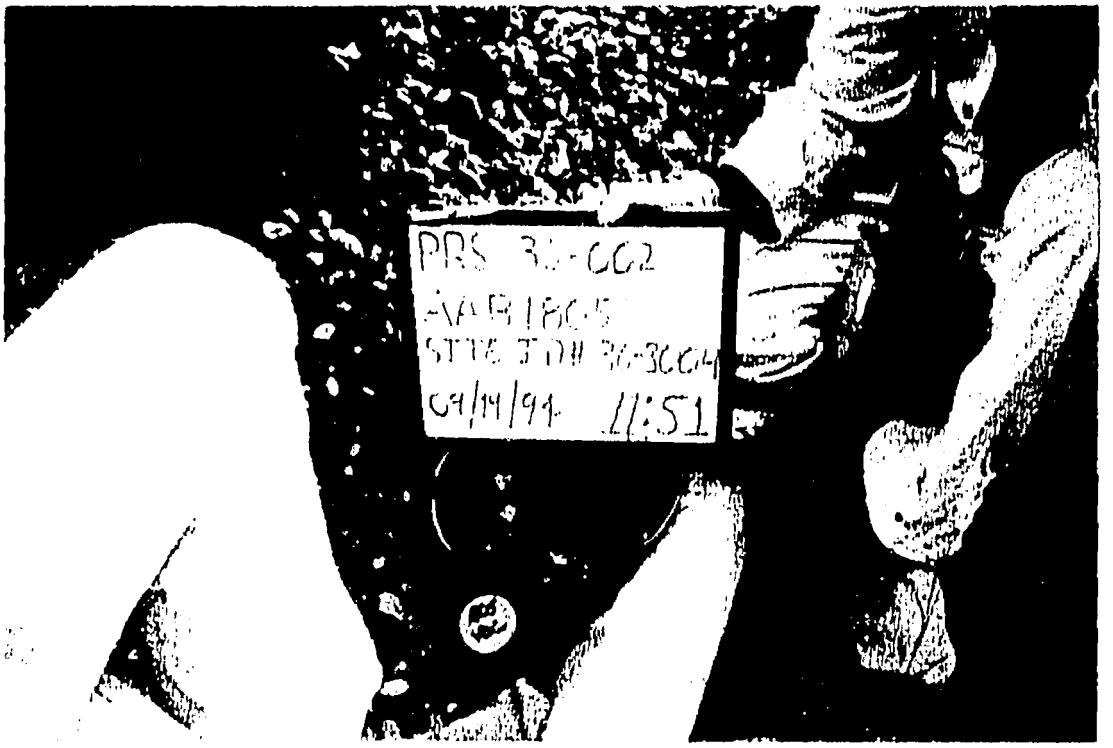


166. Photo of samples AAB1803 & AAB1804 taken close-up during sampling process. In this photo material had collected directly from bucket. Photo taken facing East by Ken McFadden at 10:39 on 9/14/94.

167. Photo of sump excavation (PRS 36-002) at approximate 3ft depth. Photo taken facing South by Ken McFadden at 10:50 on 9/14/94.



168. Photo of sump excavation (PRS 36-002). Photo taken facing South by Ken McFadden at 10:50 on 9/14/94.



169. Photo of sample AAB1805 taken close-up during sampling process. Collected VOC aliquot is visible in phot
Photo taken facing East by Ken McFadden at 11:51 on 9/14/94.

170. Photo of sample AAB1805 indicates heavy equipment activities were shut down while samples were collecte
Photo taken facing East by Ken McFadden at 11:51 on 9/14/94.

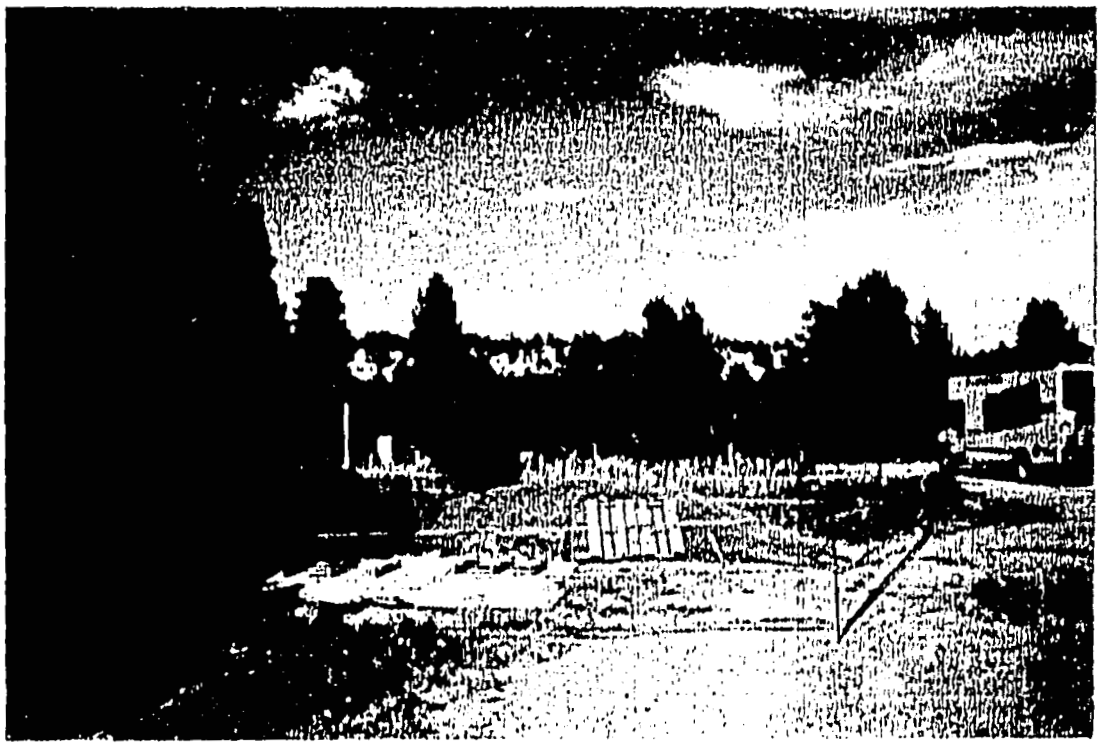
171. Photo of sample AAB1806 with in curbed area. Larger gravel encountered during excavation is visible in photo. Photo taken facing South by Ken McFadden at 12:10 on 9/14/94.

172. Photo of sample AAB1806 on berm area taken close-up during sampling process. Photo taken facing South by Ken McFadden at 12:10 on 9/14/94.

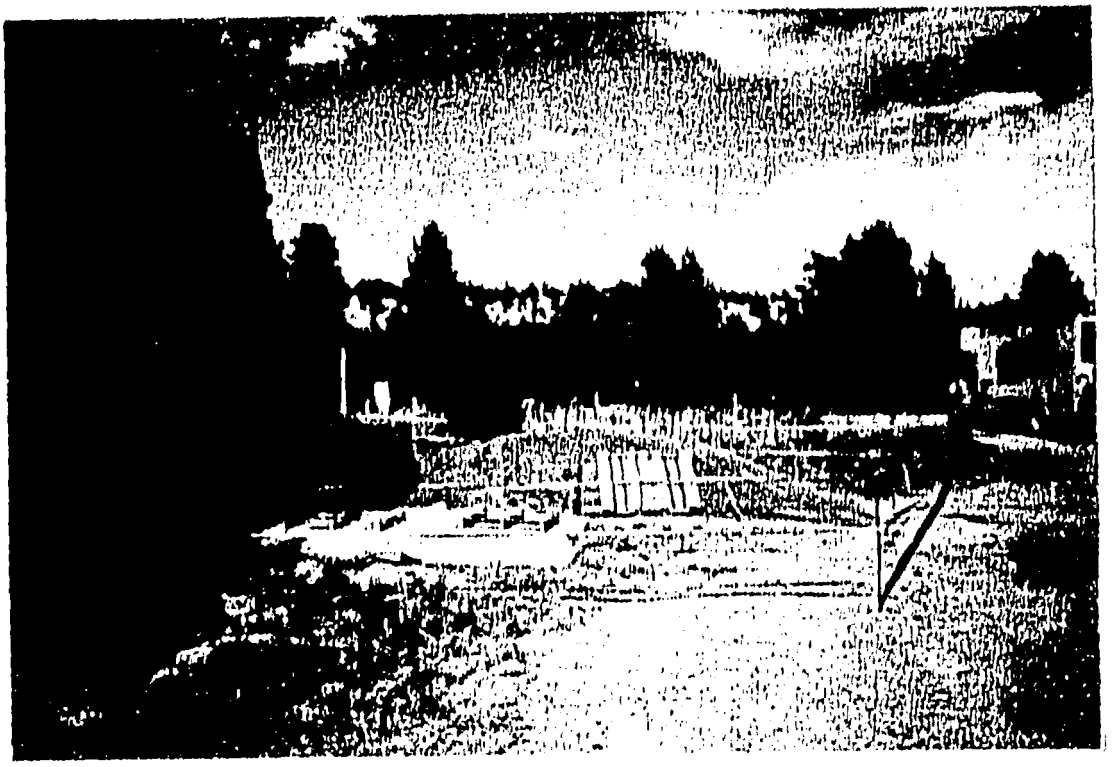
173. Photo of sump excavation (PRS 36-002) at approximate 5ft depth. Photo taken facing Northwest by Ken McFadden at 14:00 on 9/14/94.

174. Photo of sump excavation (PRS 36-002) approaching estimated soil/tuff interface. Photo taken facing North by Ken McFadden at 14:00 on 9/14/94.

175. Photo of sump area (PRS 36-002). An aluminum grate was placed over sump excavation to prevent an accidental fall in. Excavated material was covered to prevent moisture from getting in. Photo taken facing West by Ken McFadden at 14:00 on 9/14/94.

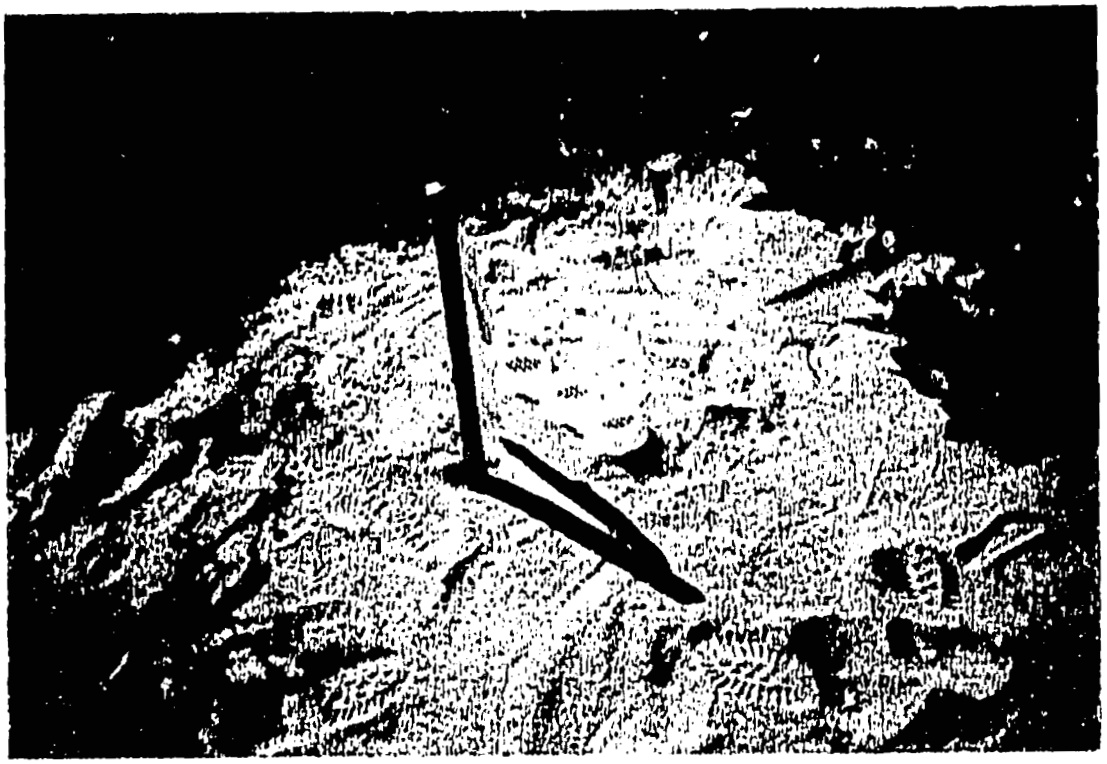


176. Photo of sump area (PRS 36-002). Access to the excavated area was restricted by setting up barrier tape as shown in photo. Photo taken facing North by Ken McFadden at 14:00 on 9/14/94.

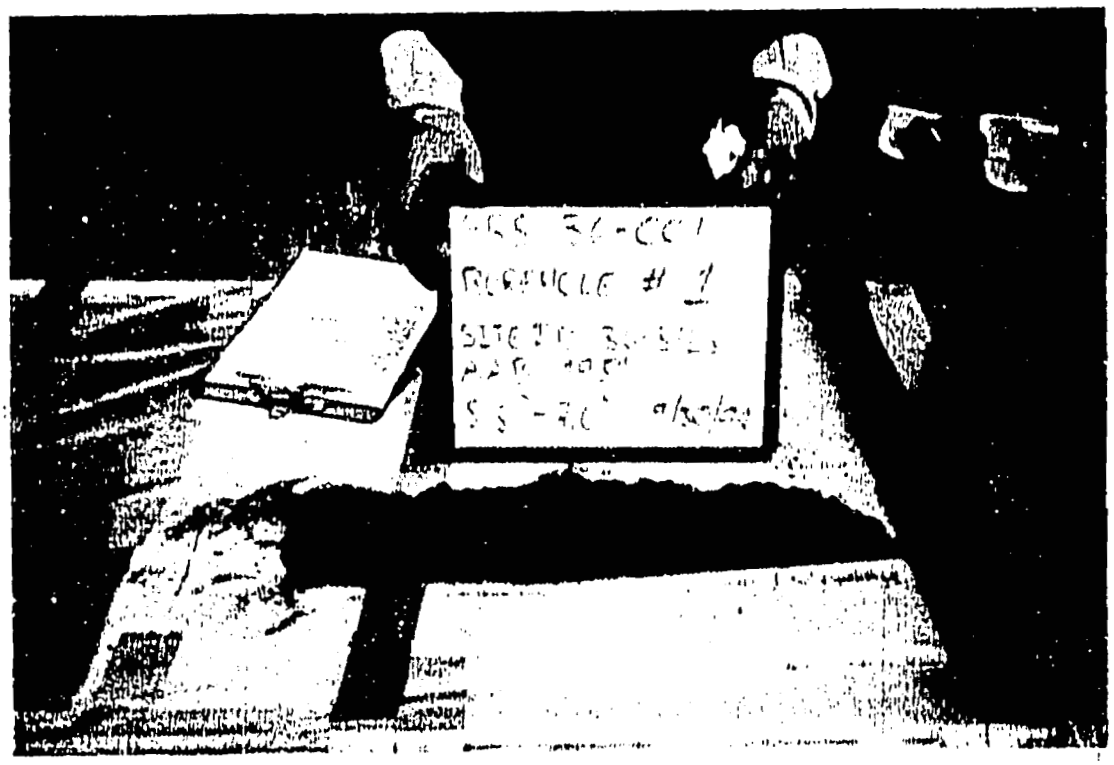


177. Photo of sampling area (PRS 36-002) taken after sampling showing covered sump area and covered curbed
Photo taken facing North by Ken McFadden at 14:00 on 9/14/94.

178. Photo of HE visual inspection and HE spot test before installation of water station (PRS 36-004) in stream be
Photo taken facing Northeast by Ken McFadden on 9/20/94.

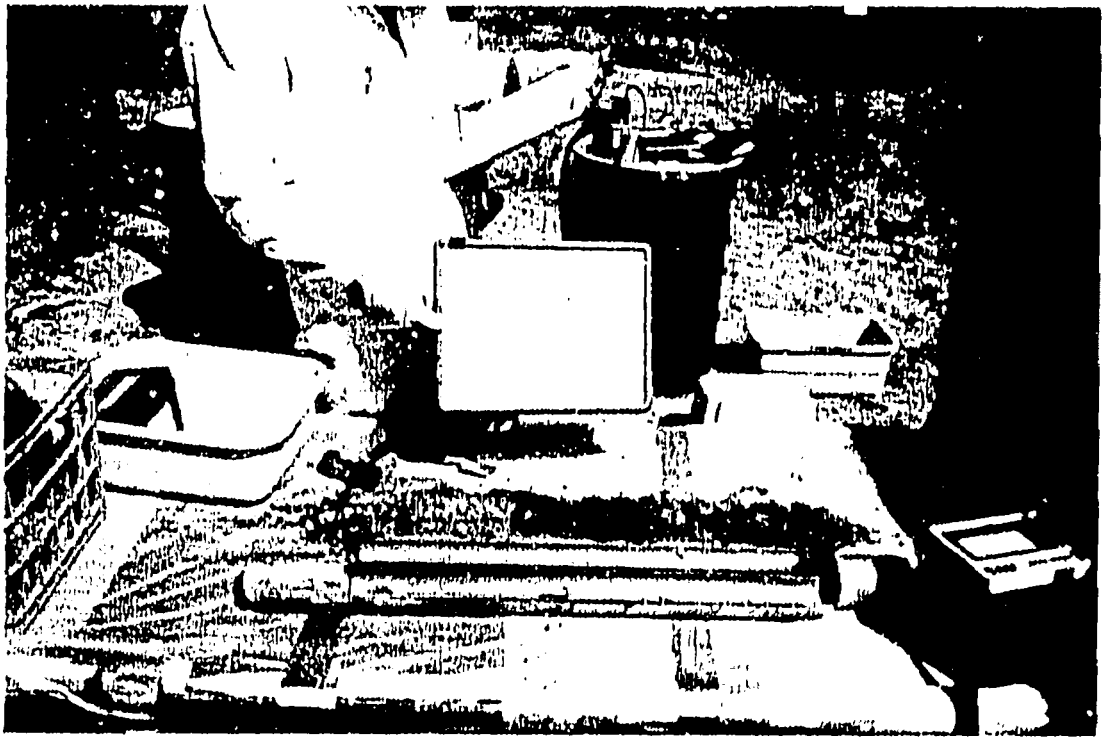


179. Photo of sampling area [PRS 36-004] taken after installation of water station in stream bed. Sampling stations consisted of three 2L polyethylene bottles covered with 1/4 in screen to prevent rodents and debris from falling inside. Photo taken facing Southwest by Ken McFadden on 9/20/94.



180. Photo of sample AAB1952 (wrong sample number in photo) at PRS 36-001 MDA-AA Trenches. Sample was collected at depths depicted in photo. Photo taken facing Northeast by Ken McFadden at 11:11 on 9/20/94.

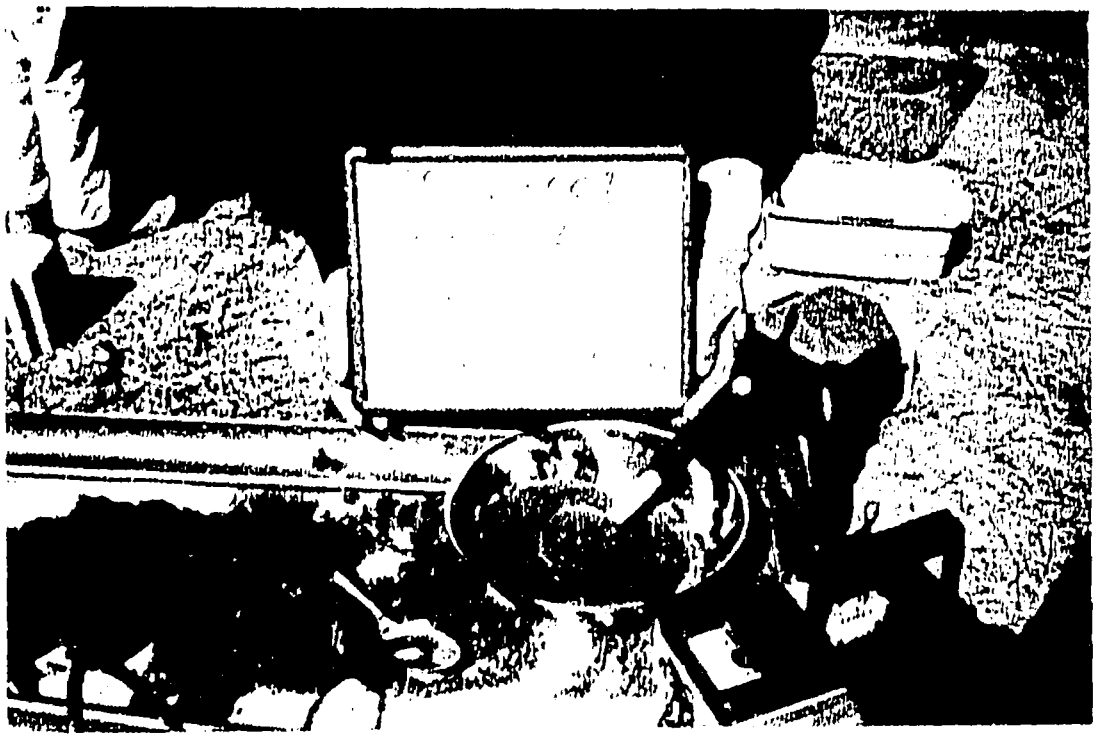
181. Photo of sample AAB1953 taken close-up. Sample shows core profile from depths of 8ft to 10ft as shown in photo. Photo taken facing East by Ken McFadden at 11:36 on 10/3/94.



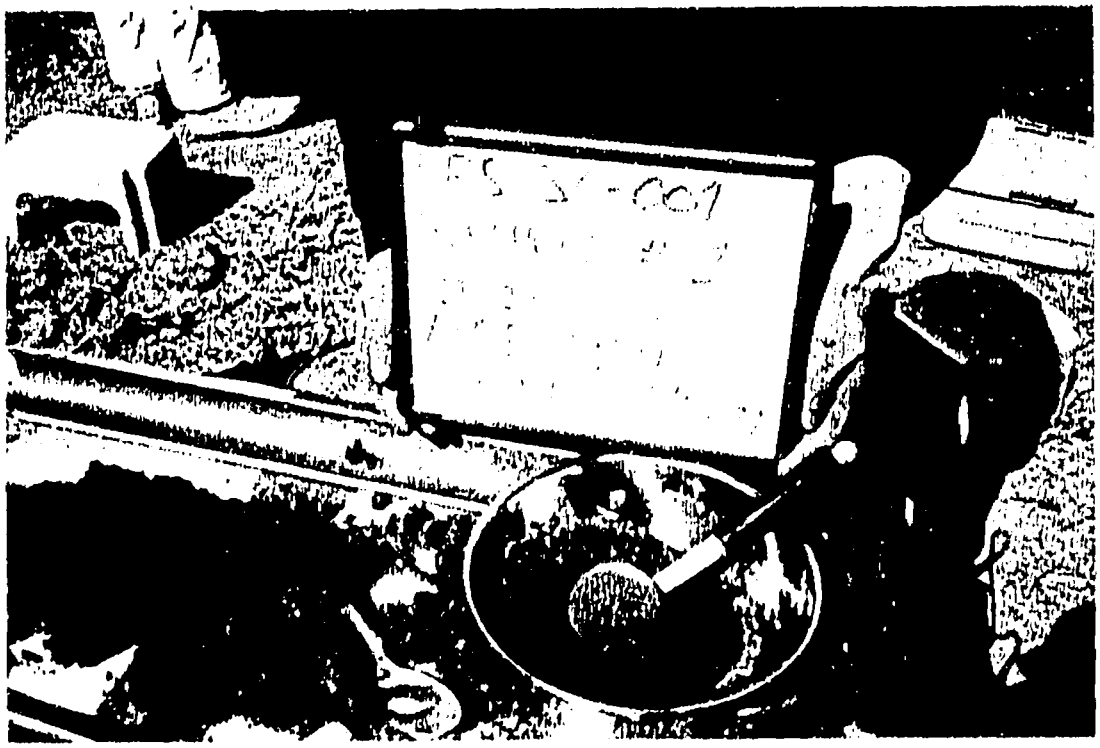
182. Photo of sample AAB1953 taken close-up. A High Explosives visual inspection and spot test was conducted before sample was homogenized and bottled. HE spot test kit , bowls, spoons, and bottles are visible in phot Photo taken facing East by Ken McFadden at 11:36 on 10/3/94.

183. Photo of core profile for sample AAB1954 taken close-up. Sample was collected in same borehole as previous photo, but from different depths as stated in photo. Photo taken facing North by Ken McFadden at 14:07 on 10/3/94.

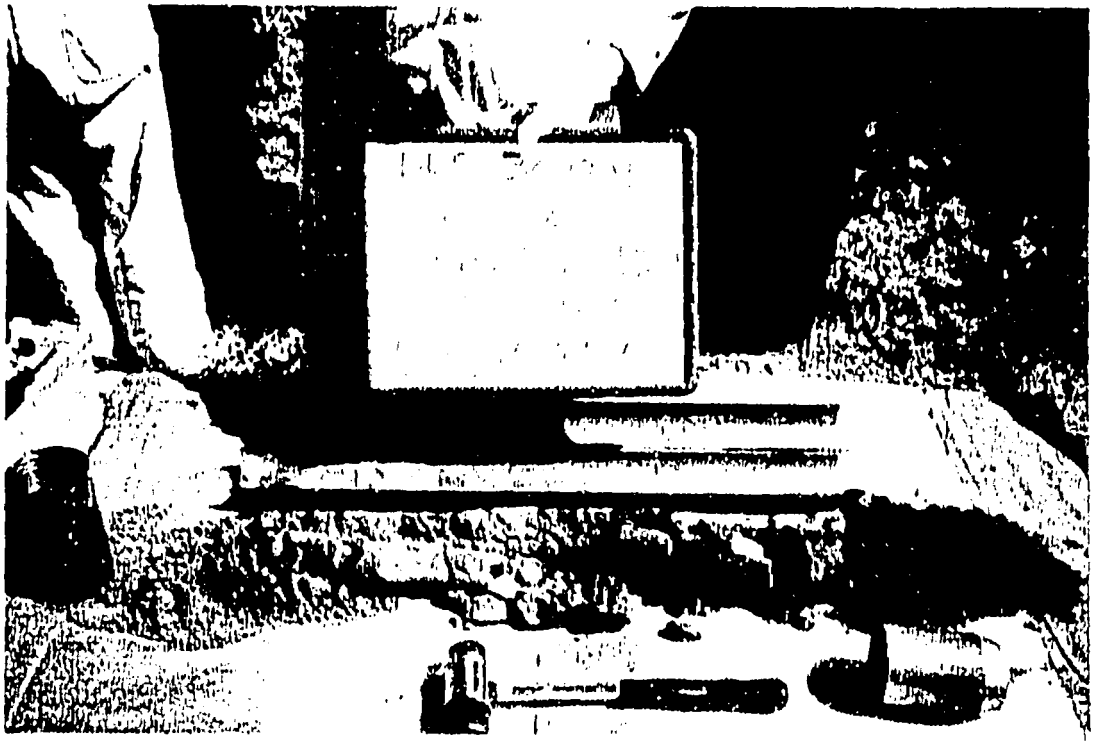
184. Photo of core profile for sample AAB1954. 55-gallon drums, used for mounting blast shields, are visible in photo Personnel stood behind drums and blast shields for protection from possible accidental high explosive detonation. Photo taken facing North by Ken McFadden at 14:07 on 10/3/94.



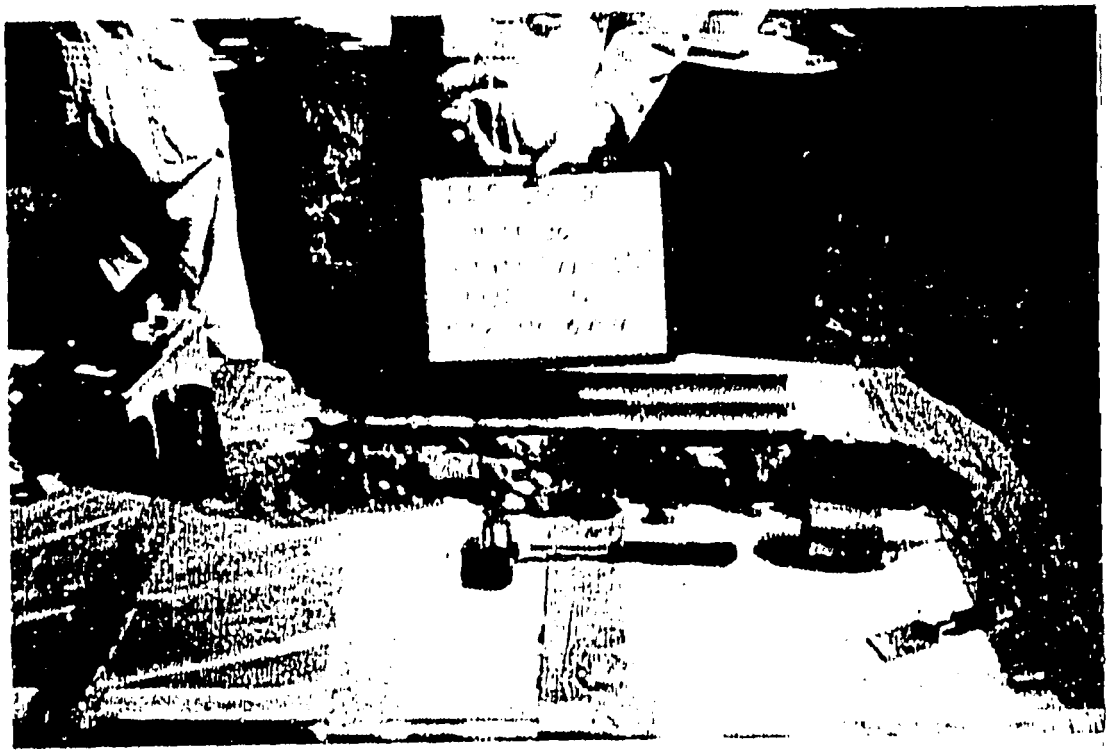
185. Photo of sample AAB1954 taken close-up during sampling process showing GM pancake probe. Photo show rubber booties worn by personnel with in the exclusion zone, as required by the health and safety plan. Photo taken facing North by Ken McFadden at 14:07 on 10/3/94.



186. Photo of sample AAB1954 taken close-up. Photo taken facing Northwest by Ken McFadden at 14:07 on 10/3/94.



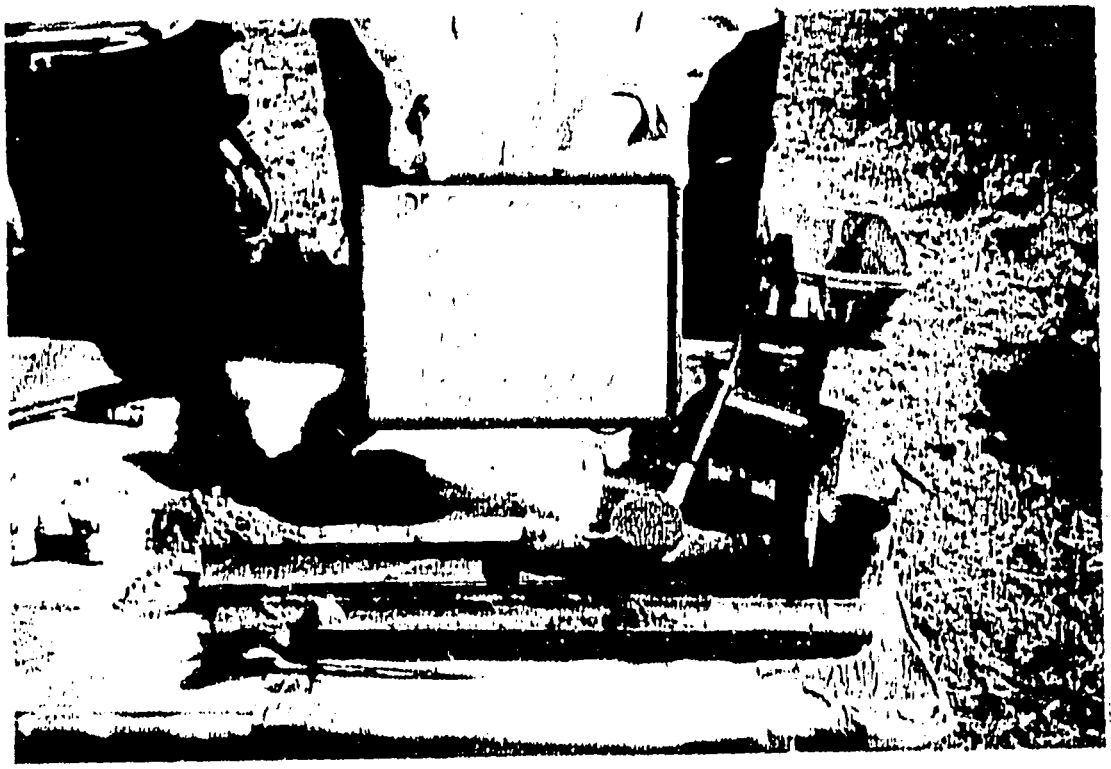
187. Photo of material for samples AAB1950 & AAB1951 taken close-up. The assembly used to collect sub-surface samples using vibratory drilling techniques is visible in photo and consisted of adaptor, steel shoe used as the tip and the spoons themselves. Photo taken facing Northeast by Ken McFadden at 12:15 on 10/6/94.



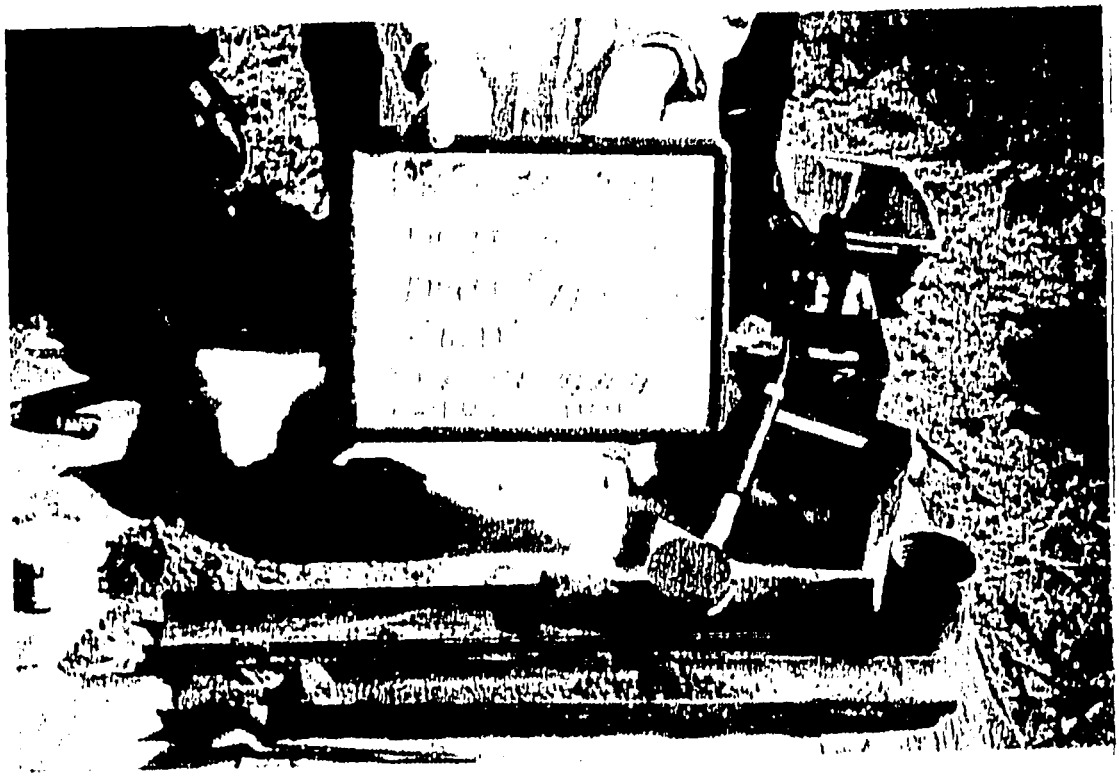
188. Photo of core profile used for samples AAB1950 & AAB1951 taken close-up. Sample was collected from 2ft to 4ft below surface as stated in sample collection logs. Photo taken facing Northeast by Ken McFadden at 12:15 on 10/6/94.

189. Photo of core profile used for sample AAB1955 taken close-up. Sample was collected from 6ft to 8ft below surface. Visible ash was retrieved indicating penetration into a trench at this location. Photo taken facing Northeast by Ken McFadden at 14:33 on 10/6/94.

190. Photo of same material in previous shot. Ash also indicated that top of trenches was found at that depth. Photo taken facing Northeast by Ken McFadden at 14:33 on 10/6/94.



191. Photo of core material used for sample AAB1956 taken close-up. Additional debris including nails and pieces of wood was retrieved at this location. Photo taken facing East by Ken McFadden at 11:04 on 10/11/94.

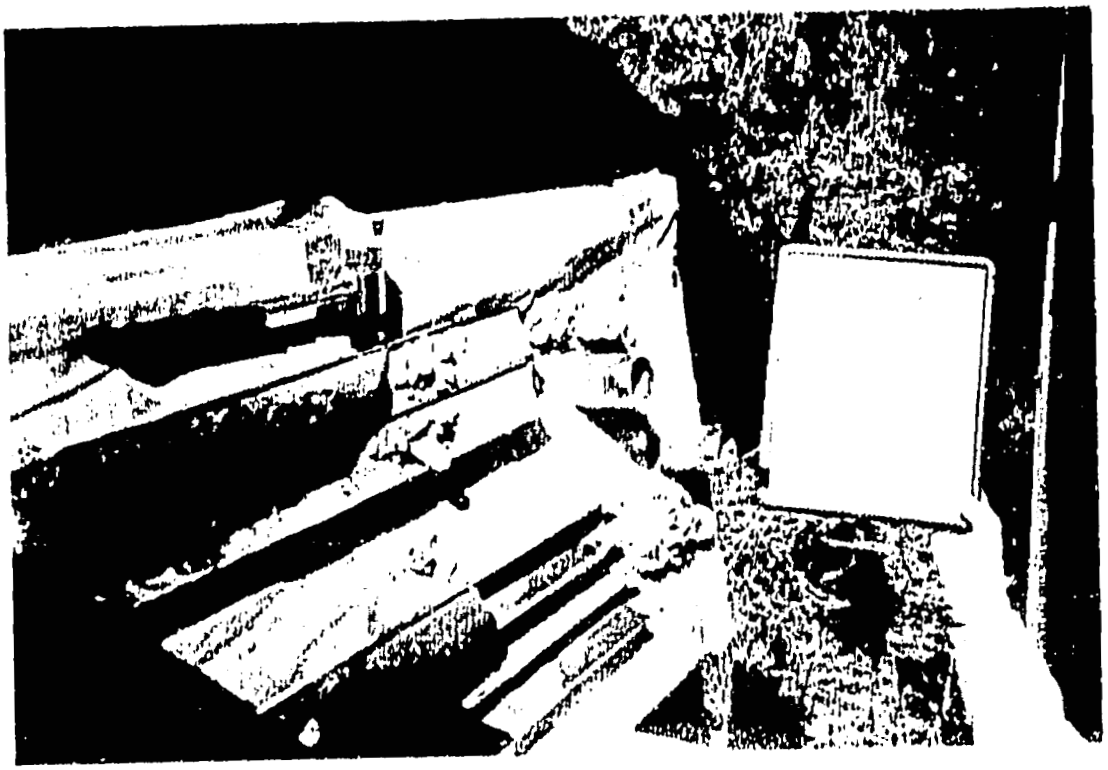


192. Photo of sample AAB1956. Evidence indicates core profile was collected from within a trench at depths depicted in photo. Photo taken facing East by Ken McFadden at 11:04 on 10/11/94.

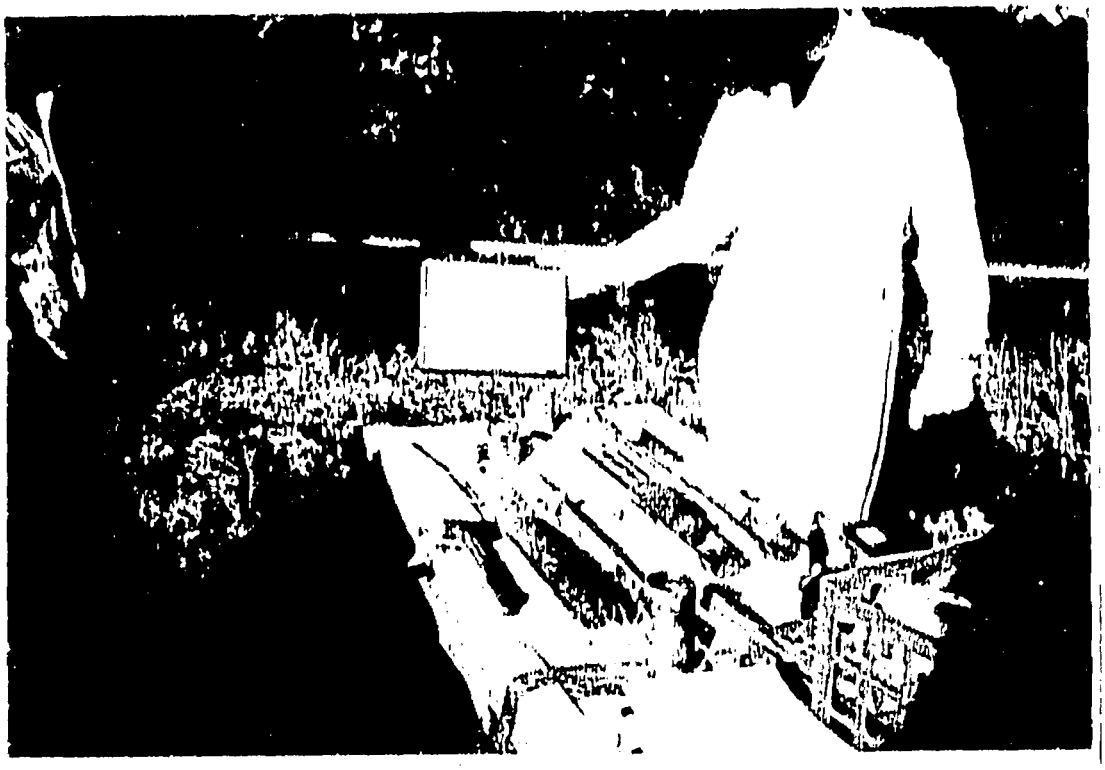
193. Photo of core material used for sample AAB1957. Sample collected from 20ft to 22ft as stated in photo. Core material was undisturbed silts and clays indicating sample was collected below bottom of trench. Photo taken facing East by Ken McFadden at 12:57 on 10/11/94.

194. Photo of sample AAB1957. Blast shields attached to drums are visible in photo. Controls for remote drilling operations were mounted to one of the drums as seen in photo. Photo taken facing East by Ken McFadden at 12:57 on 10/11/94.

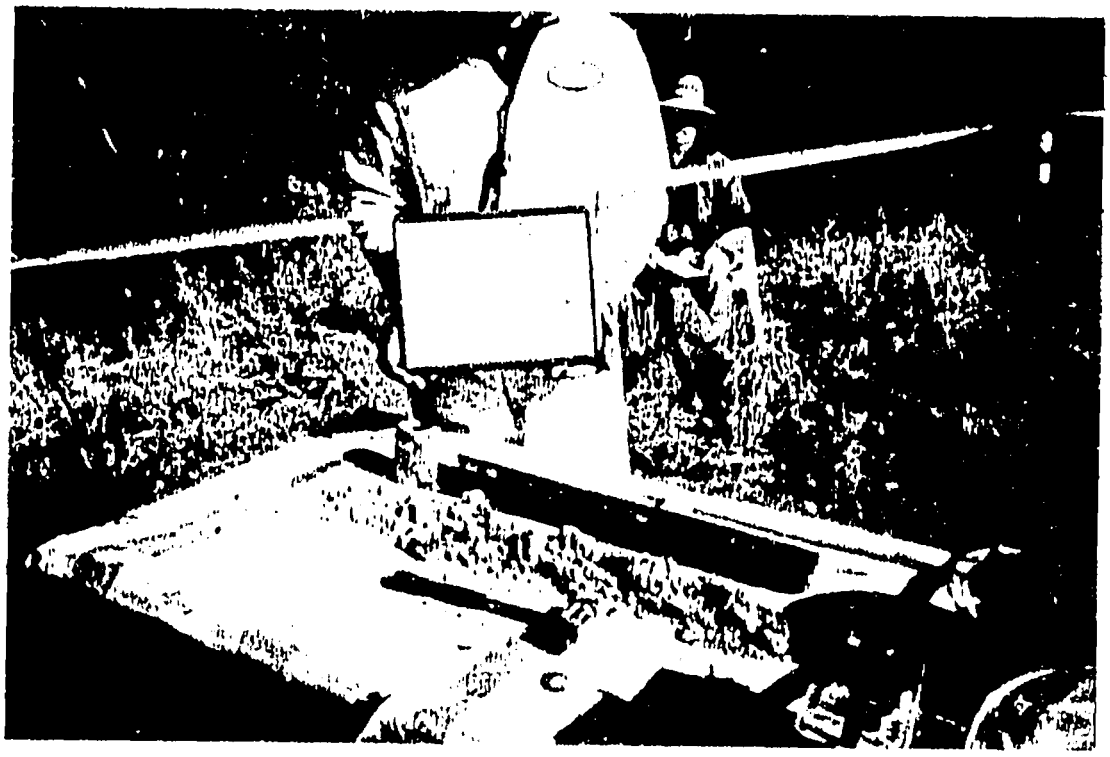
195. Photo of samples AAB1897, AAB1893 (duplicate of AAB1897), & AAB1898 taken close-up during sampling process. Photo taken facing North by Ken McFadden at 14:05 on 11/14/94.



196 Photo of core material for samples AAB1897, AAB1893 (duplicate of AAB1897), and AAB1898 at PRS 36-003(a) Septic System Leachfield. Photo taken facing North by Ken McFadden at 14:05 on 11/14/94.



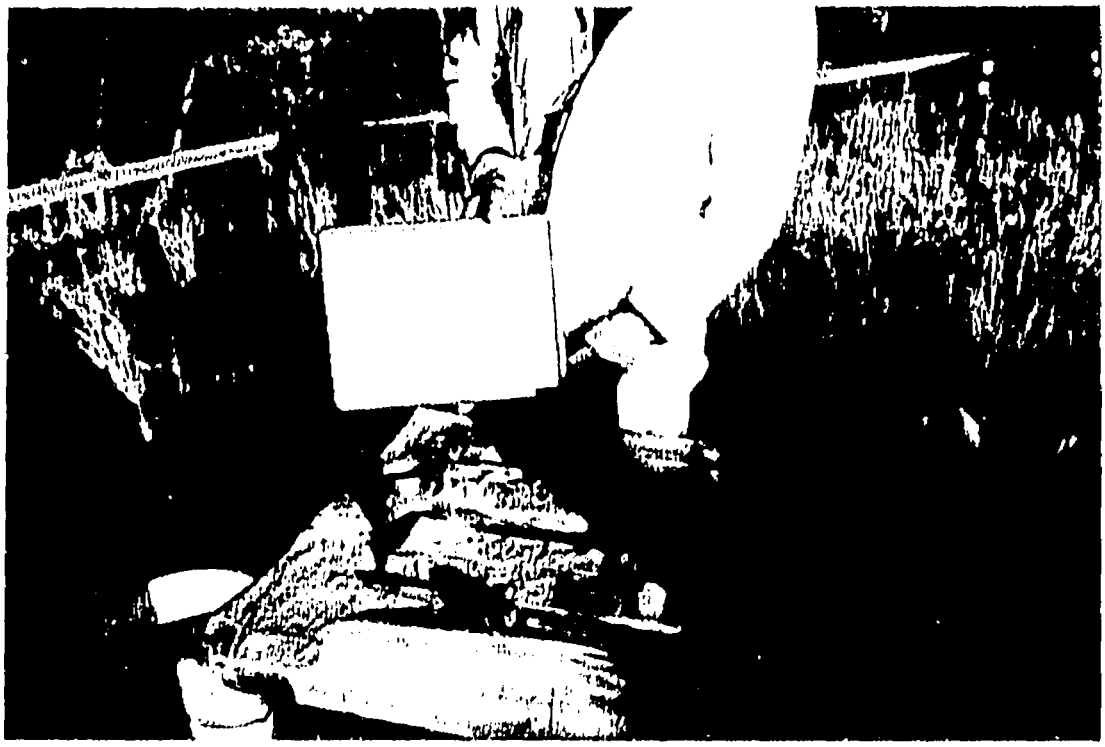
197. Photo of soil used for samples AAB1897, AAB1893 (duplicate of AAB1897), & AAB1898. Photo shows barrier tape used to mark exclusion zone boundary. Sample collected from 24 in to 32 in with evidence of soil/tuff interface at 29 in. Photo taken facing North by Ken McFadden at 14:05 on 11/14/94.



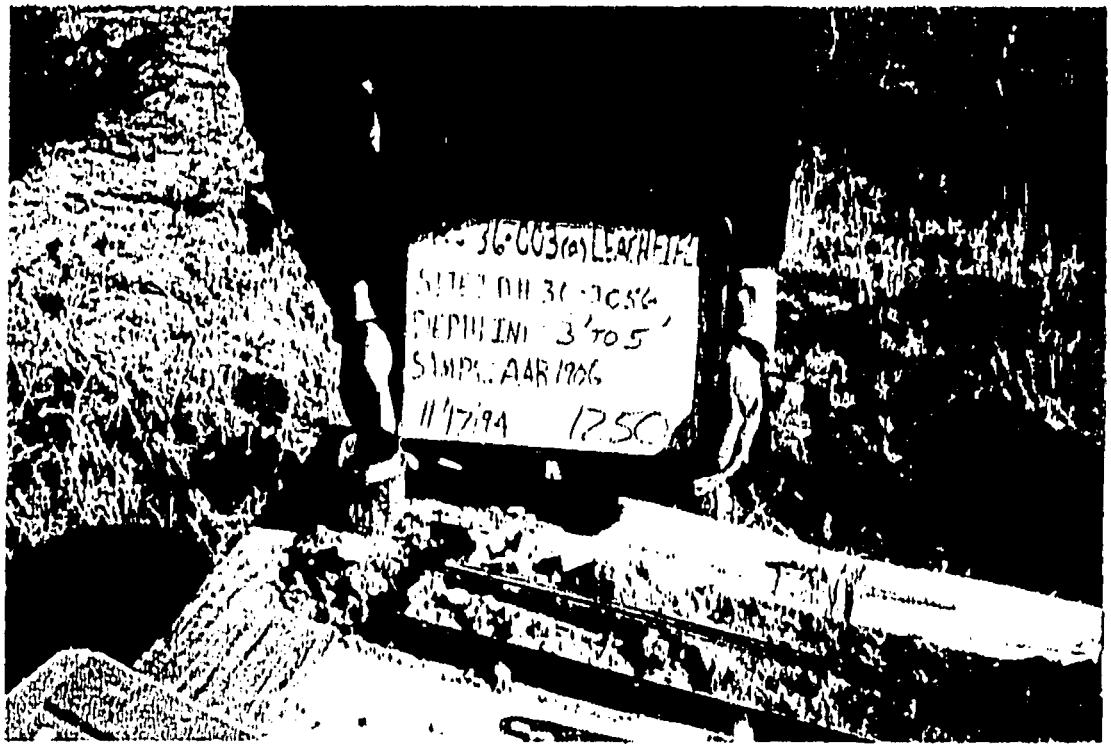
198. Photo of core profile for samples AAB1900 & AAB1901 taken close-up. Photo shows crushed tiff material collected from depths of 22 in to 30 in (depth shown in photo is wrong) and field team leader recording drilling results in log book. Photo taken facing Northeast by Ken McFadden at 11:37 on 11/15/94.

199. Photo of soil used for samples AAB1900 & AAB1901 collected from 32 in to 38 in (depth in photo is wrong). Material was crushed in order to collect sample. Photo taken facing Northeast by Ken McFadden at 11:37 on 11/15/94.

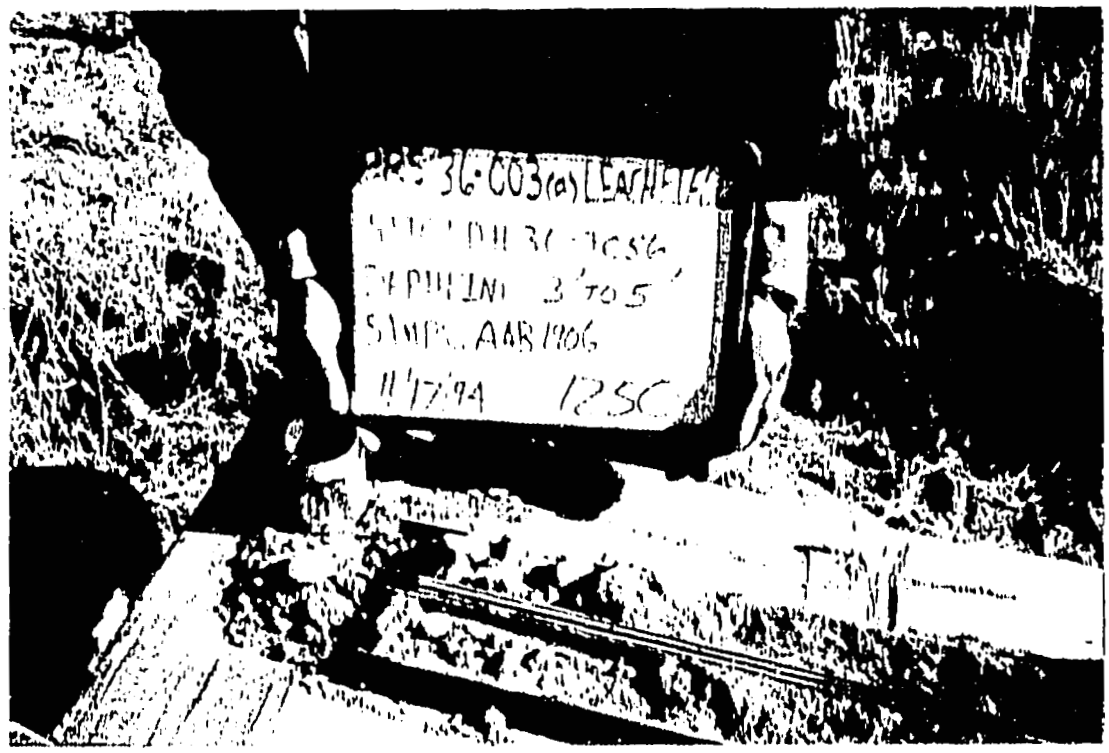
200. Photo of materials used for samples AAB1903, AAB1904, & AAB1895 (duplicate of AAB1904) collected with two sets of split spoon samplers in order to retrieve enough material. Photo taken facing North by Ken McFadden at 15:03 on 11/15/94.



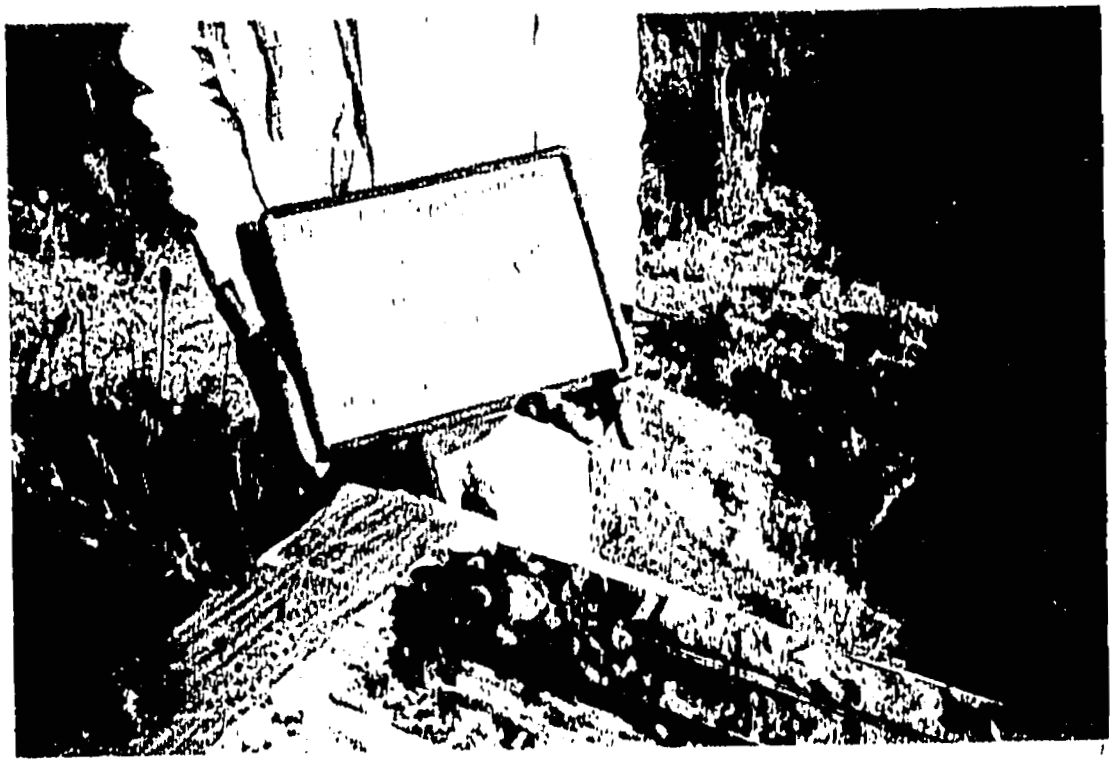
201. Photo of material used for samples AAB1903, AAB1904, & AAB1895 (duplicate of AAB1904). Photo taken facing North by Ken McFadden at 15:03 on 11/15/94.



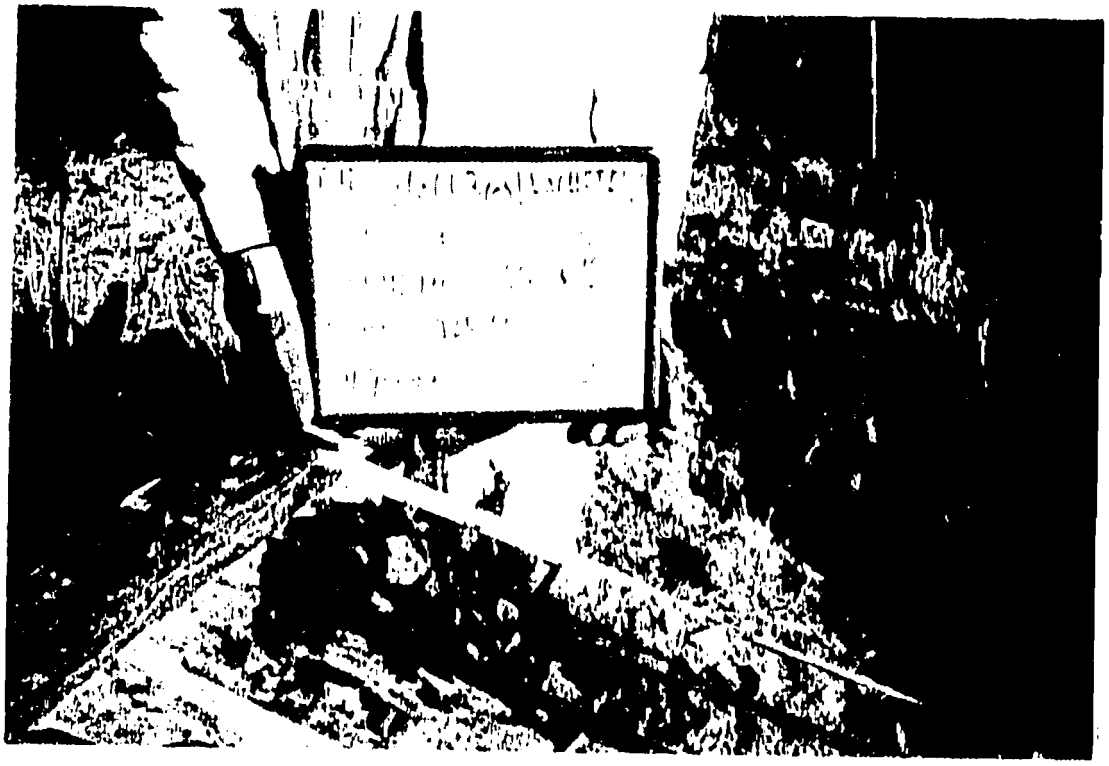
202. Photo of soil retrieved for sample AAB1906. Crushed tuff, sand and engineering fill gravel's were found, and slight staining was visible at 57 in. Photo taken facing East by Ken McFadden at 12:50 on 11/17/94.



203. Photo of soil retrieved for sample AAB1906. Sample was collected from 3ft to 5ft and crushed to be homogenized. Photo taken facing East by Ken McFadden at 12:50 on 11/17/94.

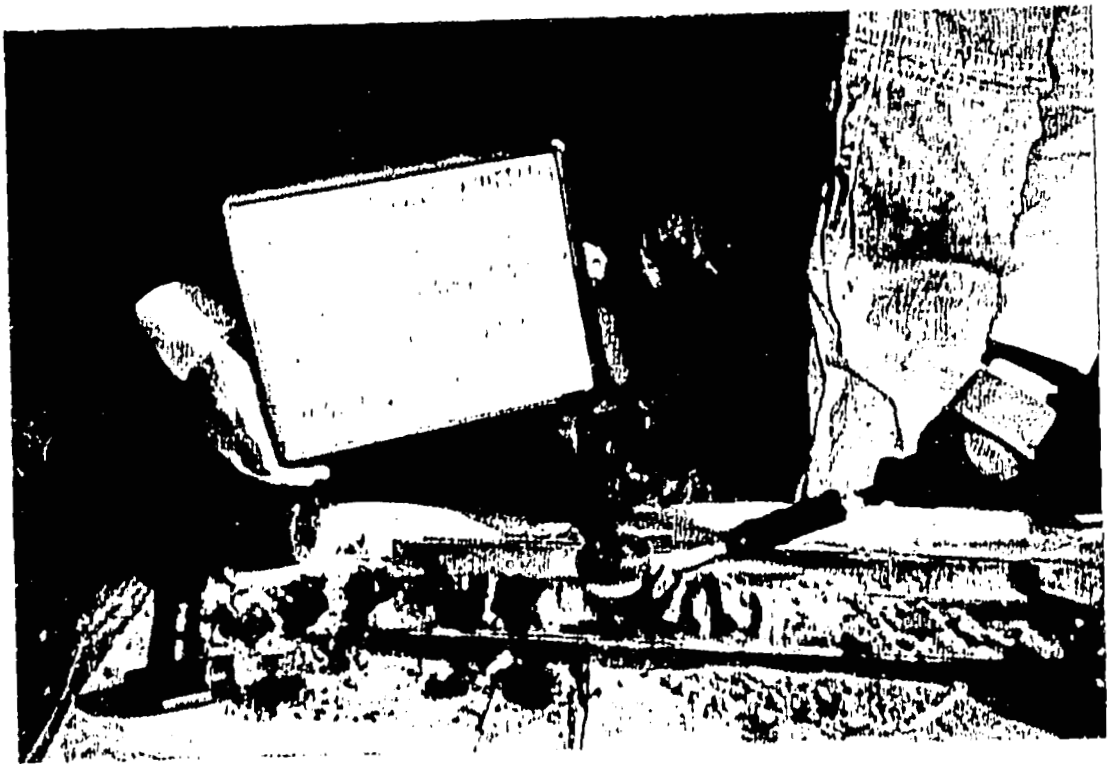


204. Photo of core profile for sample AAB1907. Sample collected from 3 in below soil/tuff interface at depths recorded in photo. Material was slightly moist with moisture increasing downward. Photo taken facing East by Ken McFadden at 13:38 on 11/17/94.

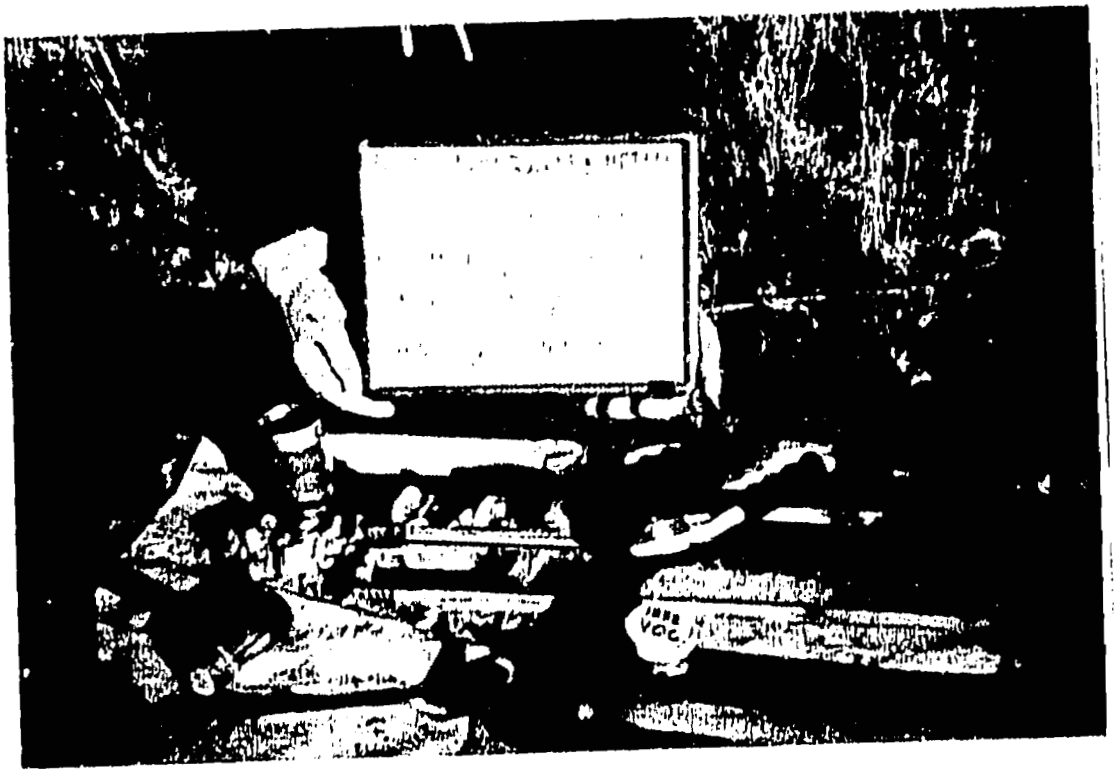


205. Photo of core profile for sample AAB1907. Photo taken facing East by Ken McFadden at 13:38 on 11/17/94.

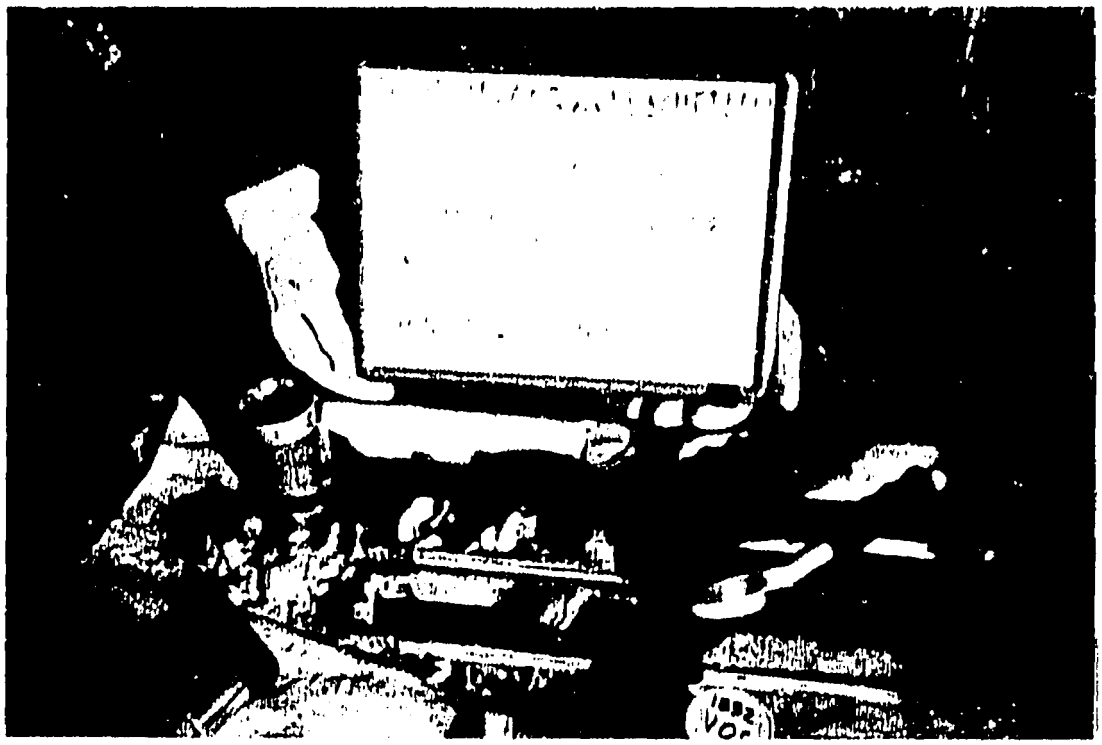
206. Photo of sample AAB1909 & AAB1910. Engineering fill interface is visible in photo. Photo taken facing East by Ken McFadden at 11:45 on 11/18/94.



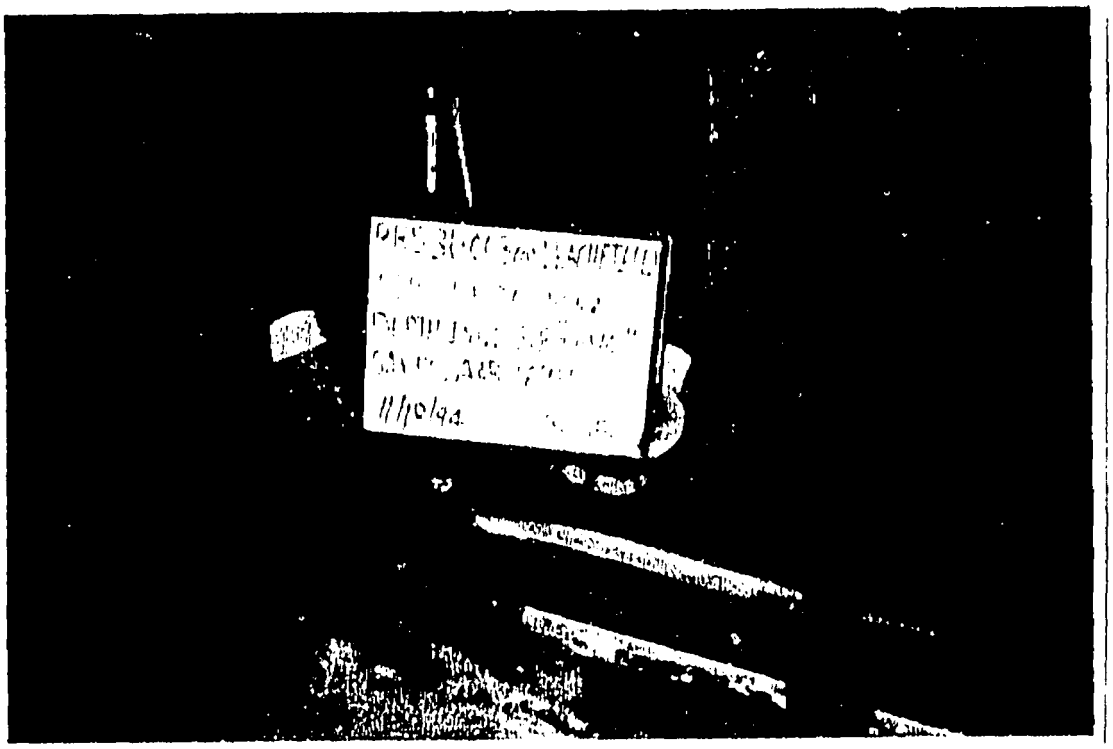
207. Photo of sample AAB1909 & AAB1910 taken close-up. Depths of sample collection are recorded in photo. Photo taken facing East by Ken McFadden at 11:45 on 11/18/94.



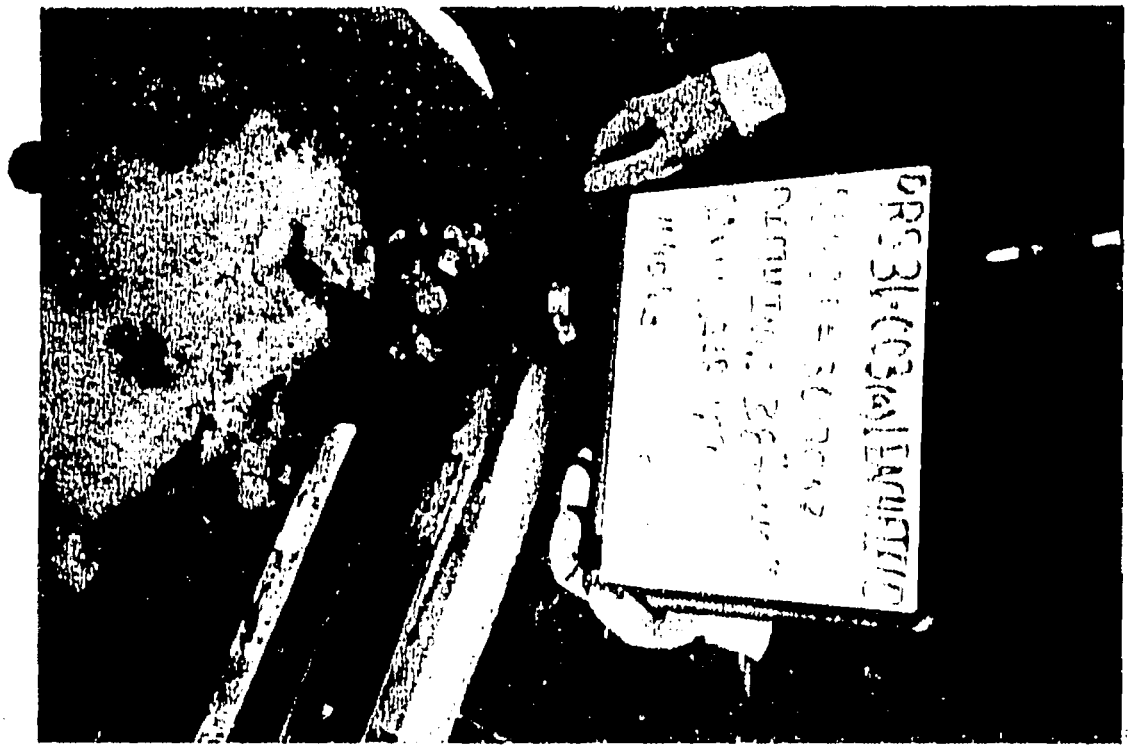
208. Photo of core for sample AAB1802 taken close-up. Photo shows filled VOC bottle, collected immediately after screening. Photo taken facing East by Ken McFadden at 14:53 on 11/18/94.



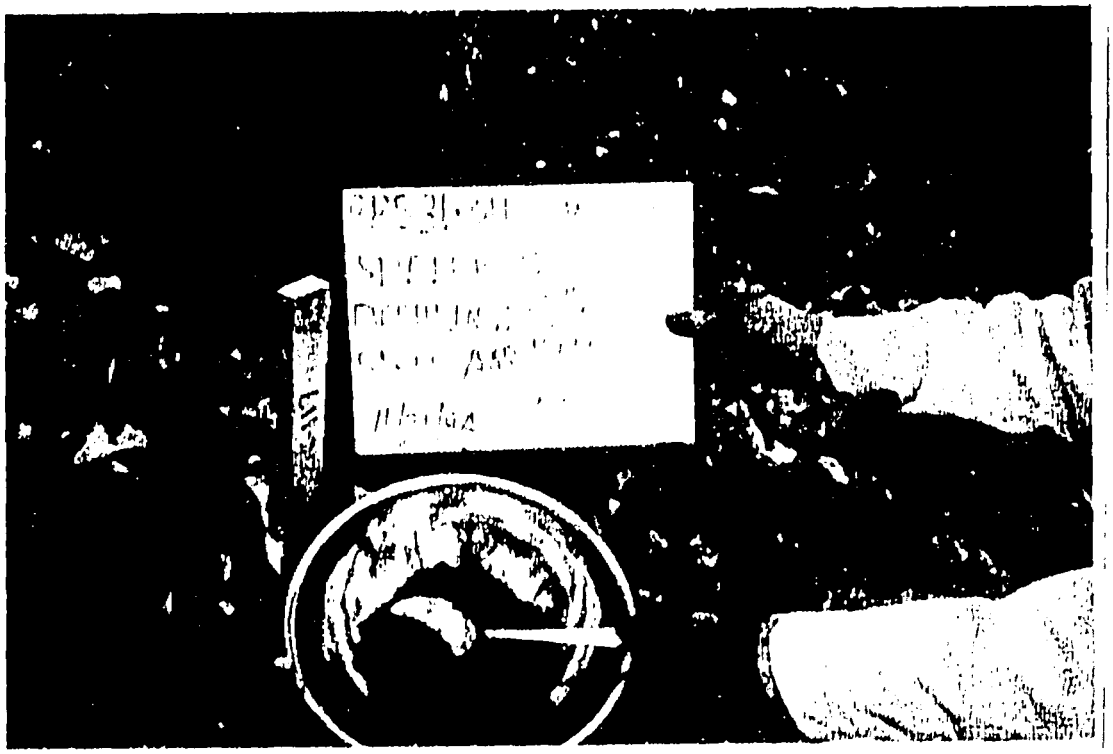
209. Photo of core for sample AAB1892. Slight yellowish staining at fill/tuff interface at 36 in is visible. Sample depths depicted in photo. Photo taken facing East by Ken McFadden at 14:53 on 11/18/94.



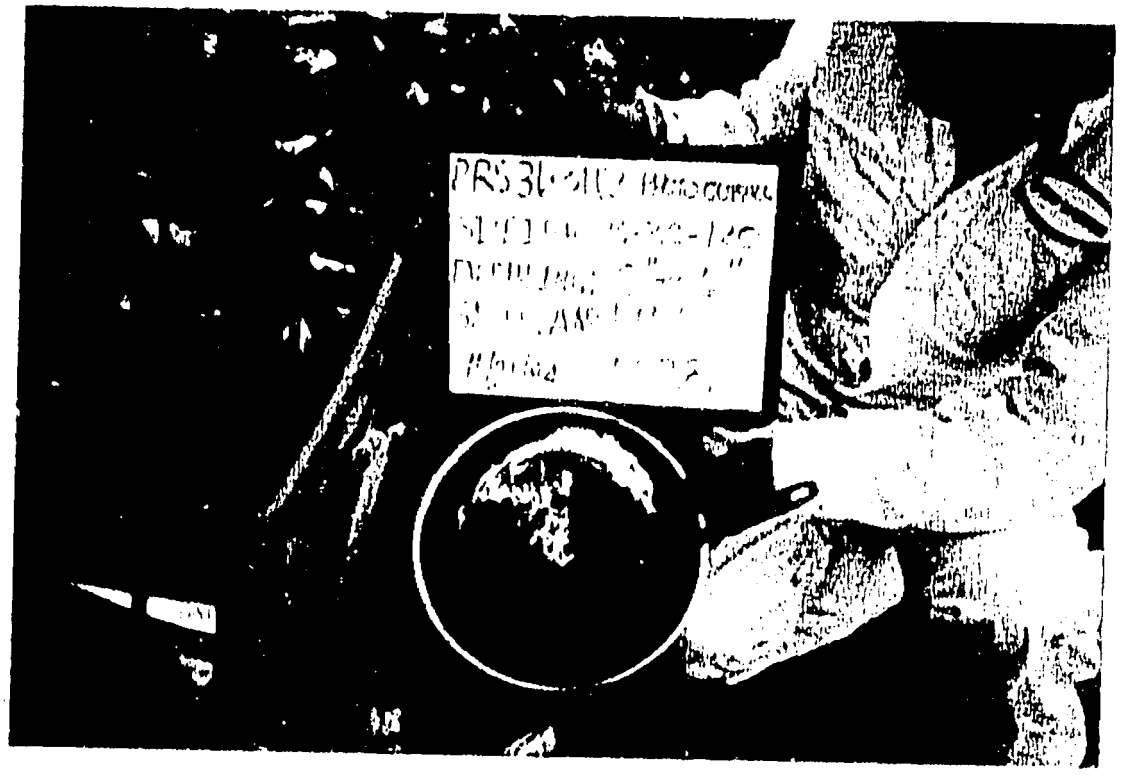
210. Photo of sample AAB1894 taken close-up. No organics or staining was observed at 38 in to 40 in. Photo taken facing Northeast by Ken McFadden at 15:05 on 11/18/94.



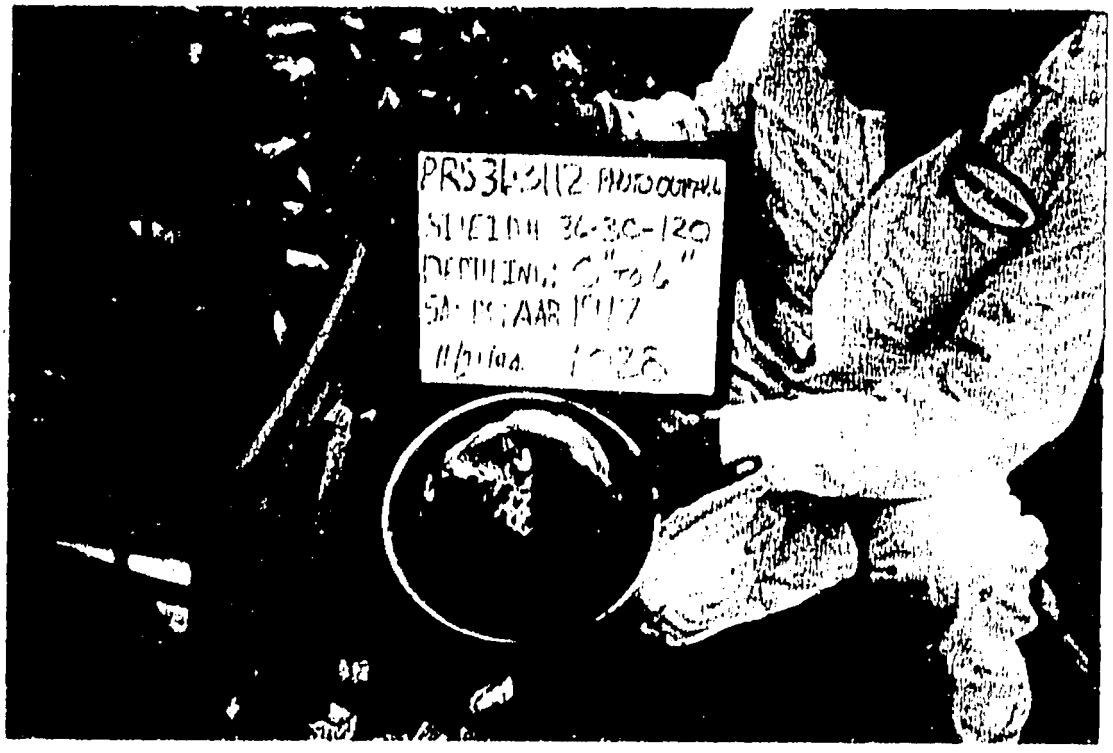
211. Photo of sample AAB1894 taken close-up. Gravel can be seen in photo. Photo taken facing Northeast by Ken McFadden at 15:05 on 11/18/94.



212. Photo of sample AAB1916 taken close-up during sampling process. Sample was collected bellow thick layer of organics at this location. Photo taken facing West by Ken McFadden at 10:25 on 11/21/94.



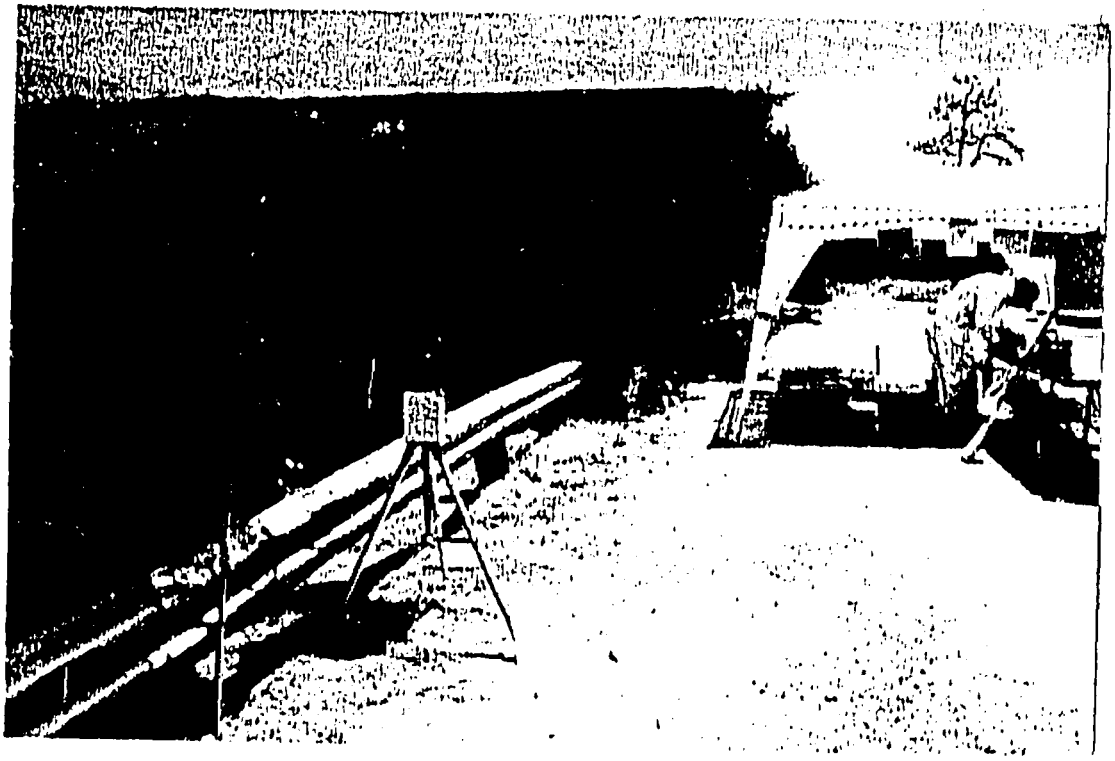
213. Photo of sample AAB1917 taken close-up during sampling process. Dark brown soil with abundant organics is visible in photo Photo taken facing West by Ken McFadden at 10:28 on 11/21/94.



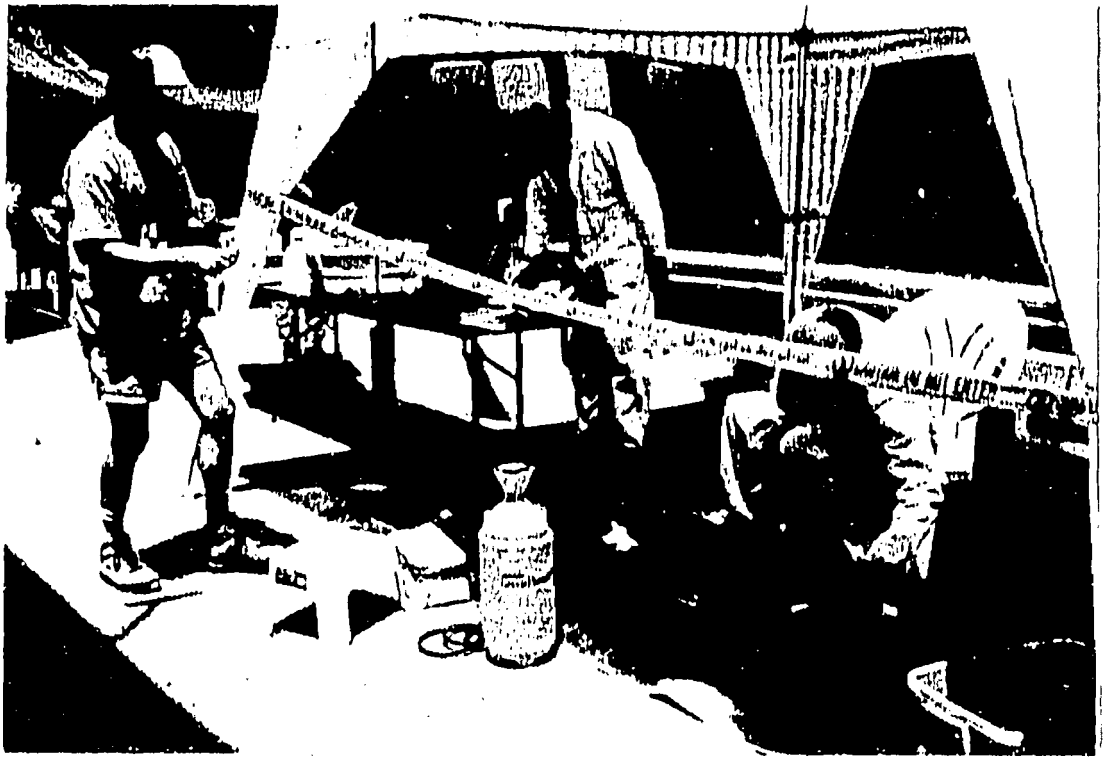
214. Photo of sample AAB1917 taken close-up during sampling process. Sample collected from slope north of Building 1. Photo taken facing West by Ken McFadden at 10:28 on 11/21/94.

GENERAL SITE ACTIVITIES INCLUDING SAMPLE DECON, SAMPLE PROCESSING AND DOCUMENTATION

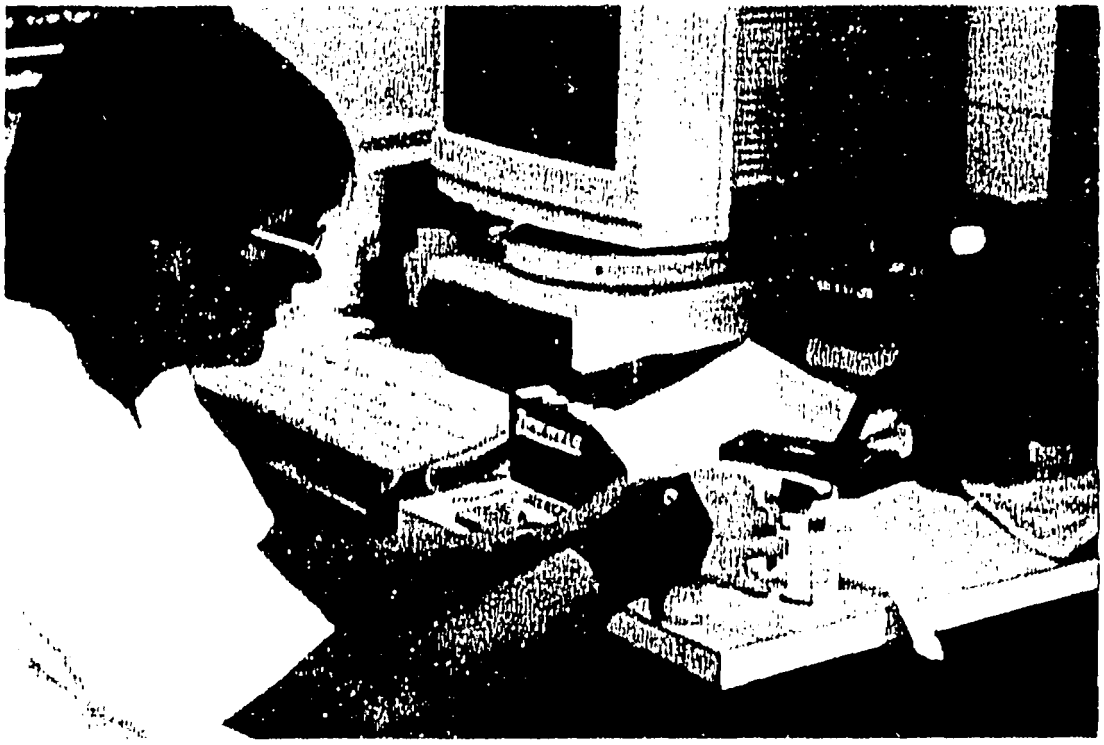
215. Photo of general support zone activities including sample documentation. Samplers are preparing to enter exclusion zone (EZ) from contamination reduction zone (CRZ) behind support zone(SZ) in photo. Photo taken facing East by Jim Kearns on June 9, 1994.



216. Photo showing Davis Instruments Weather Monitor II, monitoring temperature, humidity, barometric pressure and wind speed. Photo taken facing East by Jim Kearns on June 9, 1994.



217. Photo of contamination reduction zone activities including decontamination of sampling instruments and radiation measurements of samples. Equipment was washed in a solution of Alconox and water then rinsed with deionized water and dried. Photo taken facing Northwest by Jim Kearns on June 9, 1994.

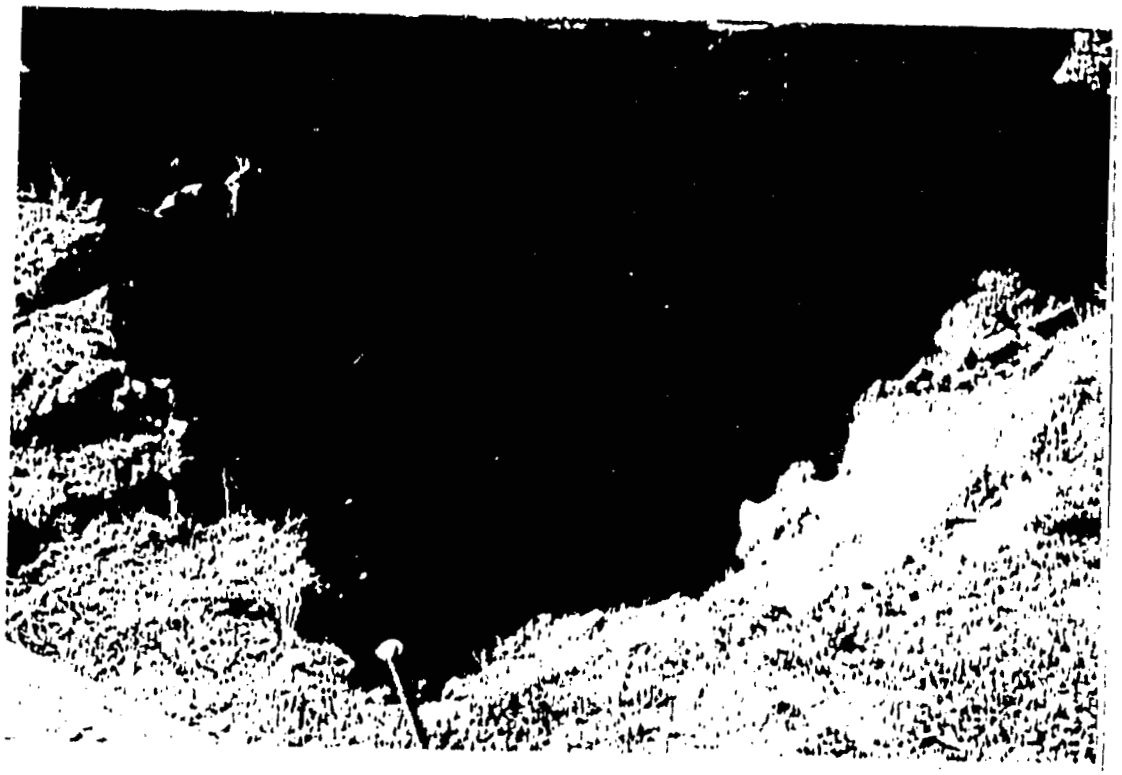


218. Photo of sample processing inside the mobile field office. Custody tape and labels were attached to bottles after decontamination process. Photo taken by Jim Kearns on June 9, 1994.

219. Photo of sample processing with the aid of computer hardware and printer inside the mobile field office. Photo taken by Jim Kearns on June 9, 1994.

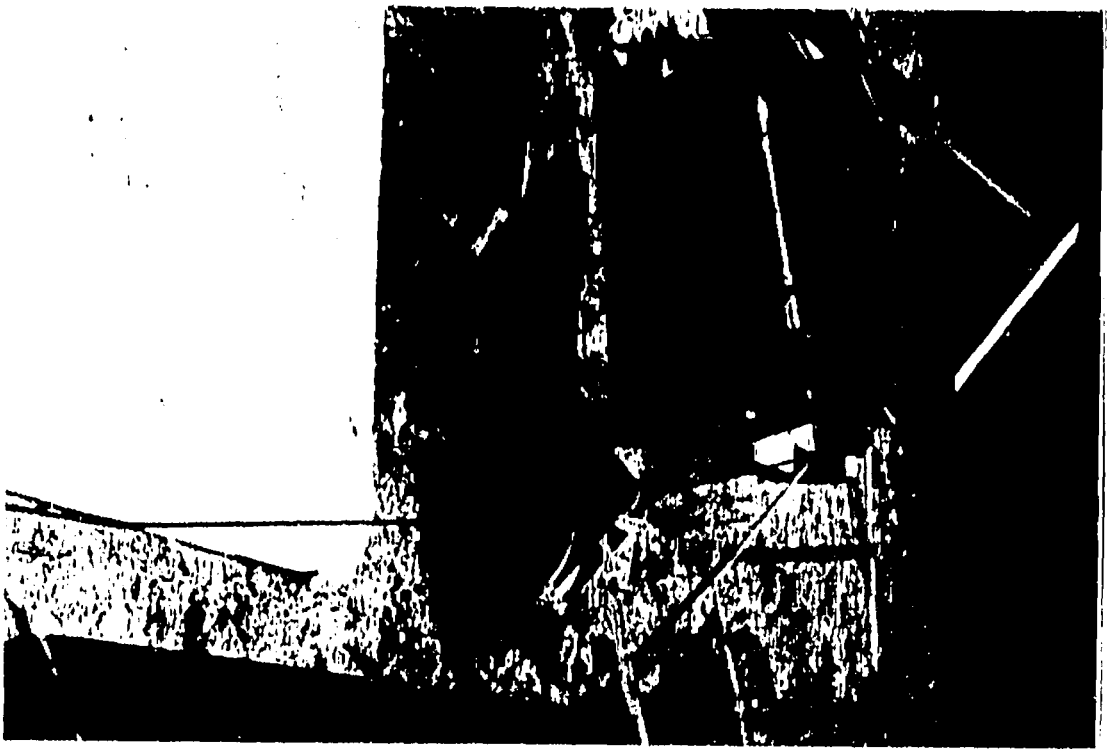
220. Photo showing start of sump excavation (PRS 36-002). Hard hats, rubber booties, and ear protection were required within the work zone. A closer look reveals a blast shield mounted to back hoe. Photo taken facing Southwest by Richard Cordi on September 14, 1994.

221. Photo of HE spot test of sump material (PRS 36-002) conducted within curbed area. Photo taken facing South by Richard Cordi on September 14, 1994.



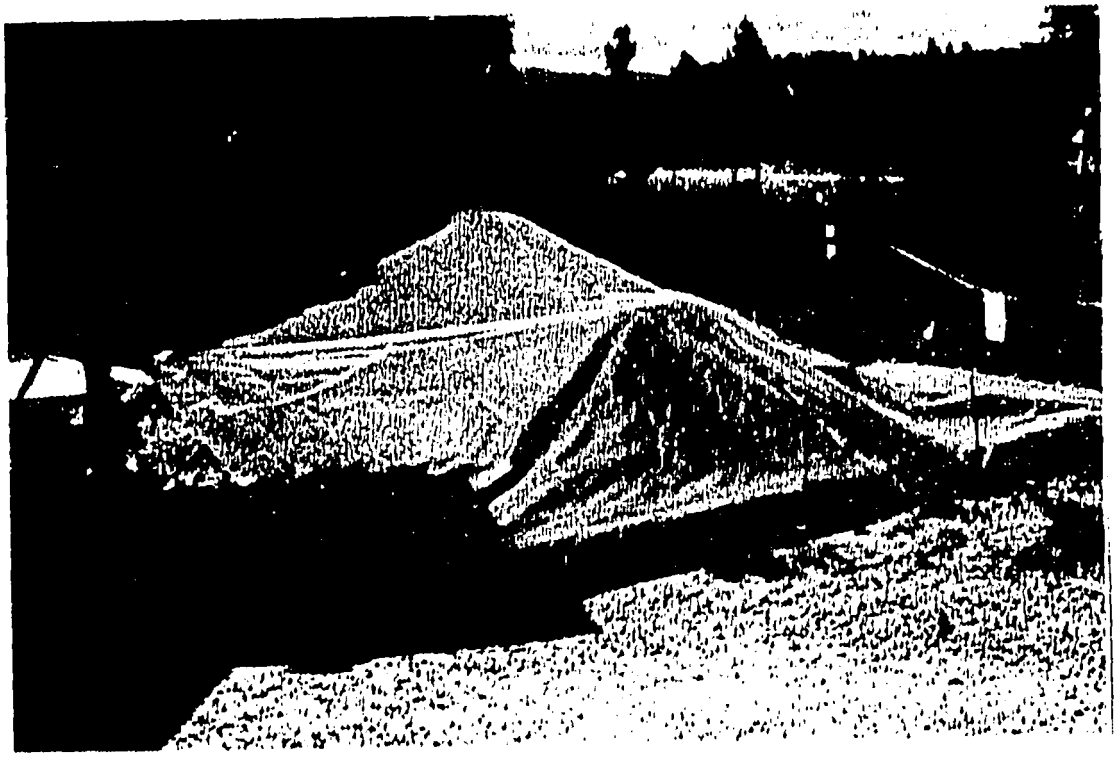
222. Photo of sump excavation after removal of corrugated pipe. Photo taken facing Southeast by Richard Cordi on September 14, 1994.

223. Photo showing rad screening of sump fill material (PRS 36-002) within curbed area. Photo taken facing Southwest by Richard Cordi on September 14, 1994.



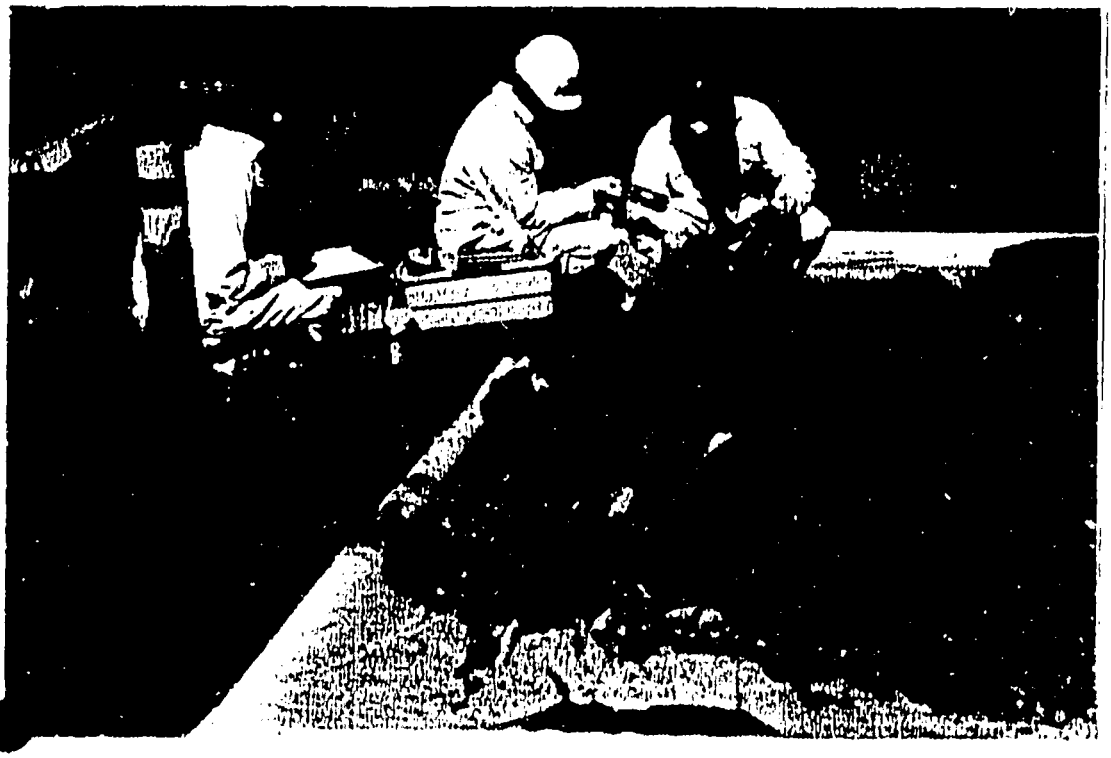
224. Photo shows start of sump excavation (PRS 36-002) with corrugated pipe still in place. Curbed area is visible in photo. Photo taken facing South by Richard Cordi on September 14, 1994.

225. Photo of VOC samples being collected while monitoring for organic vapors. Photo taken facing South by Richard Cordi on September 14, 1994.



226. Photo shows excavation material (PRS 36-002) was covered with a tarp to prevent moisture from entering, while work was to resume the next day. Photo taken facing West by Richard Cordi on September 14, 1994.

227. Aluminum grating used to cover sump excavation (PRS 36-002) is visible in photo. Photo taken facing West by Richard Cordi on September 14, 1994.



228. Photo shows sampling of sump material (PRS 36-002) and includes the end of the clay drainage pipe which lead into the sump. Photo taken facing West by Richard Cordi on September 14, 1994.

229. Photo of sump material (PRS 36-002) within cubed area showing gravel backfill. Photo taken facing South by Richard Cordi on September 14, 1994.

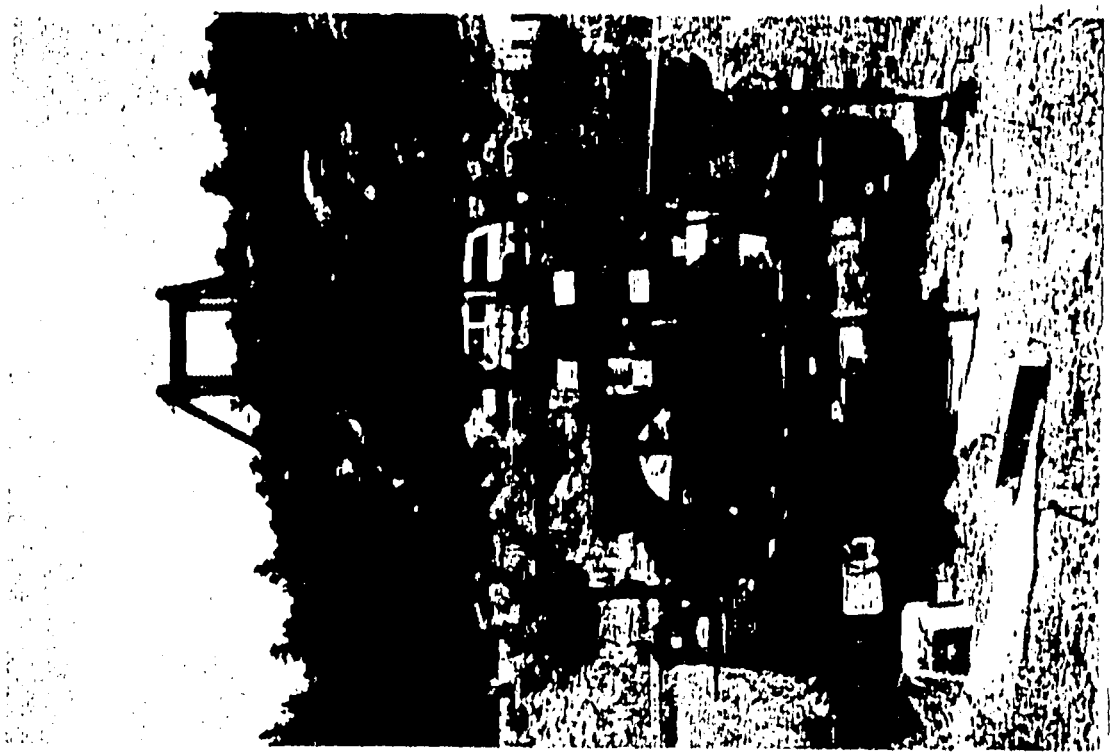
230. Photo of HE visual inspection, HE Spot Test, and screening for organic vapors prior to installation of water station (PRS 36-004) in stream bed. Photo taken facing East by Richard Cordi on September 20, 1994.

231 Photo shows installation of water station (PRS 36-004) in stream bed and the surrounding area. Photo taken facing West by Richard Cordi on September 20, 1994.

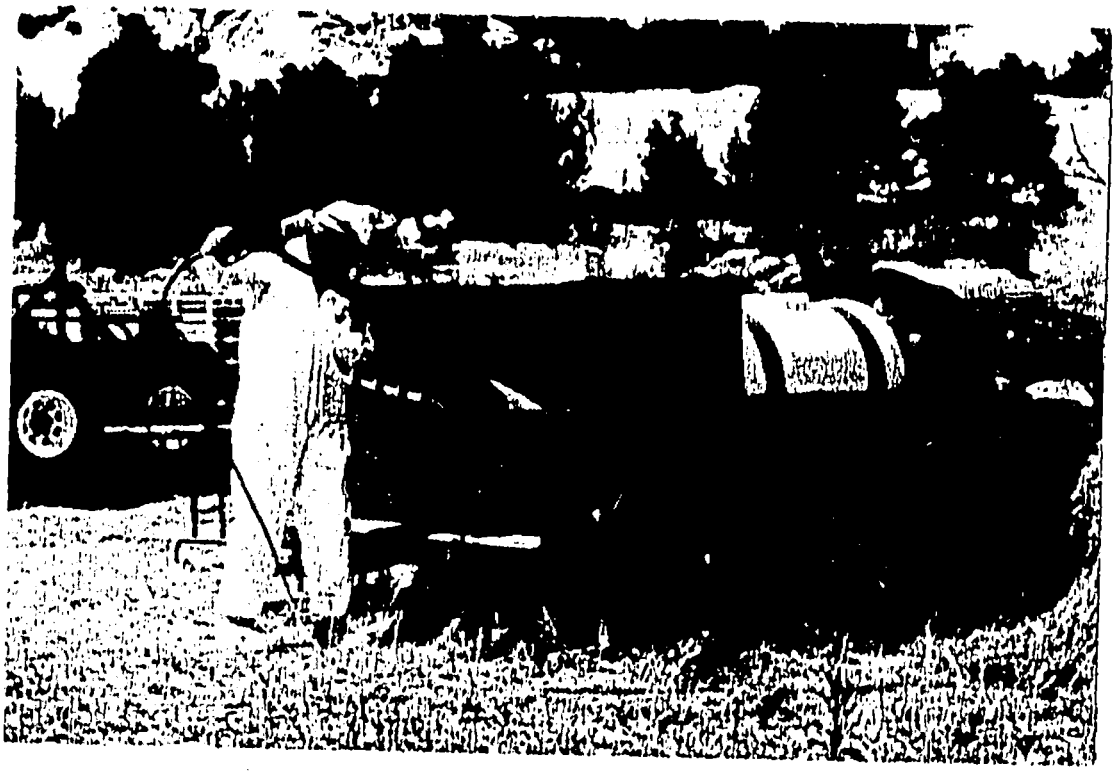
232. Photo of rad screening of water station area (PRS 36-004) in stream bed at water canyon. Photo taken facing West by Richard Cordi on September 20, 1994.

233. Photo shows HE Spot Test before installation of water station [PRS 36-004]. Photo taken facing Southwest by Richard Cordi on September 20, 1994.

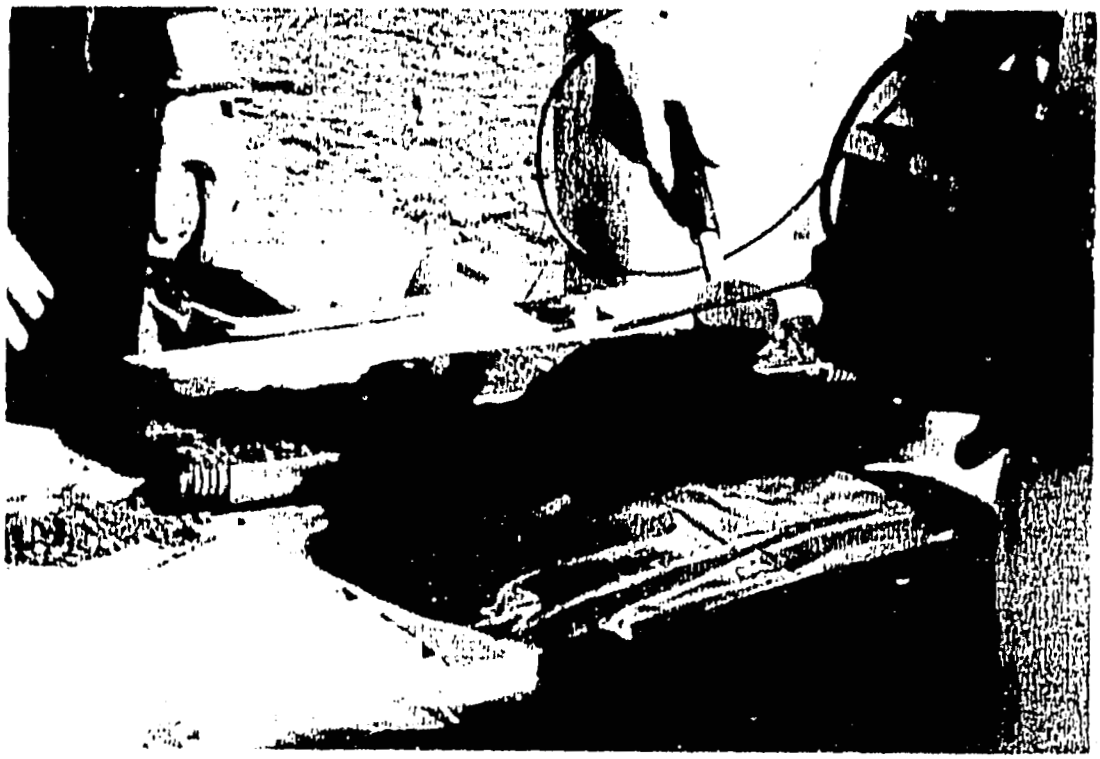
234. Photo shows remote drilling process with personnel behind protective shielding mounted to drums. Photo taken facing North by Richard Cordi on October 6, 1994.



235. Photo of sonic drill rig taken close-up. Dual stainless steel split spoons are connected to vibritory motor during drilling process (PRS 36-001). Photo shows sonic drill rig and required accessories set on flatbed trailer. Photo taken facing North by Richard Cordi on October 6, 1994.



236. Photo of high pressure steam cleaner taken during decontamination of hollow stem auger. Photo taken facing Northwest by Richard Cordi on October 6, 1994.



237. Photo of core profile collected with sonic drill using vibratory drilling techniques. Photo taken facing Northeast by Richard Cordi on October 6, 1994.

Appendix 5

APPENDIX 5

HEALTH AND SAFETY SUMMARY REPORT

OPERABLE UNIT (OU) 1130, TECHNICAL AREA (TA) 36
HEALTH AND SAFETY SUMMARY REPORT
FOR THE 1994 FIELD SAMPLING ACTIVITIES

1.0 SUMMARY

A Site-Specific Health and Safety Plan (SSHASP) for OU 1130, TA-36 was prepared and implemented for the 1994 field sampling activities (Attachment 1). The SSHASP provided historical information, environmental settings, potential contaminants of concern (PCOC) and the sampling activities to be performed at each potential release site (PRS). This information was used to perform a hazard analysis/risk assessment for each sampling activity. The hazard analysis/risk assessment was used to identify actions and control measures (e.g., personnel training, site and engineering controls, personnel and area sampling program, personal protective equipment, permits, decontamination, medical surveillance, emergency action plan, safety considerations, and site inspections) to be taken to minimize field team members' exposures to PCOCs and chemical and physical hazards. Each of these actions and control measures are further discussed below.

2.0 PERSONNEL TRAINING

All field team members were required to meet specific training requirements dependent upon the type of work performed. The training needs were based on applicable Occupational Safety and Health Administration (OSHA), U.S. Department of Energy (DOE), and Los Alamos National Laboratory (LANL) requirements. Each field team member either read or was briefed on the SSHASP and applicable procedures and attended required formal classroom training and daily tailgate safety meetings. A copy of the Site Health and Safety Plan Acknowledgment Form, the training matrix for each field and support person, and the tailgate safety meeting forms are provided in Attachment 2.

3.0 SITE AND ENGINEERING CONTROLS

Site control measures were implemented to control exposures to PCOCs and physical hazards to field team members before field operations began, and to reduce the possibility of unauthorized entry into the site. Three work zones (exclusion, contamination reduction, and support) were established prior to the initiation of field operations.

Exclusion zones (EZ) were established at each PRS and encompassed the area most likely to have contamination, or where work activities were most likely to present hazards to personnel. All EZs were demarcated using barrier tape.

except when a zone was deemed either too large or significantly remote that unauthorized entry would not be expected (e.g., the side of a canyon).

Contamination reduction zones (CRZ) were established at the upwind side of each EZ. It was through the CRZ that all personnel and hand-held equipment entered and exited the EZ. Larger equipment (e.g., drill rig, steam cleaner, support vehicle) entered and exited the EZ at the most convenient location available.

Support zones (SZ) were also established at each PRS and included uncontaminated areas, upwind of the EZ, where administrative tasks and operations support were performed. The Command Post, safety and First Aid supplies, emergency contact numbers, MSDSs, portable toilet, and other administrative/support items were all located in the SZ.

A muster area was designated on a daily basis and communicated to all field members by way of the daily tailgate safety meeting. The muster area was not marked or labeled, but was always located in the SZ.

Site access control was achieved through use of postings in the SZ and surrounding the EZ and CRZ, and by requiring all personnel to sign the control access register log upon entry into and exit from the EZ. Copies of the Control Area Access Register Forms are presented in Appendix 6, Attachment 2.

Engineering controls for each task were identified in the SSHASP. As specified in the SSHASP, the implementation of these controls were not required unless the action levels set for airborne contaminants were reached or exceeded. Since the action levels were not reached or exceeded, (see Section 4.0) during the 1994 field sampling activities, the engineering controls specified in the SSHASP were not implemented. However, all drilling activities were performed remotely which acted as a engineering control to minimize occupational exposures to noise and airborne contaminants.

4.0 PERSONAL AND AREA SAMPLING PROGRAM

The personal and area sampling program identified in the SSHASP included Industrial Hygiene (IH) and Health Physics (HP) monitoring.

4.1 IH Monitoring

The IH monitoring was conducted by Site Safety Officers (SSO) supplied by Morrison Knudsen Corporation of Los Alamos, New Mexico. The IH monitoring program for the sampling activities was designed to protect the health and safety of field team members, and consisted of direct-reading monitoring and integrated IH sampling. The results of both the direct-reading monitoring and integrated IH sampling showed that at no time, during the IH monitoring, were

the action levels for airborne contaminants, as specified in the SSHASP, reached or exceeded. Copies of the IH monitoring forms (e.g., Direct-Reading Air Sampling Forms, Noise Monitoring Data Sheets, Combustible Gas Indicator/O_2 Monitoring Data Forms, and Real-Time Aerosol Field Monitoring Data Forms) are presented in Attachment 3.

4.1.1 Direct-Reading Monitoring

Several direct-reading instruments (see Section 4.3) were used to provide instantaneous results of airborne contaminants (e.g., organic vapors, combustible gas/oxygen, and particulates) and physical parameters (e.g., noise and weather). These instruments were used to provide initial screening and for targeting areas where integrated sampling may be required. The direct-reading monitoring was conducted in accordance with the frequency and at locations specified in the SSHASP.

4.1.2 Integrated IH sampling

Four integrated IH samples were collected during the drilling activities, as required by the SSHASP, and analyzed for lead and beryllium in accordance with NIOSH Analytical Method No. 7300. All four samples were collected at the start of the drilling activities and were analyzed by West Coast Analytical Services, Inc. of Santa Fe Springs, Ca. Additional sampling was not deemed necessary due to low direct-reading monitoring results and due to the remote drilling operation. The personal pump and primary calibrator used to collect these sample are identified in Section 4.3. Copies of the Personal Exposure Records (Personal Monitoring Results Employee Notifications, Air Sampling Field Data Sheets, Personal Pump Calibration Forms, Analytical Results, and Chain of Custody forms) have been provided to the employee sampled and their employer. In addition, a copy of the records will be maintained in the project file.

4.2 HP Monitoring

The HP monitoring was conducted by Health Physics Technicians (HPTs) supplied by Environmental Dimensions, Inc. (EDI) of Albuquerque, New Mexico. Refer to the Radiation Monitoring Summary Report For The 1994 Field Sampling Activities Appendix 6 for a summary of the HP monitoring.

4.3 Instrumentation/Equipment

The following instrumentation/equipment was used during the 1994 field season.

- A HNu, PI-101, Trace Gas Analyzer with a 10.2 eV lamp was used to perform direct-reading monitoring for organic vapors.

- A MIE, MINIRAM Personal Monitor, Model PDM-3 was used to perform direct-reading monitoring for airborne particulates.
- A Quest, M-27, Noise Logging Dosimeter was used to perform noise surveys.
- A GasTech, Model 1214S, Combustible Gas/O_2 Indicator was used to perform direct-reading monitoring for combustible gas/oxygen.
- A Davis, Weather II, Portable Meteorological (MET) Station was used to monitor weather conditions (e.g., ambient temperature, relative humidity, wind speed and direction).
- Gillan HI Flow samplers Model HFS 113A were used to collect the integrated IH samples.
- A Mini Buck electronic bubble meter was used to calibrate the Gillan HI Flow samplers.

Daily instrument calibration checks were performed by the SSO in accordance with manufacturer recommendations. Copies of the calibration records are presented in Attachment 3.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The PPE requirements specified in the SSHASP were selected based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site/task-specific conditions, task duration, and the known/potential hazards present. No modifications to the PPE requirements were made during the 1994 field sampling activities.

6.0 PERMITS

An excavation permit for the drilling and sump excavation activities was obtained prior to performing the work. A copy of the excavation permit is presented in Attachment 4. No other permits were required.

7.0 DECONTAMINATION

Decontamination facilities were established in the EZ to prevent spread of contamination. All equipment, samples, and PPE were decontaminated prior to being released from the EZ. The effectiveness of the decontamination procedure was verified by radiological screening of personnel, unconditional release of equipment, by visual examination of items prior to release from the CRZ, and by collecting rinsate samples. All potentially hazardous/radioactive waste generated from the decontamination process was containerized and stored at satellite storage areas.

8.0 MEDICAL SURVEILLANCE

The Medical Surveillance requirements specified in the SSHASP met the requirements of 29 CFR 1910.120(f), DOE Orders 5480.8A and 5480.10, LANL Administrative Requirement 2-1. All site personnel were required to have a current Fit For Duty Statement, from a physician, which met the above requirements prior to entering any EZ.

9.0 EMERGENCY ACTION PLAN

The Emergency Action Plan specified in the SSHASP was designed to meet the requirements of 29 CFR 1910.38. Emergency Contacts, phone numbers, and was the most direct route to the Los Alamos Medical Center were posted on site. First Aid supplies, an eyewash station, and a fire extinguisher were maintained on-site at locations known to all team members. In the event of an emergency, field team members would have been alerted by the use of an air-horn. These instructions were given to all field team members during the daily tailgate safety meetings. During the 1994 field sampling activities, no incident or event required medical attention, reporting to LANL, or the use of the air-horn.

10.0 SAFETY CONSIDERATIONS

The two safety considerations, identified in the SSHASP, were heat stress and fall protection. Both considerations were monitored by the SSO.

10.1 Heat Stress

The SSHASP required heat stress monitoring (e.g., heart rate monitoring) of all field team members working in the EZ. This monitoring continued, at frequencies dependent upon ambient temperatures, until the team members became acclimatized (e.g., one week). The SSOs informed all field team members of the potential for heat stress, signs and symptoms of heat related illnesses, and preventative measures during the daily tailgate safety meetings. In addition, a sufficient supply of water and electrolyte drinks and shaded rest areas were provided to the field team members. At no time during the 1994 field sampling activities did a field team member show signs of a heat related illness.

10.2 Fall Protection

Fall protection, as addressed in the SSHASP, was a possible safety concern during the sump excavation activity. However, the fall hazard during this activity was eliminated by covering the open excavation with aluminum planking and by maintaining a 3 ft distance between the edge of the excavation and personnel at all times.

11.0 SITE INSPECTIONS

As required by the SSHASP, daily and periodic health and safety inspections were conducted and documented by the SSO. Copies of the inspection forms (e.g., Health and Safety Checklists, Daily Safety Inspection Checklists, Drill Rig Inspection Forms, and Equipment Inspection Checklists) are presented in Attachment 5. In addition, the SSOs maintained a daily health and safety logbook (Los Alamos National Laboratory, Environmental Restoration Field Log Book No. 114) to document daily field activities, direct-reading monitoring results, and other applicable field information. A copy of the health and safety logbook is presented in Attachment 6.

APPENDIX 5

ATTACHMENT 1

Site-Specific Health and Safety Plan

Environmental Restoration Program
Los Alamos National Laboratory

Los Alamos
NATIONAL LABORATORY

Site-Specific Health and Safety Plan

Operable Unit: 1130

Technical Area: 36

FIELD INVESTIGATION

Plan Number: 026 Draft Number: 3

Date: May 13, 1994

Change Order Control Form for ER Field Operations

This form is to be used to document revisions to the SSHASP based on new or additional site data, contaminant monitoring, visual information, or changes in site conditions, work practices, or personnel. All changes must be approved by ESH-1 and or ESH-5 as appropriate. Once approved, changes shall be communicated to all field personnel via tailgate safety meetings.

Change Order Control Form No. 026.03 (see Section 1.4 of SSHASP)

Project Title: Field Investigation
Operable Unit (OU): 1130
Technical Area (TA): 36
Change requested by: Ken H. McFadden

Plan number: 026
Draft number: 3
Plan date: May 13, 1994
Task Number and Name: N/A

Duration of Authorization Requested: For the duration of all field activities

Description of Modification: (*attach additional pages as necessary*)
1. Change the first sentence of paragraph 3 in setion 6.1.1 to read " Readings at or above the specified action levels for five minutes or more shall require the initiation of the appropriate response action."

2. Add the following contact and phone number to the current list of Emergency Contacts and Phone Numbers in section 13.
667-6742 DX-11 Access Control Office

Justification: (*attach additional pages as necessary*)
1. Clarification

2. To ensure that the phone number for DX-11 Access Control Office is available in the event of an emergency.

(Printed Name)	(Title)	(Signature)	(Date)
George A. Marino			7/6/94
ESH-1 (Health Physics) and/or ESH-5 (Industrial Hygiene/Safety)			
Ken H. McFadden	SSO		7/5/94
Site Safety Officer			
Stephen J. DePaola	DX-11 Plan Reviewer		7/6/94
DX-11 Representative			

cy: OUPL, HSPL

Change Order Control Form for ER Field Operations

This form is to be used to document revisions to the SSHASP based on new or additional site data, contaminant monitoring, visual information, or changes in site conditions, work practices, or personnel. All changes must be approved by ESH-1 and or ESH-5 as appropriate. Once approved, changes shall be communicated to all field personnel via tailgate safety meetings.

Change Order Control Form No. 026.02 (see Section 1.4 of SSHASP)

Project Title: Field Investigation
Operable Unit (OU): 1130
Technical Area (TA): 36
Change requested by: Ken H. McFadden

Plan number: 026
Draft number: 3 13 KHM
Plan date: May ~~26~~, 1994
Task Number and Name: N/A

Duration of Authorization Requested: For the duration of all field activities

Description of Modification: *(attach additional pages as necessary)*
1. All change orders to this SSHASP shall be approved of by DX-11.
2. Use this form for documenting changes to this SSHASP.
3. Prior to sampling, all sampling procedures shall be approved of by DX-11.
4. Prior to sampling, DX-11 shall review each sample location.

(See page 2 , Attached)

Justification: *(attach additional pages as necessary)*
1. To keep DX-11 informed of all changes.
2. This form has a signature line for DX-11 approval.
3. To determine if such procedures create a significant risk for HE detonation and to provide guidance and/or alternatives for safer operations.
4. To determine if HE hazards exist and provide guidance and/or alternatives for safe operations

(See page 2 , Attached)

(Printed Name)	(Title)	(Signature)	(Date)
George A Marino	III		6/27/94

ESH-1 (Health Physics) and/or ESH-5 (Industrial Hygiene/Safety)

(Printed Name)	(Title)	(Signature)	(Date)
Ken H. McFadden	SSO		6/27/94

Site Safety Officer

(Printed Name)	(Title)	(Signature)	(Date)
Stephen J DePaula	DX-11 Plan Reviewer		6/30/94

DX-11 Representative

cy: OUPL, HSPL

Change Order Control Form for ER Field Operations

Change Order Control Form No. 026.02 (see Section 1.4 of SSHASP)

Project Title: Field Investigation
Operable Unit (OU): 1130
Technical Area (TA): 36
Change requested by: Ken H. McFadden

Plan number: 026
Draft number: 3
Plan date: May 28, 1994
Task Number and Name: N/A

Duration of Authorization Requested: For the duration of all field activities

Description of Modification:

5. In areas where HE is a concern, as determined by DX-11, the first 2 inches of sample material at each sample location shall be spread out onto plastic sheeting or other suitable material and visually inspected for HE.
6. In areas where HE is a concern, as determined by DX-11, all samples shall be screened of HE using the field spot test kit.
7. DX-11 shall be immediately notified if suspect HE material is observed or in the event of a positive result on the HE spot test kit.
8. Add Bob Staub of Morrison Knudsen (Z# 115643), to the list of Alternate Site Safety Officers for this Operable Unit.

Justification:

5. To determine if suspect HE is present.
6. To determine proper handling and shipping of samples.
7. To remove suspect material, if necessary, and to provide guidance for continued sampling.
8. Increases the number of qualified Site Safety Officers available to this Operable Unit.

Site Specific Health and Safety Plan
Change Order Control Form for ER Field Operations

This form is to be used to document revisions to the SSHASP based on new or additional site data, contaminant monitoring, visual information, or changes in site conditions, work practices, or personnel. All changes must be approved by ESH-1 and or ESH-5 as appropriate. Once approved, changes shall be communicated to all field personnel via tailgate safety meetings.

Project Title: Field Invesigations

Plan number: 026.01

Operable Unit (OU): 1130
Technical Area (TA): 36
Change requested by: Ken McFadden

Draft number: 3
Plan date: May 18, 1994
Task Number and Name: 5-Sludge and liquid sampling at sump PRS 36-002; 6-Subsurface soil sampling at sump PRS 36-002; 7-Fluid and sludge sampling a septic systems PRS 36-003(a,b); and 9-Subsurface soil sampling at septic system PRS 36-003(a).

Duration of Authorization Requested: Duration of Field Activities

Description of Modification: (*attach additional pages as necessary*)

Cotton coveralls may be substituted for the disposable whole body tyvek suit or equivalent, specified for the above listed Tasks.

Justification: (*attach additional pages as necessary*)

Cotton coveralls will provide the same level of protection but reduce the amount of waste since the coveralls may be laundered.

George A Marino | TIT | [signature] | 5/27/94
Printed Name) | (Title) | (Signature) | (Date)
ESH-1 (Health Physics) and/or ESH-5 (Industrial Hygiene/Safety)

KEN H. McFADDEN | Site safety officer | [signature] | 5-27-94
(Printed Name) | (Title) | (Signature) | (Date)
Site Safety Officer

cy: OUPL, HSPL

Site-Specific Health and Safety Plan

Project Title: FIELD INVESTIGATION		
Plan #: 026		Technical Area: 36
Operable Unit: 1130		Buildings: None
Duration of Activities: 2.5 Months	Start Date: 5-16-94	Completion Date: 7-11-94

Plan Preparer:
Ken H. McFadden Morrison Knudsen Corp 1910 Deacon St. Los Alamos, NM 87544 662-7300

(Name) (Group) (Mail Stop) (Phone)

This plan addresses the appropriate environmental, safety and health criteria to be followed during investigation and remediation activities associated with the Environmental Restoration (ER) Program at Los Alamos National Laboratory.

Reviewed and Approved by:

Site Safety Officer:	Date 5/19/94
Operable Unit Project Leader:	Date 5/20/94
Field Team Manager	Date 5/20/94
Contractor/Subcontractor Representative / MK	Date 20 May 94
AH. Field Team Leader:	Date
ESH-1 Health Physics:	Date 5-19-94
ESH-5 Industrial Hygiene/Safety:	Date 5/19/94
Other:	Date 5/20/94
Other: FIELD TEAM LEADER	Date 5/30/94
~~Area Custodian~~: OU Plan Reviewer	Date 7-6-94

This plan expires on 4/31/95
(Date)

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1
1.1 Purpose and Applicability 1-1
1.2 Review and Approval 1-1
1.3 Change Order Control During Field Operations 1-1
1.4 Plan Numbering and Updates 1-1

2.0 SITE IDENTIFICATION AND SCOPE OF WORK 2-1
2.1 Project Identification 2-1
2.2 Site Description and Environmental Setting 2-1
2.3 Site History 2-1
2.4 Description of PRS(s) 2-2
2.4.1 PRS 36-002 - Sump 2-2
2.4.2 PRS 36-003(a) - Septic System 2-2
2.4.3 PRS 36-003(b) - Septic System 2-2
2.4.4 PRS 36-004(a) - Eenie Firing Site 2-3
2.4.5 PRS 36-004(b) - Meenie Firing Site 2-3
2.4.6 PRS 36-004(c) - Minie Firing Site 2-3
2.4.7 PRS 36-004(d) - Lower Slobbovia Firing Site 2-4
2.4.8 PRS 36-004(e) - I-J Firing Site 2-4
2.4.9 PRS 36-005 - Boneyard Near Building 123 2-5
2.4.10 PRS C-36-003 - Photo Outfall, Building 1 2-5
2.5 Scope of Work by Task 2-6
2.6 Impact of Work on Surrounding Area 2-10
2.7 Scheduling 10

3.0 ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES 3-1
3.1 Identification of Key Personnel 3-1
3.2 Organizational Structure and Responsibilities 3-1
3.2.1 Field Team Manager (FTM) 3-1
3.2.2 Field Team Leader (FTL) or Alternate 3-1
3.2.3 Site Safety Officer or Alternate 3-5
3.2.4 Health Physics Support Personnel (ESH-1) 3-6
3.2.5 Field Task Leaders and Field Team Members 3-6
3.2.6 Operable Unit Project Leader (OUPL) 3-7
3.2.7 Health and Safety Project Leader (HSPL) 3-7
3.2.8 ER Health and Safety Team (ER/HS Team) 3-7

3.3 Site Visitors 3-7
3.4 Subcontractors 3-8
3.5 Stop Work Activity and Stop Work Orders 3-9
3.6 Oversight Program 3-9

4.0 HAZARD ASSESSMENT 4-1
4.1 Purpose of Hazard Assessment and Risk Analysis 4-1
4.2 Preliminary Evaluation Information Sources 4-1
4.3 Task-by-Task Hazard Analysis 4-1
4.4 Radiological Information 4-1
4.5 Chemical Information 4-1

5.0 SITE CONTROL MEASURES 5-1
5.1 Site Map 5-1
5.2 Site Work Zones 5-1
5.2.1 Exclusion Zone (EZ) 5-1
5.2.2. Contamination Reduction Zone (CRZ) 5-4
5.2.3 Support Zone (SZ) 5-4
5.3 Site Access Control 5-5
5.3.1 Posting and Labeling Requirements 5-5
5.3.2 Security Badge Requirements 5-5
5.3.3 Entry and Exit Logs 5-5
5.4 Communications 5-5
5.5 Safe Work Practices 5-6
5.6 Sanitation 5-6
5.7 Illumination 5-7

6.0 SITE AND PERSONNEL MONITORING 6-1
6.1 Industrial Hygiene Monitoring 6-1
6.1.1 Direct-Reading Instrument Requirements 6-1
6.1.2 Determination of Action Levels 6-1
6.1.3 Task-Specific Action Response Plan 6-1
6.1.4 Other Monitoring Requirements 6-4
6.1.5 Integrated Industrial Hygiene Sampling 6-4
6.1.6 Sampling Protocols 6-4
6.2 Health Physics Monitoring 6-4
6.2.1 Action Levels and Response 6-4
6.2.2 Bioassays and Personal Dosimetry 6-6

6.2.3 Monitoring for Release Purposes 6-6

7.0 ENGINEERING CONTROLS 7-1

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) 8-1
8.1 Task-Specific PPE Requirements 8-1
8.2 Training and Use Requirements 8-1
8.3 Reassessment of the PPE Program 8-1

9.0 REQUIRED PERMITS 9-1

10.0 DECONTAMINATION 10-1
10.1 General Requirements 10-1
10.2 Personal Decontamination Plan 10-1
10.3 Equipment Decontamination Plan 10-2
10.4 Waste Management 10-2

11.0 MEDICAL SURVEILLANCE 11-1

12.0 PERSONNEL TRAINING AND CERTIFICATION 12-1
12.1 Required Training 12-1
12.2 Site-Specific Training 12-1
12.3 Training Documentation 12-1

13.0 EMERGENCY ACTION PLAN 13-1
13.1 General Requirements 13-1
13.2 Site Emergencies 13-1
13.3 Emergencies at Adjacent Facilities 13-1
13.4 Illness and Injuries 13-1
13.5 Other Information 13-2
13.6 Spill Containment 13-2

14.0 REPORTING AND RECORDKEEPING 14-1
14.1 Reporting Accidents, Occurrences, Illnesses and Injuries 14-1
14.2 Employee Notification Procedures 14-1
14.3 Site Records 14-1

15.0 SAFETY CONSIDERATIONS 15-1
15.1 Heat Stress 15-1
15.1.1 Discussion 15-1
15.1.2 Controls 15-1
15.1.3 Work Schedules 15-2
15.2 Fall Protection 15-4
15.2.1 Discussion 15-4
15.2.2 Caution tape and Fall Restraint 15-4
15.2.3 Covering 15-4

16.0 SITE INSPECTIONS 16-1

APPENDIXES

Appendix A: SSHASP Acknowledgment
Appendix B: Tailgate Safety Meeting Form
Appendix C: Change Order Control Form
Appendix D: Training Matrix
Appendix E: List of Material Safety Data Sheets
Appendix F: Summary of Historical Sampling Data

TABLES AND FIGURES

Table 3-1 Key Project and Support Personnel 3-2

Table 4-1 Task Hazard Analysis by Task 4-2

Table 4.2 Chemical Characteristics and Health Effects 4-12

Table 6-1 Industrial Hygiene Monitoring Instruments, Calibration Requirements, Response Factors, and Action Levels 6-2

Table 6-2 Industrial Hygiene Action Response Plan 6-3

Table 6-3 Health Physics Monitoring and Action Plan 6-5

Table 8-1 Protective Clothing and Accessories by Task 8-2

Table 9-1 Protective Clothing and Accessories by Task 9-1

Table 10-1 Decontamination Technician PPE 11-1

Table 11-1 Checklist for Proof of Medical Surveillance 11-1

Figure 3-1 Organizational Structure and Communication Lines 3-4

Figure 5-1 Control zones for Tasks 5,6, and 9 (not to scale)

Figure 5-2 Support facilities near TA-36

Figure 5-3 Routes to Emergency Services

Emergency Numbers/Contacts 13-4

Emergency Equipment Onsite 13-5

Hospital Map 13-6

LIST OF ACRONYMS AND ABBREVIATIONS

ACGIH ..... American Conference of Governmental Industrial Hygienists
ALARA ..... As Low As Reasonably Achievable
AR ..... Administrative Requirements (LANL ES&H)
CFR ..... Code of Federal Regulations
DOE ..... Department of Energy
DOT ..... Department of Transportation
DRI ..... Direct Reading Instrument
EPA ..... Environmental Protection Agency
ER ..... Environmental Restoration
ER/HS Team .... Environmental Restoration Health and Safety Technical Support Team
ES&H ..... Environmental, Safety & Health
GET ..... General Employee Training
HASP ..... Health and Safety Plan
HAZWOPER ..... Hazardous Waste Operations and Emergency Response (OSHA 29 CFR 1910.120)
HEPA ..... High Efficiency Particulate Air
HPT ..... Health Physics Technician
HSPL ..... Health & Safety Project Leader
HSWA ..... Hazardous and Solid Waste Amendments of 1984 (EPA)
IH ..... Industrial Hygienist
LANL ..... Los Alamos National Laboratory
LEL ..... Lower Explosive Limit
LP ..... Laboratory Procedure
MSHA ..... Mine Safety and Health Administration
MSDS ..... Material Safety Data Sheet
NIOSH ..... National Institute for Occupational Safety & Health
OSHA ..... Occupational Safety & Health Administration
OU ..... Operable Unit (LANL)
OUPL ..... Operable Unit Project Leader
OVA ..... Organic Vapor Analyzer
PEL ..... Permissible Exposure Limit (OSHA)
PPE ..... Personal Protective Equipment
PRS ..... Potential Release Site
RCRA ..... Resource Conservation and Recovery Act of 1980
RCT ..... Radiological Control Technician
REL ..... Recommended Exposure Limit (NIOSH)
RFI ..... RCRA Facility Investigation
RSP ..... Radiological Screening Personnel
RWP ..... Radiological Work Permit
SOP ..... Standard Operating Procedures
SSHASP ..... Site Specific Health & Safety Plan

LIST OF ACRONYMS AND ABBREVIATIONS
(Continued)

SSO.....Site Safety Officer
SWMU.....Solid Waste Management Unit
TA.....Technical Area (LANL)
TLD.....Thermoluminescent Dosimeter
TLV.....Threshold Limit Value (ACGIH)

1.0 INTRODUCTION

1.1 Purpose and Applicability

This Site-Specific Health and Safety Plan (SSHASP) establishes procedures, minimum safety and health requirements, and emergency actions for all personnel involved in the ER Program Field Activities at: Operable Unit (OU) 1130, Technical Area (TA)-36. All field team personnel, subcontractors, regulatory personnel, and visitors must sign a statement (Site Safety and Health Plan Acknowledgment Form, Appendix A) stating that they have read, understood and have agreed to abide by the requirements of this SSHASP. This SSHASP meets the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response; the Los Alamos National Laboratory (Laboratory) Radiological Control (RadCon) Manual, and the Laboratory Environmental Restoration (ER) Program.

1.2 Review and Approval

This SSHASP has been prepared specifically for site activities at: OU 1130, TA-36. Changes in the plan must be approved by the Environmental Restoration Health and Safety (ER/HS) Team and the Site Safety Officer (SSO). As this is a multi-employer work site, a representative from each Laboratory group, contractor, and subcontractor must provide, before the start of any field work, a signature approval denoting agreement that their employees shall work under the minimum requirements of this plan. Under this agreement, all parties performing field work will adhere to this SSHASP.

1.3 Change Order Control During Field Operations

This plan is subject to approved revision based on new or additional site data, contaminant monitoring, visual information, or changes in site conditions or work practices. All changes to this plan must be made and approved in writing and communicated to all field personnel via tailgate safety meetings (Tailgate Safety Meeting,Appendix B) before implementing the change at the site. The Site-Specific Health and Safety Plan Change Order Control Form (Appendix C) must be used to document all changes to this SSHASP.

1.4 Plan Numbering and Updates

This SSHASP has been assigned a unique document control number by the ER/HS Team. (The document control number appears on the title page as SSHASP Plan No. 026 and as a footer on each page of the document). This SSHASP is considered a draft until it has reached final approval by all required parties. Drafts submitted prior to approval will be numbered consecutively. Once the final draft is approved, modifications will be tracked by the ER/HS Team using Change Order Control Forms Each additional Change Order Control will be consecutively numbered using the SSHASP plan number (026), followed by a decimal point and a suffix (i.e., 026.1, 026.2, 026.3...etc.).

2.0 SITE IDENTIFICATION AND SCOPE OF WORK

This section of the SSHASP provides a brief site description and site history, identifies solid waste management units (SWMU) and potential release sites (PRS) affected, and describes the scope of work on a task-by-task basis.

2.1 Project Identification

Project Title: Environmental Restoration Program for Operable Unit 1130

OU: 1130 **TA:** 36

SWMU(s): 36-002, 36-003(a,b), 36-005

PRS(s): 36-002, 36-003(a,b), 36-004(a-e), 36-005, C-36-003

Project Objective: Characterize and define type and extent of potential contamination at 36-002, 36-003(a,b), 36-004(a-e), 36-005, and C-36-003

Work Classification: (X) Environmental restoration
( ) Interim action
( ) Non-environmental restoration
( ) Decontamination and decommissioning

2.2 Site Description and Environmental Setting

OU 1130 comprises TA-36, TA-68, and TA-71, which are contiguous and cover a total of approximately 7 square miles. The latter two TAs are areas in which no Laboratory activities are performed. The PRSs in this OU are all in TA-36.

2.3 Site History

TA-36, the site of the Laboratory group currently designated as DX-11, is an explosives testing area comprised of five firing sites that are used to conduct a total of approximately 1,500 explosives tests annually. Other activities include the storage and assembly of prefabricated metal and explosives components, detonators, cables, and instrumentation (including several x-ray machines) for shots. TA-36-1 housed office facilities for M-8 personnel and a photo processing facility. Past disposal practices have included burial, surface disposal, burning, and liquid discharge through outfalls.

2.4 Description of PRS(s)

2.4.1 PRS 36-002 - Sump

This sump, located on a mesa south of Potrillo Drive, was constructed in September 1965 to receive the drainage from two sinks in Building TA-36-48. The sump is an unlined pit that is filled to a depth of 6 ft with coarse rocks, approximately 3 inches in diameter, and is covered by a 4-ft by 6-ft aluminum plate. TA-36-48 was initially used for shot assembly and for temperature-controlled experiments. Depleted uranium (DU) was cut, lapped, and polished in this building.

There has been no reported sampling of the sump, so it is not known whether it is contaminated. However, contaminants might have been discharged to the sump through the sinks. Materials used in the shot assembly process included known contaminants, and the fact that the sinks and drains were designed to handle chemicals supports further the idea that this sump was designed to handle industrial wastes. The cumulative discharge of contaminants to the sump is unknown but most likely small because, until recently, the building was used no more than 10 times per year. Shot assembly and DU preparation have been discontinued at this site, so no contaminants are being discharged to the sump at the present time.

2.4.2 PRS 36-003(a) - Septic System

This septic system, constructed in 1949, was designed to handle sanitary wastes from facilities in TA-36-1 and TA-36-22. The septic system has six components: a 1,160-gal.-capacity septic tank; a 23-in.-diam manhole of unknown depth; a second manhole positioned on the line between the septic tank and the first manhole; a 26-in. by 20-in. by 27-in. distribution box and leach field consisting of four 200-ft-long perforated tile pipes; a 4-ft-diam. by 50-ft-deep gravel-filled seepage pit; and associated drain lines connecting the various parts.

For many years, spent photochemicals from the x-ray-developing process were discharged into the system. In 1990 or 1991, the practice of discarding photochemicals in the sink to drain to the septic system was discontinued. The x-ray-processing rinse water continues to go to the sanitary system, but this system was recently disconnected from the septic system and connected to the Laboratory's sanitary waste line. One floor drain in the photo-processing room connects to the sanitary system; amounts of contaminants discarded into this floor drain are estimated to be small.

2.4.3 PRS 36-003(b) - Septic System

This septic system was built to handle sanitary waste from a bathroom and sink in Building TA-36-55. This building is a bunker that houses electronics and instrumentation for the firing site. No explosives assembly is conducted in this bunker. The septic system has three components: a 420-gal. reinforced concrete septic tank; a 4-in.-diam. tile pipe that connects the tank to TA-36-55; and a buried overflow pipe (outfall). The tank is pumped periodically, and the effluent is taken to the Laboratory sanitary treatment plant. In 1989, the outfall was capped because of potential direct discharge to the environment .

Although this PRS is associated with I-J firing site, there is no evidence that hazardous or radioactive materials or other potential contaminants of concern were ever discharged to this septic system. No testing has ever been performed below the inactive outfall; however, the probability of contamination is very low.

2.4.4 PRS 36-004(a) - Eenie Firing Site

This active firing site, commonly called Eenie, is located on a mesa top overlooking Potrillo Canyon. The only permanent structures at this site are a control bunker (TA-36-3); a make-up building with container storage (TA-36-4); and an impact area. The established hazard radius for this site is 3,000 ft.

The construction of Eenie Site was begun in July 1949 and completed in July 1951. The amount of contamination present at Eenie firing site is unknown. In addition to the types of shots usually fired, shoulder-mounted projectiles have been fired into targets south of the firing site. A few of the shots fired at the site have contained small amounts of lead oxide; mercury, copper, nickel, and brass have been used more frequently. Shots containing DU have been detonated at this site, and at least two shots fired at Eenie contained nitroglycerine. However, most of the shots are believed to have contained relatively small amounts of hazardous substances.

2.4.5 PRS 36-004(b) - Meenie Firing Site

This active firing site, commonly called Meenie, is located in Fence Canyon. This site comprises a make-up/magazine building (TA-36-5); a control bunker (TA-36-6); and an impact area. The established hazard radius for this site is 3,000 ft.

The construction of Meenie Site began in July 1949 and completed in June 1950. The site has been used for extensive gun work; shots have been fired into the cliff to the north as well as into the embankment south of the firing area. Shots of up to 300 lb have been fired, and at least one shot was detonated that contained 60 gal. of nitro-methane sealed in an aluminum cylinder. Until 1971, lead bricks were often used as parts of the shots. Sometimes these bricks were pulverized during detonation. The amount of contamination present at Meenie firing site is unknown.

2.4.6 PRS 36-004(c) - Minie Firing Site

This active firing site, commonly called Minie, is located on the mesa top in the headwaters of Fence Canyon approximately 800 ft south of Meenie. This site consists of an x-ray house, a control bunker (TA-36-8), a firing platform, and a make-up building (TA-36-7). The established hazard radius for this site is 3,000 ft.

The construction of Minie Site began in July 1949 and was completed in June 1950. Many armor-piercing experiments that involve the use of various metal penetrators are conducted at this site. The penetrator jets are directed at the canyon wall to the west; most of the penetrators are stopped by metal plates placed behind the targets. Permitted open burning (detonation) of waste, scrap explosives, and unstable gas cylinders has been conducted at

the explosives destruction area within this firing site. The amount of contamination present at Minie firing site is unknown.

2.4.7 PRS 36-004(d) - Lower Slobbovia Firing Site

This active firing site, commonly called Lower Slobbovia, is located on a flat area at the eastern end of Potrillo Drive in the bottom of Potrillo Canyon. This site has two active firing points, the first located on top of a pad of dirt and sand approximately 100 ft in radius near the control building (TA-36-12) and the second located at the northwest end of a 1,000-ft-long sled track adjacent to PIXY (TA-36-86). Oil tanks used for PIXY stand approximately 165 ft south of this firing point. In a small side canyon, approximately 2,300 ft upstream and west of Lower Slobbovia, there is an inactive firing point known as Skunk Works. The established hazard radius of Lower Slobbovia is 3,000 ft.

Construction at this firing site was finished in 1950. The site has been used for explosives testing since 1951 or 1952. Skunk Works was used only in the early to mid-1950s. In 1986, the original firing mount was enlarged to provide for a newly installed sled track.

Shots fired at Lower Slobbovia have contained such materials as explosives, DU, lead, copper, aluminum, steel, barium, and plastics. However, less than 2% of the shots are estimated to have contained large amounts of metal. Explosives used at this site may have included TNT, baratol, HMX, RDX, and plastic-bonded explosives. The largest shot fired at Lower Slobbovia was 5,000 to 6,000 lb of explosives containing no metal parts. In 1959, 248 cans of detonators were exploded using nitromethane. In addition, several underground tests, buried to a depth of approximately 100 ft, were conducted at this site. A wooden tower, which once stood between PIXY and the original firing point, was used to conduct drop tests.

Before the first MDA-AA trench was dug in the mid-1960s, two contaminated burn pits near TA-36-12 were used to burn firing site debris; these are likely to be contaminated. After MDA-AA was opened, these burn pits were no longer used. The amount of contamination present at Minie firing site is unknown.

2.4.8 PRS 36-004(e) - I-J Firing Site

This active firing site, commonly called I-J, is located on the north leg of R-Site Mesa overlooking Potrillo Canyon. The site consists of two active firing points (I and J), two control buildings, a dirt bunker, a covered work area, and an old chamber for enclosed firing. Firing Point I, which has a firing pad radius of 15 ft, is located about 75 ft northeast of the old control building; Firing Point J is located near the control building (TA-36-55). The established hazard radius for the site is 5,000 ft.

The construction of I-J firing site began in 1948, and it was ready for use by 1949 or 1950. This firing site was part of TA-15 until about 1981, when TA-36 was enlarged to include I-J.

At I-J firing site, shots of up to 500 lb of explosives were fired. The explosives used included boracitol, baratol, TNT, Composition B, cyclotol, 9404, and nitromethane. Solid explosives shots were aimed downward, and liquid explosives shots were aimed upward.

The liquid explosives included benzene-ring compounds, n-hexane, cyclohexane, nitrogen oxide, nitroglycerin, nitromethane and TNT. Some shots were fired into iron, copper, and lead targets. Other metals used in shots included aluminum, antimony, various steels, lithium-magnesium alloys, and lithium hydride. In addition, hydrocarbons, argon, benzene, small amounts of mercury, cadmium, and beryllium were used.

In the early years, DU was also in heavy use at this site. However, all of the shots fired at this site using radioactive materials were fired in fully containing vessels, with any releases being captured by the environ-efficiency filters. One such vessel (SWMU C-36-001), after being decontaminated, was brought back to I-J site, where it still remains. The 1990 SWMU report identified an additional PRS, which it referred to as SWMU 15-006(e), within the bounds of I-J site. In the late 1980s approximately 138 lb of DU, in the form of bullets, was used in projectiles that were fired into the cliff face. This projectile-testing site, now renamed PRS C-36-006(e), together with the rest of I-J site, is now part of TA-36.

2.4.9 PRS 36-005 - Boneyard Near Building 123

This surface storage area, known as the Boneyard, is located across the road from Building TA-36-7, near the Minie firing site. It is an undeveloped area, measuring approximately 500 ft by 300 ft, that is largely covered with grass and ponderosa pine. Until the late 1970s, the Boneyard was used as a parking area for trailers and other large non-waste items. From the late 1970s to the late 1980s, the area was used as a surface storage area for large waste items that had been exposed to explosives testing.

Waste items at the Boneyard consisted of metal drums, cans, and cylinders, and scrap metals such as lead sheets, copper, uranium-contaminated steel, and iron. Many of these items were test targets. As a consequence of the 1986 CEARP report, the Boneyard underwent a major cleanup at which time cans labeled "Isopentane," "uranium-contaminated iron," and "steel" and unmarked drums and cylinders were removed from the site. The site is currently used for storing usable non-waste items. Many small fragments of metal, plastic, bolts, etc. lie on the surface or are embedded in the ground amid the natural vegetation.

2.4.10 PRS C-36-003 - Photo Outfall, Building 1

This permitted outfall is located north of Building TA-36-1. The outfall extends out a few feet over the steep sloping edge of Threemile Canyon. Threemile Canyon eventually joins Pajarito Canyon downstream. Building TA-36-1 became operational in 1950; the outfall is thought to have become operational sometime during that same decade. At one time, spent photo-processing fluids may have been discharged to this outfall; this no longer occurs. Currently, the ground beneath the outfall is covered with vegetation, organic matter, rocks, and soil.

2.5 Scope of Work by Task

Task 1—Engineering Surveys at All PRSs

Engineering surveys will be conducted at all PRS's in order to establish the coordinates of sampling sites, or to locate and stake sampling sites based on pre-determined coordinate positions of the sites. Many of these PRS's may contain radioactive or hazardous contaminants in surface soils (See Appendix F) but concentrations of contaminants, if present, are expected to be low. Other than the placing of survey stakes, no intrusive activities are included in this task. This task does not present a significant hazard to site workers.

Task 2— Radiation Surveys at PRS 36-004(d), 36-005

Radiological surveys will be conducted at these PRS's in order to determine the level of gross beta/gamma and low-energy gamma radiation in the surface soil. These surveys will follow the engineering surveys described above. The surveys will be performed in areas which may contain radioactive or hazardous contaminants in surface soils (See Appendix F) but concentrations of contaminants, if present, are expected to be low. Other than the placement of stakes to identify areas with elevated radiation levels, no intrusive activities are included in this task. This task does not present a significant hazard to site workers.

Task 3—Geophysical Surveys at PRS 36-003(a,b), 36-004(e)

Geophysical surveys using ground penetrating radar (GPR) and/or electromagnetic resistivity (EM) will be conducted at these PRS in order to locate the drain fields associated with these systems. Some areas of this PRS may contain radioactive or hazardous contaminants in subsurface soils (See Appendix F) however, surface contamination is not expected. This non-intrusive survey does not present a significant hazard to site workers.

Task 4—Geomorphic Surveys at PRS 36-003(b), 36-004(a-e), 36-005, C-36-003

Geomorphic surveys will be conducted at these PRS in order to identify sediment catchment areas and locations where sediment sampling may occur. Some areas of this PRS may contain radioactive or hazardous contaminants in subsurface soils (See Appendix F), but concentrations of contaminants, if present, are expected to be low. Except for possible scraping of surface soils along stream channels banks or other areas, this is a non-intrusive survey and does not present a significant hazard to site workers.

Task 5—Sludge and Liquid Sampling at the Sump, PRS 36-002

A backhoe equipped with a clamshell or similar tool will be used to remove the rock fill from the sump. Samples of sludge within the rock fill will be collected at three depths below the discharge point of the pipe entering the sump. Samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992). Storage will be consistent with Laboratory requirements for materials that are potentially mixed wastes. If liquid is

present, two liquid sludge samples will be collected from the near-bottom of the sump using a coliw...a or teflon mucksucker in accordance with protocols established in LANL-ER-SOP-06.15, Collwasa Liquid Waste Sampler for Liquids and Slurries (LANL 1992).

Hazardous or radioactive contaminants could be present in either the sludge or liquid in this sump (See Appendix F). Before sampling is conducted at the sump, its metal cover will be removed, and the head space above the backfill will be screened for combustible gases and organic and radioactive constituents. The sampling area will be screened for organic and radioactive constituents for the duration of the sludge and liquid sampling activities. In addition, selected field samples will be screened for explosives using a field spot-test kit.

Task 6— Subsurface Sampling at Sump, PRS 36-002

If the sludge samples obtained during task 5, above, are detected to have contaminants of concern above screening action levels, a hollow-stem auger drill rig with a core barrel (or similar rig) will be used to drill three holes inside the excavated sump, and three holes outside its perimeter. The holes will be drilled to depths of approximately 5 ft below the bottom of the sump in order to determine whether potential contaminants of concern are migrating out of the sump. Holes will be ...lled to greater depths if visual indicators (such as indications of staining, wet intervals, change in color or texture, etc.) or field screening measurements suggest that contamination extends deeper. Continuous cores and two samples will be collected from each hole. One sample will be collected from the top 6 in of each hole, and the other sample location will be approximately 2 ft below the bottom of the sump. Core and sample collection will be carried out in a manner consistent with protocols established in LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler and/or LANL-ER-SOP-06.24, Sample Collection from Split Spoon Samplers and Shelby Tube Samplers (LANL 1992).

Hazardous or radioactive contaminants could be present in the subsurface soil below this sump (See Appendix F). Upon retrieval of subsurface soil samples, the samples will be screened for organic and radioactive constituents both prior and subsequent to opening the core barrel. In addition, selected field samples will be screened for explosives using a field spot-test kit.

Task 7—Fluid and Sludge Sampling at Septic Systems, PRS 36-003 (a,b)

Two fluid and two sludge samples will be collected from the interior of the tanks located at this PRS by either a collwasa or teflon mucksucker in accordance with protocols established in LANL-ER-SOP-06.15, Collwasa Liquid Waste Sampler for Liquids and Slurries (LANL 1992). There will be no entry into confined spaces.

Hazardous or radioactive contaminants could be present in either the fluid or sludge in these tanks (Appendix F). Before sampling is conducted in the tanks, their metal covers will be removed, and the head space above the backfill will be screened for combustible gases and organic and radioactive constituents. The sampling area will be screened for organic and radioactive constituents for the duration of the sludge and liquid sampling activity. In addition, selected samples will be screened for explosives using a field spot-test kit.

Task 8—Surface Soil Sampling at Septic Systems, PRS 36-003 (b)

If the discharge pipe from this PRS is buried, one sample will be taken at the end of the pipe and another approximately 1 ft away and 6 in below the previous sample. The depths at which these soil samples are taken will depend on the depth of the end of the pipe. Samples will be collected in accordance with protocols established in LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler and/or LANL-ER-SOP-06.24, Sample Collection from Split Spoon Samplers and Shelby Tube Samplers (LANL 1992).

If the pipe discharges to the surface, one sample will be taken near the end of the pipe, and three other samples will be collected along the likely migration pathway. Samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992).

Hazardous or radioactive contaminants could be present in the surface soil near the discharge pipe (Appendix F). The sampling area will be screened for organic and radioactive constituents prior to sample collection. In addition, selected samples will be screened for explosives using a field spot-test kit.

Task 9—Subsurface Soil Sampling at Septic Systems, PRS 36-003 (a)

A total of six holes will be drilled at random locations within the leach field using a hollow-stem auger drill rig with core barrel (or similar rig). Continuous cores will be collected from each of the six holes, and three samples will then be taken from each core. One of the three samples will be from the depth of the tiles, one from the fill/tuff interface, and one from the underlying tuff. Core and sample collection will be conducted in accordance with protocols established in LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler and/or LANL-ER-SOP-06.24, Sample Collection from Split Spoon Samplers and Shelby Tube Samplers (LANL 1992).

Hazardous contaminants could be present in the subsurface soil below the leach field (See Appendix F). Upon retrieval of subsurface soil samples, the samples will be screened for organic and radioactive constituents both prior and subsequent to opening the core barrel. In addition, selected field samples will be screened for explosives using a field spot-test kit.

Task 10—Water and Sediment Sampling at Active Firing Sites, PRS 36-004 (a-e)

Water and sediment samples will be collected from major canyons that drain the firing sites. These samples will be analyzed to determine whether contaminants have been transported by surface water runoff. Surface sediment samples (from depths of 0–6 in.) will be collected from areas in Water Canyon, Fence Canyon, and Potrillo Canyon in which sediments have accumulated as a result of transport, as determined by the geomorphic survey. Water and sediment samples will be collected from the same approximate locations, but not at the same time. Sediment samples will not be collected from under water. A minimum of one water and one sediment sample will be collected from each of four sediment deposition

areas in each canyon. Sedin samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992,). Water samples will be collected in accordance with protocols established in LANL-ER-SOP-06.13, Surface Water Sampling (LANL 1992).

Hazardous or radioactive contaminants could be present in the water and sediment in these PRS's (See Appendix F), but concentrations of contaminants, if present, are expected to be low. The sampling area will be screened for organic and radioactive constituents prior to sample collection. In addition, selected samples will be screened for explosives using a field spot-test kit.

Task 11—Surface Soil Sampling at the Boneyard, PRS 36-005

Eight surface samples (from 0-6 in.) will be collected from each of the four strata. Soil or sediment samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992).

In addition, two surface samples (from 0–6 in.) will be collected from an area within the hazard radius of Meenie and Minie firing sites, but outside the observed area of contamination at the Boneyard site. Because the Boneyard is within the hazard radius of these active firing sites and continues to receive shrapnel from both of these sites, these samples will be used to evaluate contamination originating from active firing sites. Samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09.

Hazardous or radioactive contaminants could be present in the surface soil at this PRS (See Appendix F). The sampling area will be screened for organic and radioactive constituents prior to sample collection. In addition, selected samples will be screened for explosives using a field spot-test kit.

Task 12—Surface Soil, Sediment, and Water Sampling at the Photo Outfall, PRS C-36-003

Six surface soil and sediment samples (from 0-6 in.) will be collected downstream within approximately 200 ft of the outfall. The exact sampling locations will be determined in the field, based on the results of the geomorphic survey. These six samples should be sufficient to characterize the area accurately, given the expectation that the potential and of moderate variability. If visual inspection (as described in Section 5.2.5.2 of this work plan) and field screening measurements indicate the presence of additional areas of potential contamination, more samples may be collected for analysis. Surface samples will be collected in accordance with protocols established in LANL-ER-SOP-06.09.

One sample of the outfall water will be collected if water is found to be flowing at the site. This water sample will be collected in accordance with protocols established in LANL-ER-SOP-06.13, Surface Water Sampling (LANL 1992).

Hazardous or radioactive contaminants could be present in the surface soil, sediment and water at this PRS (Appendix F), but concentrations of contaminates, if present is expected

to be low. The sampling area will be screened for organic and radioactive constituents prior to sample collection.

Task 13—Preserving Water Samples, Rinsate Blanks, and Field Blanks

All water samples, rinsate blanks, and field blanks will require preservation with nitric or hydrochloric acid. This is accomplished by adding approximately 5 ml of acid per liter of sample. This task will be performed off-site or at the point of sampling. Provided that adequate ventilation is maintained, this task does not present a significant hazard to site workers.

2.6 Impact of Work on Surrounding Area

Work activities will be conducted near active firing sites where explosives tests are conducted. Access to the PRS's will be coordinated through appropriate DX-11 personnel. In addition two sample locations at the photo outfall and the leach field are located in areas controlled by TA-18. Access to these sample locations will be coordinated through appropriate TA-18 personnel.

2.7 Scheduling

The following schedule provides the most current date for mobilization to the site, and the time frames for each task at the time this SSHASP was developed. It is not unreasonable to assume that the dates will change due to unforeseen delays. This schedule also makes it appear that non-intrusive work will be occurring at the same time as intrusive work. This is not expected to occur in the field, however if such an event does occur, the PPE and engineering controls required to perform the more hazardous activity will take precedence.

Mobilization to site: May 16, 1994

Begin Task 1:	May 17, 1994	Demobilization:	May 23, 1994
Begin Task 2:	May 19, 1994	Demobilization:	May 24, 1994
Begin Task 4:	June 1, 1994	Demobilization:	June 2, 1994
Begin Task 5:	May 16, 1994	Demobilization:	May 17, 1994
Begin Task 6:	July 18, 1994	Demobilization:	July 19, 1994
Begin Task 7:	May 23, 1994	Demobilization:	May 24, 1994
Begin Task 8:	June 1 , 1994	Demobilization:	June 7, 1994
Begin Task 9:	June 6 , 1994	Demobilization:	June 7, 1994
Begin Task 10:	June 13, 1994	Demobilization:	June 27, 1994
Begin Task 11:	June 27, 1994	Demobilization:	July 5, 1994
Begin Task 12:	July 11, 1994	Demobilization:	July 11, 1994
Begin Task 13:	May 16, 1994	Demobilization:	June 27, 1994

3.0 ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

3.1 Identification of Key Personnel

Table 3-1 identifies the individuals with key responsibilities for implementing, using, and maintaining the SSHASP during this project. The table is divided between Site Personnel and Support Personnel.

Figure 3-1 shows the lines of authority and communication for the key individuals listed in Table 3-1. The responsibilities assigned to each job title are discussed in Section 3.2.

3.2 Organizational Structure and Responsibilities

3.2.1 Field Team Manager (FTM)

Directs all field work. Assigns, with OUPL approval, personnel for all positions on the field team. Establishes schedules for all sampling, and coordinates all non-team support such as mobile laboratory services, EM-9 analytical support, other contractors, ESH-5 oversight, etc.

Will participate in sampling activities, but primarily as an observer. Will not be directly responsible for the collection, containerization, and documenting of samples. Will not necessarily be present at all times during sampling events, but will be fully aware of all ongoing activities. Will provide continuing oversight of all field activities to ensure they are in compliance with written SOPs, and are being conducted in a professional manner. Reviews all field documentation to ensure compliance with requirements. Will ensure that all support personnel, such as the Site Safety Officer, radiation protection staff, etc., are fully aware of, and properly conducting their responsibilities.

3.2.2 Field Team Leader (FTL) or Alternate

The FTL is responsible for ensuring the safe and successful completion of the project. The FTL works with subcontractor supervisors, assigned field task leaders, and the SSO to manage field operations and implement and execute the comprehensive work plan, the Operable Unit Health and Safety Plan (OUHSP), the SSHASP, the sampling and analysis plan (if specified), and the project-specific Quality Assurance Project Plan. Specific health and safety responsibilities include:

- Notifying the ER/HS Team of any schedule changes;
- Implementing emergency action procedures; and
- Fulfilling notification requirements.

Table 3-1

Key Project and Support Personnel

Site Personnel			
Surface Sampling			
Title	Name	Organization	Phone/ Pager
Field Team Leader	Mike Henke	ESA - 4	665-1115
Alternate Field Team Leader	Peter Gram	ICF Kaiser Inc.	661-5207
Site Safety Officer (SSO)	Ken H. McFadden or Alternate	Morrison Knudsen	662-7300
Samplers	Nancy Ness Jeff Bingham Johnny Garcia	ICF Kaiser Inc. ESA - 4 ESA - 4	661-5219 665-7434 665-7434
Backhoe Operator	Ambrose Coriz	ICF Kaiser Inc.	661-5200
Driller	Peter Gram	ICF Kaiser Inc.	661-5207
General Site Support			
Title	Name	Organization	Phone/ Pager
Alternate SSO	Wayne Stevenson	Morrison Knudsen	662-7300
Alternate SSO	Brian Pais	Morrison Knudsen	662-7300
Alternate SSO	Willy Piispanen	Morrison Knudson	662-7300
Alternate SSO	Andre Gonzalez	Morrison Knudsen	662-7300
Health Physics Technician (HPT)	John Taylor	EDI	881-9427
Site Assistance	Joe Balderas Jeff Bingham Johnny Garcia	ESA - 4	665-7434 665-7934 665-2224
Engineering Surveyors	Martin Gabaldon Tom Peiffer	ICF Kaiser Inc. ICF Kaiser Inc.	661-5248 661-5251
Geomorphic Surveyor	Peter Gram	ICF Kaiser Inc.	661-5207
Schedule Coordinators	Wilette Wehner Nancy Riebe	ICF Kaiser Inc. ICF Kaiser Inc.	665-7751 661-4348
Data Management Coordinator	Judith Cohn	ICF Kaiser Inc.	661-5264
Data Specialist	Kathy Gonzales	ESA-4	662-7300

Table 3-1

Key Project and Support Personnel
(continued)

Site Personnel (Continued)			
General Site Support			
Title	Name	Organization	Phone/ Pager
Equipment	Stephanie Lovato	ICF Kaiser Inc.	661-5234
	Nancy Ness	ICF Kaiser Inc.	661-5219
Subcontractor Supervisory Personnel			
Title	Name	Organization	Phone/ Pager
Project Manager	Lynn Kidman	ICF Kaiser, Inc.	661-5227
Project Manager	Pat Griffin	Morrison Knudsen	662-7300
HPT Supervisor	Stan Waligora	EDI	881-9427
Support Personnel			
Title	Name	Organization	Phone/ Pager
OU Project Leader (OUPL)	Gene Gould	ESA-4	667-0402
Alternate OUPL	Merlin Wheeler	ICF Kaiser	667-7377
Health and Safety Project Leader (HSPL)	Susan Alexander	ESH-5	667-5722
OU HS Representative	George Marino	ESH-5	665-8458

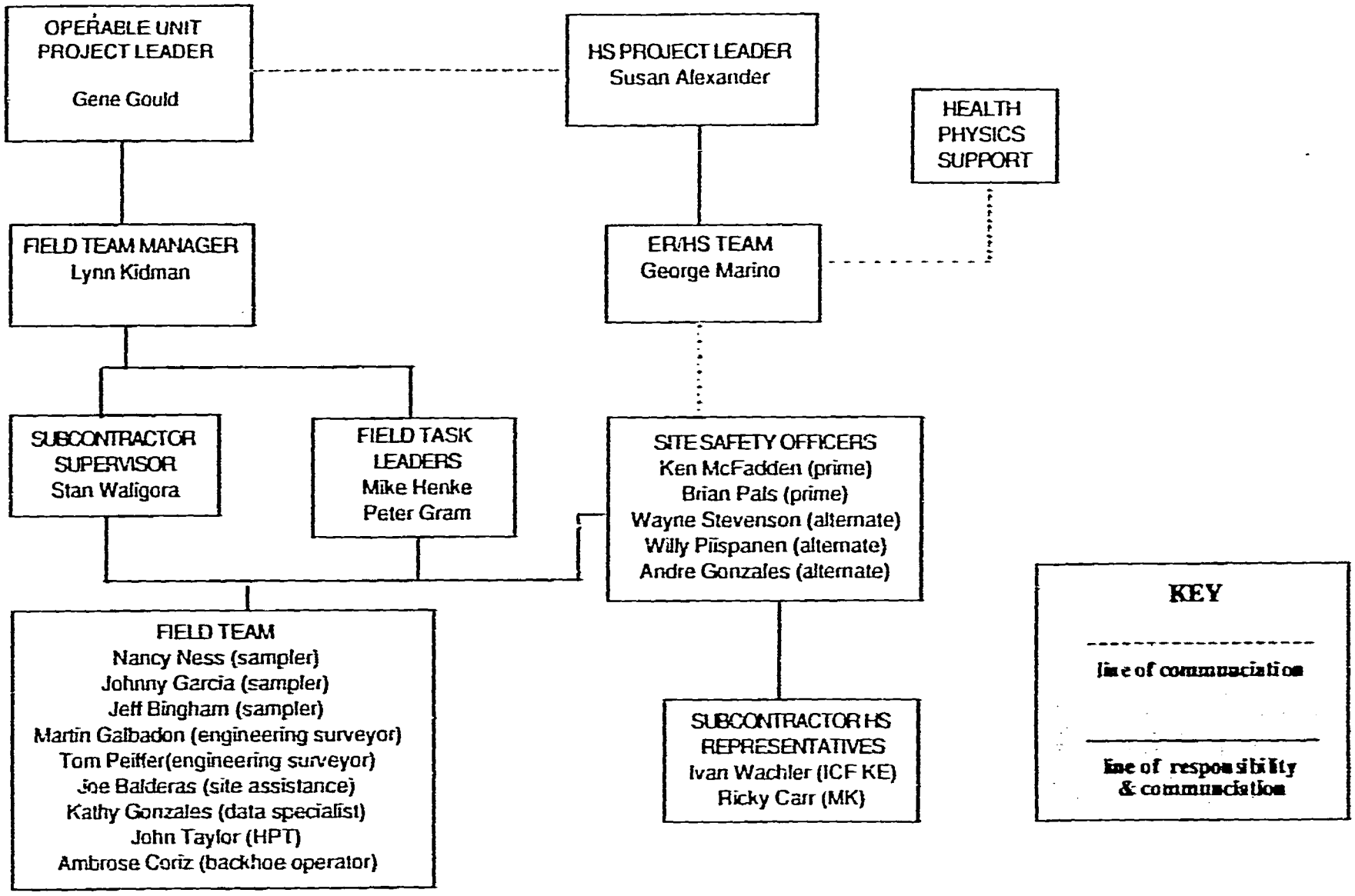


Figure 3.1 Organizational Structure and Communication Line

3.2.3 Site Safety Officer or Alternate

The SSO maintains the ultimate authority for the implementation of the SSHASP and serves as the primary contact for health and safety issues. Specific responsibilities include the following:

- Coordinating with the FTL to implement the SSHASP
- Keeping the HSPL and OUPL apprised of project health and safety issues
- Maintaining a current copy of the SSHASP and any Change Order Controls at the site and assuring their availability
- Ensuring that all personnel on site are trained in accordance with requirements in the SSHASP
- Establishing site control areas specified in the SSHASP
- Ensuring that all personnel on site comply with SSHASP requirements
- Determining personal protective equipment (PPE) requirements for workers with assistance from ESH-1 and ESH-5
- Stopping work when unsafe conditions develop or an imminent danger is present
- Performing and documenting daily inspections of the site
- Providing and maintaining first aid and communications equipment
- Conducting and documenting daily health and safety briefings for field team members
- Scheduling and performing personal and environmental monitoring and evaluating analytical results for health and safety considerations
- Notifying sampled personnel of sampling results in writing
- Determining whether site personnel can perform their jobs safely under prevailing weather conditions
- Maintaining a logbook for site personnel and visitors entering and exiting exclusion zones
- Briefing visitors on heath and safety issues and ensuring their compliance with the SSHASP
- Functioning as the site emergency coordinator until Laboratory emergency response takes control of the scene
- Maintaining the list of emergency phone numbers and contacts at the site
- Notifying proper Laboratory authorities of injuries, illnesses, emergencies, or stop-work orders.

3.2.4 Health Physics Support Personnel (ESH-1)

ESH-1 has reviewed this SSHASP and has determined that the SSHASP had sufficient information to substitute for a radiological work permit.

ESH-1 Technician Coverage

ESH-1 will have a "pool" of Radiological Control Technicians (RCT) and/or Health Physics Technicians (HPT) responsible for providing radiological control support to the ER program. These technicians will serve as "rovers" and will visit field sites on a periodic basis. A listing of assigned Operable Units (OUs) and pager numbers will be assembled and ESH-1 technicians will respond to sites on an on-call basis in addition to daily rounds.

Subcontractor RCTs/HPTs

In addition to field team members performing limited radiological surveillance, ESH-1 will approve subcontractor personnel to serve as RCTs/HPTs. This approval will be granted on a case-by-case basis based on review of qualifications (experience, education, etc.). Once approved, these personnel would then be considered "equivalent" to ESH-1 technicians and would be authorized to perform all radiation protection functions in accordance with ESH-1 procedures and with ESH-1 oversight.

Responsibilities

Health physics support personnel (RCT, HPT) are the primary source of information and guidance on radiation protection. They will monitor compliance with radiological requirements of this SSHASP or the radiological work permit and will conduct monitoring as established and documented by the radiological work permit and/or SSHASP. Other responsibilities include

- Performing and documenting radiological surveys at the site;
- Providing guidance for radiological decontamination of equipment and personnel; and
- Maintaining notification and reporting requirements as specified in DOE Order 5000.3B.

3.2.5 Field Task Leaders and Field Team Members

Field task leaders and team members are responsible for complying with the requirements of this plan, fulfilling and maintaining their individual training requirements, and following safe work practices. They must notify their supervisor and the SSO immediately if unsafe conditions exist, or if there are any injuries, illnesses, or unusual events which could impact the health and safety of site personnel.

- Providing guidance for radiological decontamination of equipment and personnel; and
- Maintaining notification and reporting requirements as specified in DOE Order 5000.3B.

3.2.5 Field Task Leaders and Field Team Members

Field task leaders and team members are responsible for complying with the requirements of this plan, fulfilling and maintaining their individual training requirements, and following safe work practices. They must notify their supervisor and the SSO immediately if unsafe conditions exist, or if there are any injuries, illnesses, or unusual events which could impact the health and safety of site personnel.

3.2.6 Operable Unit Project Leader (OUPL)

The OUPL is responsible for all RFI activities, including health and safety, within their assigned OU.

3.2.7 Health and Safety Project Leader (HSPL)

The HSPL oversees health and safety performance related to the Laboratory ER program and directs the activities of the ER/HS Team. The HSPL provides guidance and assistance on health and safety matters to the ER program OUPLs.

3.2.8 ER Health and Safety Team (ER/HS Team)

Industrial hygiene, health physics and safety support is coordinated through the HSPL and the ER/HS Team. The ER/HS Team is made up of the HSPL and a supporting staff which includes ESH-5 employees and/or representatives from subcontractors supporting ESH-5 and ESH-1 employees and/or representatives from subcontractors supporting ESH-1. The ER/HS team is responsible for the following:

- Evaluating qualifications of personnel performing health and safety roles in the field
- Providing assistance in preparing SSHASPs
- Reviewing SSHASPs for approval
- Coordinating health and safety support
- Providing technical support and consultation
- Maintaining health and safety oversight
- Performing field verifications to ensure compliance with OSHA and Laboratory requirements
- Providing guidance on obtaining necessary permits
- Providing field support by prior arrangement.

3.3 Site Visitors

All site personnel who are on site to collect samples or who must enter controlled work zones must meet all the health and safety requirements of this SSHASP, and will be asked to sign an acknowledgment to this effect.

Visitors who will not be collecting samples or entering site control areas will abide by the following rules:

1. Report to the SSO or FTL upon arrival at the site;
2. Login/Logout upon entering and exiting the site;
3. Receive abbreviated site training from the SSO or his designee on the following topics:
    - site-specific hazards,
    - site protocol,
    - emergency action procedures, and
    - muster areas.
4. Shall not be permitted to enter the exclusion zone or contamination reduction zone;
5. Shall be escorted by the SSO or other qualified personnel at all times.

If a visitor does not comply with these requirements, the SSO or FTL will request the visitor to leave the site immediately.

3.4 Subcontractors

The SSO has the ultimate authority for implementation of the SSHASP and is responsible for the health and safety of all subcontractors involved with site operations. Subcontractors will adhere to the requirements of all applicable health and safety plans. If any conflicts arise between the SSO and subcontractor personnel, the field activity will cease until the conflicts are resolved. Laboratory personnel shall audit activities to ensure full Laboratory and OSHA compliance. Failure to adhere to these requirements may cause work to stop until compliance is achieved.

An official for each subcontractor has certified that all of their field personnel have been evaluated for enrollment in medical surveillance, have participated in the appropriate training and certification, and have been provided with approved personal protective equipment.

3.5 Stop Work Activity and Stop Work Orders

Stop Work Activity

As soon as it is concluded that conditions or practices exist which constitute an imminent danger, the FTL, SSO, or a designee will verbally notify supervisors and site personnel of the danger, and all personnel shall be removed from the area of imminent danger immediately. A single activity, such as the removal of defective equipment or the removal of site personnel from a section of scaffolding which is defective, may be ordered stopped without stopping the whole job. The SSO or designee will notify the ER/HS Team of any Stop Work Activity. The ER/HS Team will authorize restart only when it has made a determination that hazards have been completely abated.

ESH-1 technicians and their supervisors shall have the responsibility and authority to stop work or mitigate the effect of an activity if they suspect that the initiation or continued performance of a job, evolution, or test will result in the violation of radiological control standards, or result in imminent danger/unacceptable risk.

Stop Work Order

An individual observing an operation that presents a clear and imminent danger to the environment or to health and safety of site personnel, subcontractors, visitors or the public has the authority to initiate a stop-work action. A formal Stop Work Order can be issued only by a Laboratory Contract Administrator. Technical or discipline experts for industrial hygiene, health physics, and environmental protection may provide recommendations to the Contract Administrator regarding the need to issue a Stop Work Order. Procedures for issuing formal written Stop Work Orders and Restart are contained in Laboratory Procedure 116, "Stop Work and Restart."

3.6 Oversight Program

Oversight will be maintained to ensure compliance with regulatory requirements. Laboratory Environmental Safety and Health Division is responsible for developing and implementing the oversight program. The frequency of field verifications will depend on the characteristics of the site, the equipment used, and the scope of work.

4.0 HAZARD ASSESSMENT

4.1 Purpose of Hazard Assessment and Risk Analysis

Site characterization and hazard assessment provide information needed to identify site hazards and to select proper worker protection methods, such as engineering controls, work practices, and PPE. Site characterization and assessment conform to the requirements listed in paragraph (c) of 29 CFR 1910.120.

Site characterization and analysis is a continual process. During each phase of site work, personnel will become aware of new information about site conditions and will immediately notify the SSO of any significant new information. The SSO will use the information to perform a new hazard assessment, which will be reviewed by the ER/HS Team and OUPL and documented in a Change Order Control.

4.2 Preliminary Evaluation Information Sources

The preliminary evaluation and hazard assessment for this project was obtained from the following reports and sources of information:

- RFI Work Plan for Operable Unit 1130
- Historical sampling data presented in Appendix F of this SSHASP
- NIOSH Pocket Guide to Chemical Hazards, 1990

4.3 Task-by-Task Hazard Analysis

For each Task described in Section 2 of this SSHASP, a task analysis/risk assessment has been performed. Each task has been analyzed separately for physical, chemical, radiological, biological, and safety hazards, and the results recorded in Table 4-1.

4.4 Radiological Information

The radionuclides of concern include U-235 and U-238. The primary mode of decay for uranium is alpha emissions, but daughter products may emit significant beta radiation. The radioactive material is expected to be primarily subsurface.

Table 4-1 includes the information and hazard assessment for anticipated radiological hazards.

4.5 Chemical Information

Specific information concerning chemicals known or suspected to be present on site as well as those used for sample preservation and testing is contained in the Material Safety Data Sheets (MSDS) each substance. Table 4-2 identifies the chemical hazards of concern for each task. A list of MSDSs maintained for this project is provided in Appendix E. Copies of this information will be at the work site at all times and will be made available to all affected personnel.

Table 4-1
Task Hazard Analysis by Task

Task 1 - Engineering Surveys at All PRSs				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

Task 2 - Radiation Surveys at PRS 36-004(d), 36-005				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4.3.2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 3 - Geophysical Surveys at PRS 36-003(b), 36-004(e)				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

Task 4 - Geomorphic Surveys at PRS 36-003(b), 36-004(a-e), 36-005, C-36-003				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Physical (C-36-003 excluded)	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4 3 2
Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 5 - Sludge and Liquid Sampling at Sump, PRS 36-002				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation	Dose rate < 0.5 mR/Hr from radionuclides in soil	4	Limit contact with sludge or liquid	GM probe or ion chamber
Internal radiation	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Limit contact with sludge or liquid	Personal air sampling
Chemical	Solvents, zinc, acids, HE residues	4	Limit contact with sludge or liquid	Personal air sampling, air monitoring
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Noise	3	Wear earplugs, muffs; proper maintenance	Inspection
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking, maintain distance of at least 3 ft from open excavation unless fall restraint protection used	Visual observation, inspection
Physical	Flying debris and overhead hazard	3	Wear eye and head protection	Visual observation, insp
Mechanical	Moving parts on heavy equipment	3	Proper guarding, hazard awareness, proper PPE	Inspection
Biological	Snakes, biting insects, rodents/droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4.3.2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 6 - Subsurface Soil Sampling at Sump, PRS 36-002				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation	Dose rate < 0.5 mR/Hr from radionuclides in soil	4	Limit contact with soil	GM probe or ion chamber
Internal radiation	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Control dust, limit contact with soil	Personal air sampling
Chemical	Solvents, zinc, acids, HE residues	4	Control dust, limit contact with soil	Air monitoring, personal air sampling
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Noise	3	Wear earplugs or muffs, proper maintenance	Inspection
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	3	Non-slip soles on boots, look before walking, cover the open excavation to eliminate the fall hazard	Visual observation, inspection
Physical	Flying debris and overhead hazard	3	Wear eye and head protection	Visual observation, Insp
Mechanical	Moving parts on heavy equipment	3	Proper guarding, awareness of hazards, PPE	Inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4 3 2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 7 - Fluid and Sludge Sampling at Septic Systems, PRS 36-003(a,b)				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation 36-003 (b) only	Dose rate < 0.5 mR/Hr from radionuclides in soil	4	Limit contact with sludge or liquid	GM probe or ion chamber
Internal radiation 36-003 (b) only	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Limit contact with sludge or liquid	Personal air sampling
Chemical	Solvents, thiosulfates, silver cyanides, organic compounds, metals	4	Limit contact with sludge or liquid	Personal air sampling, air monitoring
Physical 36-003 (b) only	HE	4	Remove visible HE	Visual inspection
Physical	Explosion	4	Ventillate tank or other means to mitigate explosive atmosphere, if required	Air monitoring
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4 3 2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 8 - Surface Soil Sampling at Septic System, PRS 36-003(b)				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation	Dose rate <0.5 mR/Hr from radionuclides in soil	4	Limit contact with soil	GM probe or ion chamber
Internal radiation	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Minimize dust, limit contact with soil	Personal air sampling
Chemical	Solvents	4	Minimize dust, limit contact with soil	Air monitoring
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4.3.2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task
(continued)

Task 9 - Subsurface Soil Sampling at Septic System, PRS 36-003(a)				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Chemical	Thiosulfates, silver cyanides, organic compounds, metals	3	Control dust, limit contact with soil	Air monitoring, personal air sampling
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Noise	3	Wear earplugs or muffs, proper maintenance	Inspection
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking, avoid open drill holes	Visual observation, inspection
Physical	Flying debris and overhead hazard	3	Wear eye and head protection	Visual observation, inspection
Mechanical	Moving parts on heavy equipment	3	Proper guarding, awareness of hazards, use of PPE	Inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4.3.2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 10 - Water and Sediment Sampling at Active Firing Sites, PRS 36-004(a-e)				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation	Dose rate <0.5 mR/Hr from radionuclides in soil	4	Limit contact with water and sediment	GM probe or ion chamber
Internal radiation	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Limit contact with water and sediment	Personal air sampling
Chemical	HE residuals, Barium, Beryllium, Lead, Mercury	4	Limit contact with water and sediment	Personal air sampling, air monitoring
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Noise	3	Wear earplugs or muffs, proper maintenance	Inspection
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4 3 2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task (continued)

Task 11 - Surface Soil Sampling at the Boneyard, PRS 36-005				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
External radiation	Dose rate < 0.5 mR/Hr from radionuclides in soil	4	Limit contact with soil	GM probe or ion chamber
Internal radiation	Inhalation or ingestion of radionuclides (alpha emitters) in soil	4	Minimize dust, limit contact with soil	Personal air sampling
Chemical	HE residues, Organic compounds, Chromium, Silver, Zinc, Berylium, Copper, Lead	3	Minimize dust, limit contact with soil	Air monitoring, personal air sampling
Physical	HE	4	Remove visible HE	Visual inspection
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4.3.2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-1
Task Hazard Analysis by Task
(continued)

Task 12 - Surface Soil, Sediment, and Water Sampling at the Photo Outfall, PRS C-36-003				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Chemical	Thiosulfates, Silver, Organic compounds	4	Minimize dust, limit contact with soil	Air monitoring, personal air sampling
Physical	Heat Stress	3	Rest breaks, fluids, shaded rest area	Measure heart rate, visual observation
Physical	Pinch points on equipment	4	Awareness of hazard	Inspection
Physical	Back injury (lifting, twisting, turning)	4	Use proper lifting technique	Visual observation
Physical	Slips, trips, and falls	4	Non-slip soles on boots, look before walking	Visual observation, inspection
Biological	Snakes, biting insects, rodents and their droppings	4	Long pants, above-ankle boots, awareness of their presence	Visual observation, inspection

Task 13- Preserving Water Samples, Rinsate Blanks, and Field Blanks				
Hazard Type	**Description**	**RAC[1]**	**Mitigation Measures**	**Monitoring Techniques**
Chemical	Nitric and hydrochloric acids	4	Wear gloves, ensure adequate ventilation	Visual observation, inspection

[1]The Risk Assessment Code (RAC) was obtained using the risk analysis procedure provided in the Author's Instruction Manual, Section 4 3 2. Code interpretation is as follows: 1 = Imminent Danger, 2 = Serious, 3 = Moderate, 4 = Minor, 5 = Negligible

Table 4-2
Chemical Characteristics and Health Effects

Chemical Name	Physical Form and Appearance	Liquids Vapor Pressure (mm Hg)	Flash pt.(°F) Flammable range(%)	Acute Toxicity	Chronic Toxicity	Routes of Exposure	Published Exposure Limit
Lead	Solid, soft gray	N/A[1]	N/A	Weakness, insomnia, eye irritation, gingival lead line	Central nervous system damage, kidney failure, blood damage, CA[2]	Inhalation, ingestion, skin contact	OSHA: 0.05 mg/m^3 ACGIH: 0.05 mg/m^3
Beryllium	Solid, gray-white	N/A	N/A	Weakness, difficult breathing, weight loss	CA; lung, skin, eye, mucous membrane damage	Inhalation	OSHA: 0.002 mg/m^3 NIOSH: 0.0005 mg/m^3
Silver	White, lustrous solid	N/A	N/A	Blue-gray eyes, nasal septum, throat and skin, irritated skin, GI disturbance	Damage to skin and eyes	Inhalation, ingestion, skin contact	OSHA: 0.01 mg/m^3
Zinc	Dull gray-white solid	N/A	N/A	Chills, tight chest, nausea, vomiting, fatigue	Respiratory system damage	Inhalation, ingestion	OSHA: 5 mg/m^3
Cyanides	Crystalline soild with faint almond odor	N/A	N/A	Asphixiation/death, headache, nausea, confusion, slow gasping respiration, eye/skin irritation	Damage to cardiovascular/central nervous systems, liver/kidney failure	Inhalation, ingestion, skin contact, absorption	OSHA: 5 mg/m^3
Acids	Clear to hazy liquid	Varies	N/A	Eye/nose/throat/skin irritation	Damage to eyes, skin, respiratory system	Inhalation, ingestion, skin contact	Varies
Solvents	Clear to brown liquid	Varies	Varies	Eye/nose/throat/skin irritation, lassitude, nausea, vomiting, coma, dermatitis, depression.	All organs and body systems may be affected	Inhalation, ingestion, skin contact, absorption	Varies
Copper	Reddish, lustrous odorless solid	N/A	N/A	Eye/nasal irritation, metallic taste, dermatitis	Liver /kidney failure, damage to respiratory system and skin	Inhalation, ingestion, skin contact	OSHA: 1 mg/m^3
Chromium	Lustrous solid, varies	N/A	N/A	Sensitization dermatitis, CA	Damage to skin	Inhalation, ingestion,	OSHA: 0.5 mg/m^3
Mercury	Silver-white, heavy, odorless liquid	0.0012	n/a	Vision/hearing disturbance, tremors, fatigue, headache, eye and skin irritation, cough	Skin/eyes/respiratory system damage; central nervous system deterioration; kidney failure	Inhalation, ingestion, absorption	OSHA: 0.05 mg/m^3

[1] Not applicable [2] Carcinogen

5.0 SITE CONTROL MEASURES

This section describes site control measures that will be implemented during field activities. The primary objectives of site control are to control employee exposures before field operations begin, and to ensure that only trained and fully-informed persons are able to access the work sites. This section addresses the designation of specific work zones, which are designed to limit the spread of hazardous substances both on and off site. This section also addresses the use of site access control, the "buddy system," and site communications. In addition, safe work practices are listed, as are procedures for illumination and sanitation. If site conditions change significantly during field operations, site control procedures will be re-evaluated by the SSO and, if necessary, a Change Order Control prepared to address any needed modifications.

5.1 Site Map

The site maps presented in Figures 5-1 and 5-2 were prepared to meet the requirements of 29 CFR 1910.120 (d)(3), and include the locations of administrative controls such as support trailers and sanitary facilities, if used.

5.2 Site Work Zones

The site will be divided up into the work zones described herein. Work zones will be defined at the time work commences as work activities will be at different locations throughout TA-18 and TA-36.

5.2.1. Exclusion Zone (EZ)

The EZ includes the area(s) where contamination is likely or known to be present, or because of work activities which will present a hazard to personnel. The EZ will be delineated by barrier tape and will be large enough to encompass work activities.

Safe work practices that apply specifically to activities in the EZ include:

- As practical, personnel should practice contamination avoidance. Stand upwind during intrusive activities, if possible. Minimize dust generation by using prudent work practices and wetting agents. All solid and liquid samples should be collected in such a manner as to minimize contact with the material.
- The number of personnel and amount of equipment in any contaminated area should be minimized, but effective site operations must be maintained.
- Procedures for leaving any contaminated area will be planned and reviewed before entering these areas.
- 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.

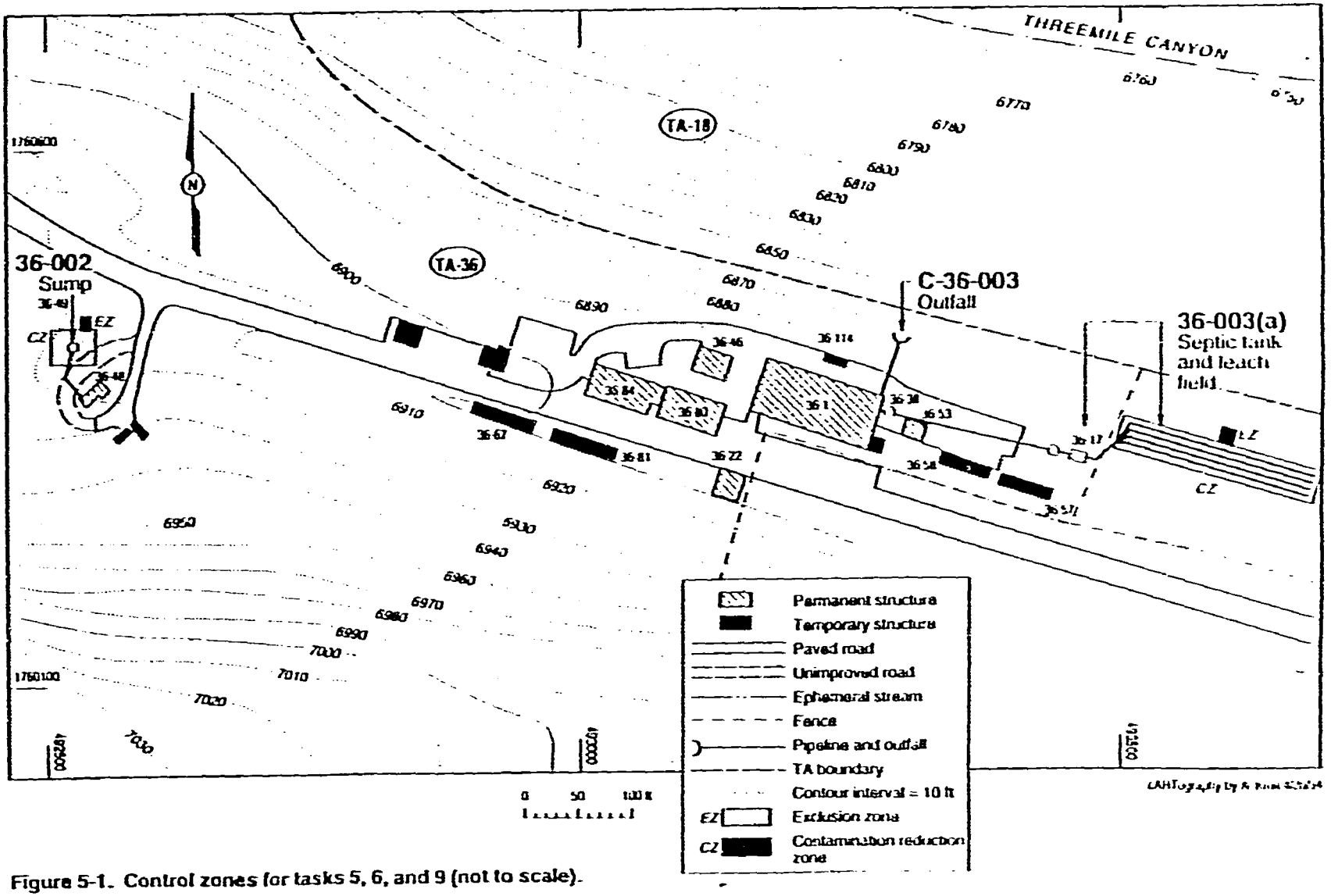


Figure 5-1. Control zones for tasks 5, 6, and 9 (not to scale).

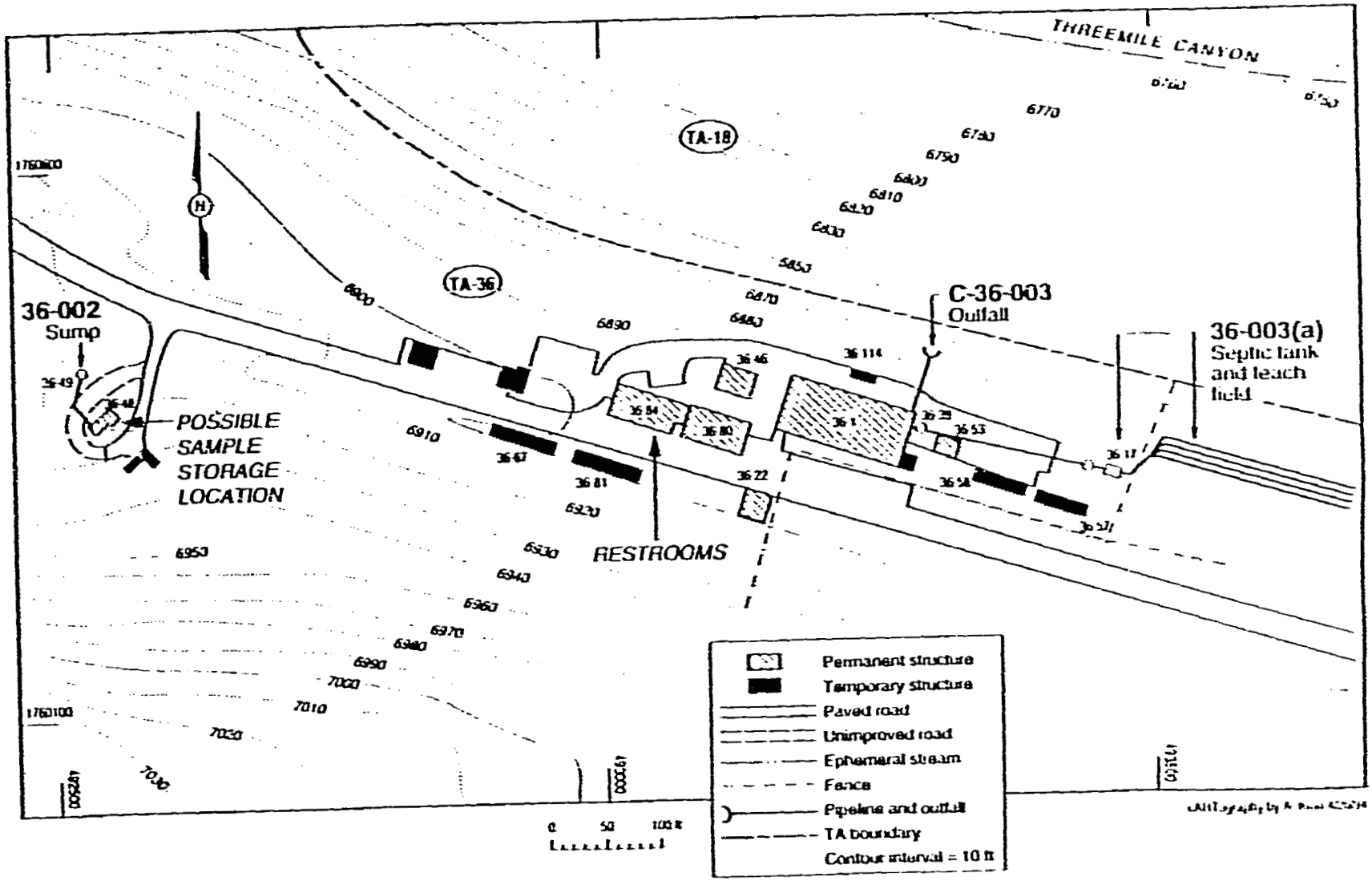


Figure 5-2. Support facilities near TA-36.

- Keep all ignition sources at least 50 ft from explosive or flammable environments and at least 35 ft from combustible liquids. Use non-sparking, explosion-proof equipment if advised to do so by a safety professional.

5.2.2. Contamination Reduction Zone (CRZ)

The CRZ includes the area(s) where decontamination of personnel and equipment occurs. The CRZ will be set up adjacent to the EZ for personnel and equipment. It will be moved as work activities change and as equipment and personnel move to different locations. Safe work practices which apply specifically to activities in the CRZ include:

- Removal of contaminated solids from protective clothing or equipment by blowing, shaking, or any other means that disperses contaminants into the air is prohibited;
- Decontamination fluids will be drummed as necessary. Legible and understandable precautionary labels which comply with the hazard communication standard shall be affixed prominently to all containers of contaminated scrap, waste, debris, and clothing;
- No equipment will leave the site unless

    1) It has been screened for contaminants;
    2) Decontaminated if possible;
    3) Final release authority has been given by the SSO or designees; and
    4) The equipment is accompanied by all necessary transportation manifests.

- Staging areas for various operational activities (equipment testing, decontamination, etc.) will be established; and
- Proper decontamination procedures will be followed before leaving the site, except in medical emergencies.

5.2.3 Support Zone (SZ)

The SZ includes uncontaminated areas where administrative and operation support are located and which are not exposed to hazardous substances or conditions. It is located upwind of the EZ and the CRZ and includes a command post for supporting site operations. Emergency supplies, as designated in Section 13.0, will be available in the SZ. All records and documents necessary for site work will be kept in the SZ until removed from the site.

5.3 Site Access Control

Access to site areas will be controlled through the use of 1) postings at site and work zone boundaries, 2) security badges, and 3) site exit and entry logs. These procedures are described in the following sections.

5.3.1 Posting and Labeling Requirements

All zones will be delineated with yellow "CAUTION" tape. Signs identifying the various zones will be posted at the entrance to each zone and will be black letters on a white background. No radiological posting is anticipated at this time.

5.3.2 Security Badge Requirements

All field team members, whether Laboratory employees or subcontractors, must obtain a Laboratory badge prior to commencing field work. The SSO or FTL will ensure that all site workers have the proper badges before being allowed entry on-site.

5.3.3 Entry and Exit Logs

All personnel entering an EZ on site shall log in prior to each entry and log out after each exit. Each entry and exit will be documented using an EZ Personnel Log. The SSO or designee shall ensure that all individuals are accounted for prior to leaving the site each day.

5.4 Communications

Communication Equipment

The following communication equipment will be used and maintained on site for communication purposes:

( ) Radio: Channel
(X) Cellular phone 1-699-2123, 1-699-2124
( ) Pager
( ) Other
( ) Not applicable
(X) The following restriction applies: Only Laboratory equipment may be used

The person responsible for the communications equipment is Nancy Riebe, ICF Kaiser, Inc.

The Buddy System

Personnel conducting ER field activities will work in groups of at least two, so that someone is always available to render assistance in the event of an unplanned

occurrence. Site personnel need to be able to see or hear, and effectively communicate with, their buddy at all times when working in the EZ. They will be instructed to watch for signs and symptoms of illness or injury of their assigned buddy.

5.5 Safe Work Practices

The following safe work practices will be observed:

- No food, beverages, or tobacco products shall be present or consumed in the Exclusion Zone and areas where potential contamination exists;
- No cosmetics or creams shall be applied in the EZ or 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;
- Personnel will recognize potential hazards associated with equipment movement, and traffic patterns of support trucks and automobiles;
- At least one copy of this plan will be available at each work site;
- Horseplay, practical joking, or any other actions that jeopardize safety will not be tolerated;
- Running is not permitted;
- All activities will be performed in such a way as to minimize or prevent the disbursement or release of contaminants;
- All personnel will avoid contact with potentially contaminated substances except as necessary for sampling; and
- Monitoring equipment will not be placed on potentially contaminated surfaces.
- Wind direction indicators shall be used to determine wind direction.

5.6 Sanitation

Potable Water

Potable water for this site will be clearly marked and available at the SZ. Non-potable water sources will be clearly marked as being unsuitable for drinking or personal washing purposes.

Toilet Facilities

Toilet facilities are available at TA-36-183. In addition, portable toilet facilities will be brought on-site and stationed as close to the work area as possible.

Break Area

A break area will be established upwind from the work area and outside the CRZ. The area will be clearly marked and no contaminated personnel or equipment is permitted there. Liquid refreshment will be available for prevention of heat stress.

Temporary Washing/Shower Facilities/Change Trailer

There will be water, soap, and towels available in the support zone for site personnel for the purpose of hand and face washing in the field. Washing facilities are available at TA-36-84.

Trash Collection

Trash will be segregated according to whether it is potentially contaminated or not. Clean trash will be collected in a suitable container in the SZ. Potentially contaminated trash will be collected in the CRZ and containerized for disposal. This waste will be disposed consistent with the site specific waste management plan.

5.7 Illumination

Illumination shall meet the requirements of Table H-120.1, 29 CFR 1910.120. For this project, no activities are anticipated to require artificial lighting. Natural sunlight is anticipated to be sufficient for this work.

6.0 SITE AND PERSONNEL MONITORING

This section describes the monitoring program for chemical, physical and radiological surveillance during site activities. This monitoring strategy has been developed to meet the requirements in 29 CFR 1910.120 (h), LANL ER SOPs, and the LANL RadCon Manual. Monitoring strategies have been developed for each task and will include sampling employee breathing zones. Action levels have been determined based on identified hazards and published safety and exposure limits.

This section is divided into two major subsections: Industrial Hygiene Monitoring; and Health Physics Monitoring. These are discussed below.

6.1 Industrial Hygiene Monitoring

6.1.1 Direct-Reading Instrument Requirements

Real-time monitoring with direct-reading instruments provides instantaneous results for measuring air contaminants, or other physical parameters such as noise and temperature. These instruments will be used for initial screening, and for targeting areas where integrated sampling may be needed.

Direct-reading instruments required for this project have been selected based on the hazard analysis conducted in Section 4. The chemical and physical parameters which present the greatest hazard, and require monitoring, are listed in Table 6-1. This table also lists appropriate monitoring instruments, calibration techniques, and response factors for individual contaminants, if applicable.

Readings are to be at or above the action levels specified for 5 minutes or more. The surrounding area is to be checked for interferences to the organic vapor readings.

6.1.2 Determination of Action Levels

Established exposure criteria such as Immediately Dangerous to Life or Health (IDLH) levels, explosive and flammable limits, OSHA PELs, and ACGIH TLVs have been used to set action levels to protect against health and physical hazards. Table 6-1 provides the action levels associated with each parameter listed, and how each parameter was determined.

6.1.3 Task-Specific Action Response Plan

Table 6-2 presents the monitoring action response plan for each of the tasks identified in Section 2.

Table 6-1
Industrial Hygiene Monitoring Instruments, Calibration Requirements, Response Factors, and Action Levels

Parameter to be Monitored	Instrument Specifications	Calibration Procedure and Response Factor	Action Level	Basis for Action Level
Organic Vapors	Flame Ionization Detector (FID) or Photoionization Detector (PID) with 10.2 eV lamp	FID-Methane gas at 95 ppm, calibrate daily PID-Isobutylene gas at 100 ppm calibrated to 56 on instrument, calibrate daily	5 ppm above background	Allows sufficient time to respond to any organic substance detected
Combustible Gas/ Oxygen	Combustible Gas Indicator/ Oxygen (CGI/O_2) Meter	In accordance with manufacturer's recommendations	10% of the lower explosive limit	Allows sufficient time to respond to any explosive atmospheres detected
Mercury Vapor *	Draeger tube	N/A	0.025 mg/m3	Allows sufficient time to respond to any mercury vapor detected
Nitric Acid	Draeger tube	N/A	2.5 mg/m3	Allows sufficient time to respond to any nitric acid detected
Hydrochloric Acid	Draeger tube	N/A	3.5 mg/m3	Allows sufficient time to respond to any hydrochloric acid detected
Particulates	Mini-Ram	N/A	2.5 mg/m3	Allows sufficient time to respond to any particulates detected

* If detected by the Draeger tube, a Mercury Vapor Analyzer or NIOSH Analytical Method No. 6009 may be used for further analysis at the discretion of the SSO.

Table 6-2
Industrial Hygiene Action Response Plan

Parameter	Task No.	Instrument	Frequency of Monitoring[1]	Locations to Monitor	Action Level	Response Actions
Organic Vapors	5, 6, 7, 8, 9, 10, 11, 12	FID/PID or equivalent	Once every 30 min., more often if readings fluctuate during monitoring or odors are detected	At source and breathing zone (BZ) of personnel in EZ if detected at source	5 ppm above background in personnel BZ only	Stop work, upgrade PPE, and initiate engineering controls
Combustible Gas/ Oxygen	6, 7, 9	CGI/O2 Meter or equivalent	Upon exposing tank, periodically thereafter	Inside tank and surrounding area	10% of the LEL	Stop work, ventilate tank, and use non-sparking tools
Mercury Vapor [2]	10	Draeger Tube	During initial activity; periodically thereafter at SSO discretion	At source and BZ of task personnel if detected at source	0.025 mg/m3	Stop work, upgrade PPE, and initiate engineering controls
Nitric Acid	14	Draeger Tube	During initial activity; periodically thereafter at SSO discretion	At source and BZ of task personnel if detected at source	2.5 mg/m3	Stop work and initiate engineering controls
Hydrochloric Acid	14	Draeger Tube	During initial activity; periodically thereafter at SSO discretion	At source and BZ of task personnel if detected at source	3.5 mg/m3	Stop work and initiate engineering controls
Particulates	5, 6, 7, 8, 9, 10, 11, 12	Mini-ram	Once every 30 min., more often if readings fluctuate during monitoring	At source and BZ of task personnel if detected at source	2.5 mg/m3	Stop work and initiate engineering controls

[1]Persons responsible for monitoring - Ken H. McFadden or SSO alternates

[2] If detected by the Draeger tube, a Mercury Vapor Analyzer or NIOSH Analytical Method No. 6009 may be used for further analysis at the discretion of the SSO.

6.1.4 Other Monitoring Requirements

Maintenance and calibration of direct-reading instruments will be performed according to manufacturer's and Laboratory specifications. Instruments will be inspected and calibrated daily, before and after each use, or according to manufacturer's recommended frequencies. Calibration results will be recorded on a designated form either in the Health and Safety Logbook or as supplied by the SSO.

Daily background readings will be obtained in a clean, contaminant-free area near the site on a daily basis, and recorded as such. Data for each monitoring sample/occurrence will be recorded on direct reading monitoring forms. Information recorded includes date, time, sampler name, instrument data, description and location of operation, and other observations.

6.1.5 Integrated Industrial Hygiene Sampling

Periodic integrated personal sampling for metals (lead, beryllium, silver) will be performed during the drilling task only (Tasks # 6 and # 9).

All personnel collecting integrated samples shall be trained in the use of proper analytical procedures as prescribed by NIOSH, OSHA, ANSI or ACGIH. Sampling methods and strategies will comply with the methods outlined in the NIOSH Occupational Sampling Strategy Manual, NIOSH Manual of Analytical Methods, or OSHA Technical Manual, unless otherwise specified by a Laboratory consulting industrial hygienist. Air sampling procedures contained in the Environmental Restoration Program Guidance Manual (draft) for Site Health and Safety Activities Manual will be followed. Air sampling field data sheets will be used to document sampling information.

6.1.6 Sampling Protocols

Personal air sampling will be performed for metals (lead, beryllium and silver). NIOSH Analytical Methods No. 7082 will be used for lead sampling, No. 7102 for beryllium sampling and No. 7300 for silver sampling, depending on laboratory capability. All personal sampling pumps will be calibrated before and after each use. The SSO will be responsible for ensuring that samples are collected and shipped properly.

6.2 Health Physics Monitoring

In order to assess the radiological hazards identified in section 4.0 "Hazard Assessment", ESH-1 has developed the following radiation monitoring strategy for use at ER sites. Table 6-3 contains staffing, PPE, equipment, release, posting, permit, and air sampling requirements.

6.2.1 Action Levels and Response

Measured intensities of radiation have been established which trigger certain actions for health protection purposes. These actions are listed in Table 6-3.

Table 6-3
Health Physics
Monitoring and Action Plan

Condition	Requirements						
	Radiological Surveillance Staffing	PPE	Equipment Release	Posting	RWP	Respiratory Protection	Air Sampling
(1) SSHASP approved by ESH-1 meeting the requirements of RadCon Articles 321-323 (2) No radioactivity above background levels	Field team member trained in ESH-1 procedures performing surveys (soil, core, personnel, etc.) Intermittent ESH-1 coverage	None	Large area swipes for alpha ($2000\ cm^2$) Direct frisk for b/g	Controlled Area posting required when EZ is designated*	None	None	None
<u>Exceed Action Level I</u> above background but, < 500 cpm/probe a < 5000 cpm/probe b/g	Notify ESH-1 of elevated readings Proceed as above Increased intermittent ESH-1 coverage	None	Laboratory-grade analysis of smears	Controlled Area posting required when EZ is designated*	None	None	None
<u>Exceed Action Level II</u> 500 cpm/probe a 5000 cpm/probe b/g 5 mR/hr	Full time ESH-1 technician (or equivalent) coverage	In accordance with the RWP	Laboratory-grade analysis of smears	Controlled Area posting required when EZ is designated*	Stop work. SSO initiates RWP	Evaluate case-by-case to determine contamination dispersibility, resuspension potential	Evaluate need for periodic confirming sample

*If potential exists for radioactive contamination

6.2.2 Bioassays and Personal Dosimetry

Baseline Bioassays - All personnel who are required to participate in the bioassay program shall have a baseline bioassay measurement prior to entering the exclusion or contamination reduction zones.

Periodic Bioassays - An analysis of Health Physics Checklists for this project indicates that site personnel performing require:

(X) No bioassay

The bioassay requirements were established by Virginia Rey of ESH-12, on March 3, 1994. All personnel performing ER field work are to wear a TLD badge at all times.

6.2.3 Monitoring for Release Purposes

Personnel exiting from areas of potential radioactive contamination shall be monitored (frisked) for radioactive contamination after removal of all PPE. Appendix 3D of the LANL RadCon Manual lists guidelines for personnel monitoring with hand-held survey instruments. If personnel contamination is detected, notify ESH-1 immediately at 667-7137. Direction on how to proceed with decontamination will be determined on a case-by-case basis.

Removal of equipment/items from a Controlled Area designated for contamination control purposes requires monitoring for radioactive contamination. The general procedures and requirements are located in the ESH-1 Draft Procedure ESH-1-07-01 "Releasing Equipment and Items Standard." Equipment release requirements will depend on the destination of the equipment/item, the suspected radionuclides, and whether or not radioactive material has been detected with portable instruments while working at the site.

Health Physics Release Tags or Release Logs shall be filled out to document the release process in accordance with the Laboratory Draft Procedure LP107-04.0 "Documenting Equipment and Item Release."

Unrestricted Release

For unrestricted release to the public (free release) smear surveys shall be required. Each ESH-1 technician assigned to the ER program will have the capability to evaluate these smears in their vehicle. Smear and direct surveys shall be conducted in accordance with the ESH-1 Procedure ESH-1-02-02 "Surveying for Alpha and/or Beta/Gamma Contamination."

Movement of Equipment/Items from one Controlled Area to Another or to a Location Where Positive Control is Maintained

For these types of releases, smear surveys may not be required provided that the following criteria are met:

- Positive control is maintained over the equipment/item (it is not released to the public).
- No detectable activity is discovered on site with field instruments during screening of samples collected (e.g. samples, core, drill cuttings);
- Field instrument screening of material/equipment for beta/gamma contamination indicates no detectable activity above LANL RadCon Table 2-2 removable values (1,000 dpm/100 cm^2, ~75 cpm/probe-area with a HP-260 probe).
- In areas where transuranic contaminants are suspected, a large area swipe (2,000 cm^2) indicates no detectable activity when counted with a portable alpha instrument (in scaler mode); and
- In areas where uranium contamination is suspected (and transuranics are not) field instrument screening of equipment/material for alpha contamination indicates no activity above LANL RadCon Table 2-2 removable values (1,000 dpm/100 cm^2, ~300 cpm/probe-area with an air proportional alpha probe).

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

7.0 ENGINEERING CONTROLS

Engineering controls will be used as the first line of defense for protecting site personnel from hazards. This section of the SSHASP describes the engineering controls that will be used to control specific hazards associated with each task.

Task 1: Engineering surveys at all PRS's
Hazard: Physical
Engineering Control: Remove visible HE, provide shaded rest area when required
SOP for engineering control: None

Task 2: Radiation surveys at PRS 36-004(d), 36-005
Hazard: Physical
Engineering Control: Remove visible HE; provide shaded rest area when required
SOP for engineering control: None

Task 3: Geophysical surveys at PRS 36-003(b), 36-004(e)
Hazard: Physical
Engineering Control: Remove visible HE; provide shaded rest areas when required
SOP for engineering control: None

Task 4: Geomorphic surveys at PRS 36-003(b), 36-004(a-e), 36-005, C-36-003
Hazard: Physical
Engineering Control: Remove visible HE; provide shaded rest areas when required
SOP for engineering control: None

Task 5: Sludge and liquid sampling at the sump PRS 36-002
Hazard: Physical and airborne dusts containing radiological and chemical contaminants
Engineering Control: Provide shaded rest areas when required; apply wetting agent or other means to control dust when required; remove all visible HE
SOP for engineering control: None

Task 6: Subsurface soil sampling at the sump PRS 36-002
Hazard: Physical and airborne dusts containing radiological and chemical contaminants
Engineering Control: Remove all visible HE; provide shaded rest areas when required; provide fall protection; apply wetting agent or other means to control dust when required
SOP for engineering control: None

Task 7: Fluid and Sludge sampling at septic systems PRS 36-003 (a,b)
Hazard: Physical
Engineering Control: Remove all visible HE; provide shaded rest areas when required
SOP for engineering control: None

Task 8: Surface soil sampling at septic system PRS 36-003(b)
Hazard: Physical and airborne dusts containing radiological and chemical contaminants
Engineering Control: Provide shaded rest areas when required; minimize disturbance of soil while sampling
SOP for engineering control: None

Task 9: Subsurface soil sampling at septic system PRS 36-003(a)
Hazard: Physical and airborne dusts containing chemical contaminants
Engineering Control: Provide shaded rest areas when required; apply wetting agent or other means to control dust when required
SOP for engineering control: None

Task 10: Water and sediment sampling at active firing sites PRS 36-004(a-e)
Hazard: Physical and airborne dusts containing radiological and chemical contaminants
Engineering Control: Provide shaded rest areas when required; minimize disturbance of soil while sampling
SOP for engineering control: None

Task 11: Surface soil sampling at the boneyard PRS 36-005
Hazard: Physical and airborne dusts containing radiological and chemical contaminants
Engineering Control: Remove all visible HE; provide shaded rest areas when required; minimize disturbance of soil while sampling
SOP for engineering control: None

Task 12: Surface soil sampling at the photo outfall PRS C-36-003
Hazard: Physical and airborne dusts containing chemical contaminants
Engineering Control: Provide shaded rest areas when required; minimize disturbance of soil while sampling
SOP for engineering control: None

Task 13: Preserving water samples, rinsate blanks and field blanks
Hazard: Nitric and hydrochloric acid vapors
Engineering Control: ventilate work area
SOP for engineering control: None

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

This section of the SSHASP describes the PPE requirements for specific tasks and work zones. PPE has been selected based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, task-specific conditions and duration and the hazards and potential hazards identified in Section 4 of this SSHASP.

8.1 Task-Specific PPE Requirements

Table 8-1 provides a detailed description of the protective clothing and accessories as related to each part of the body (i.e., respiratory system, full body, hands and arms, etc.) for each specific task. At a minimum, long pants and long-sleeved shirts are required for all field activities. Short-sleeved shirts may be worn during general oversight activities when ambient air temperatures exceed 70° F. In addition, where hard hats are not required, it is recommended that some type of hat is worn to provide protection from the sun. Sun screen may be used to protect exposed skin provided that it is applied outside of any EZ.

8.2 Training and Use Requirements

All site personnel shall be trained in proper PPE use prior to entering an area requiring the use of PPE. Site personnel required to use respirators will have current authorization cards and proof of medical certification. It is the responsibility of the user to perform inspections of PPE before each use. In addition, the FTL and/or the SSO will check that persons entering an area where PPE is required are properly attired.

8.3 Reassessment of the PPE Program

The level of protective clothing and accessories selected may be upgraded or downgradedbased upon a change in site conditions, or findings of investigations. When a significant change occurs, the PPE requirements will be reassessed by the SSO, and a Change Order Control Form or revision to the RWP will be issued.

Table 8-1
Protective Clothing and Accessories by Task

Task 1 - ENGINEERING SURVEYS AT All PRSs				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910 133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection Protective Footwear Boots should provide good traction

This ensemble of PPE represents level D protection

Task 2 - RADIATION SURVEYS AT PRS 36-004(d), 36-005				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling moving, or sharp objects	All boots must at least meet the specifications required by OSHAs 29 CFR 1910 136 and ANSI Z41 1-1983 "Personal Protection Protective Footwear". Boots should provide good traction

This ensemble of PPE represents level D protection

Table 8-1

Protective Clothing and Accessories by Task
(continued)

Task 3 - GEOPHYSICAL SURVEYS AT PRS 36-003(b), 36-005, C-36-003				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection Protective Footwear. Boots should provide good traction.

This ensemble of PPE represents level D protection

Task 4 - GEOMORPHIC SURVEYS AT PRS 36-003(b), 36-004(a-e), 36-005, C-36-003				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983 "Personal Protection Protective Footwear". Boots should provide good traction.

This ensemble of PPE represents level D protection

Table 8-1

Protective Clothing and Accessories by Task
(continued)

Task 5 - SLUDGE AND LIQUID SAMPLING AT SUMP PRS 36-002				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Head	Safety helmet (hard hat)	Plastic hard hat	Blows from falling and moving objects.	All hard hats must comply with OSHA 29 CFR 1910.135 "Head Protection" and ANSI Z89.1-1986 "Requirements for Protective Headwear for Industrial Workers".
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection
Feet	Protective footwear	Steel-toed safety shoes with boot covers or chemical resistant steel toed safety boots	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction
Hands	Inner gloves - Latex or vinyl Outer gloves - Nitrile	Inner gloves - surgical style, thin, any brand Outer gloves - minimum 13 mil thickness, unlined with ribs for gripping	Solvents and radiological contamination.	At least one pair of inner and one pair of outer gloves are required
Whole Body	Disposable whole body suit	Tyvek suit or equivalent, no hood or booties; may use Kleenguard or other disposable garment	Dusts and limited splashes	If suit becomes wet or tears, replace suit Water will permeate suit rapidly. Will protect from dust for extended period of time.
Hearing	Earplugs or muffs (during drilling activities)	Any item with a minimum 25 dB noise reduction rating	Continuous and impact noise	Earplugs must be inserted properly. Muffs should be cleaned regularly

This ensemble of PPE represents level D-4 protection

Table 8-1
Protective Clothing and Accessories by Task
(continued)

Task 6 - SUBSURFACE SOIL SAMPLING AT SUMP PRS 36-002				
BODY PART PROTECTED	**TYPE OF CLOTHING OR ACCESSORY**	**DESCRIPTION / BRAND NAME**	**TYPE OF PROTECTION**	**USE AND CONSIDERATIONS**
Head	Safety helmet (hard hat)	Plastic hard hat	Blows from falling and moving objects.	All hard hats must comply with OSHA 29 CFR 1910 135 "Head Protection" and ANSI Z89.1-1986 "Requirements for Protective Headwear for Industrial Workers"
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes with boot covers or chemical resistant steel toed safety boots	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910 136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear Boots should provide good traction
Hands	Inner gloves - Latex or vinyl Outer gloves - Nitrile	Inner gloves - surgical style, thin, any brand Outer gloves - minimum 13 mil thickness, unlined with ribs for gripping	Solvents and radiological contamination.	At least one pair of inner and one pair of outer gloves are required.
Whole Body	Disposable whole body suit	Tyvek suit or equivalent, no hood or booties; may use Kleenguard or other disposable garment	Dusts and limited splashes	If suit becomes wet or tears, replace suit. Water will permeate suit rapidly Will protect from dust for extended period of time.
Hearing	Earplugs or muffs (during drilling activities)	Any item with a minimum 25dB noise reduction rating.	Continuous and impact noise	Earplugs must be inserted properly Muffs should be cleaned regularly

This ensemble of PPE represents level D4 protection

Table 8-1

Protective Clothing and Accessories by Task
(continued)

Task 7 - FLUID AND SLUDGE SAMPLING AT SEPTIC SYSTEMS PRS 36-003(a,b)				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction.
Hands	Latex or vinyl gloves	Surgical style, thin type, any brand	Solvents, radiological contamination	(2) pairs required. If tears are observed, replace gloves.
Whole Body	Disposable whole body suit	Tyvek suit or quivalent, no hood or booties. May use Kleenguard or other disposable garment	Dusts and limited splashes	If suit becomes wet or tears, replace or repair at the discretion of the SSO. Water will permeate suit rapidly. Will protect from dust for extended period of time.

This ensemble of PPE represents level D3 protection.

Table 8-1

Protective Clothing and Accessories by Task
(continued)

Task 8 - SURFACE SOIL SAMPLING AT SEPTIC SYSTEM PRS 36-003(b)				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction.
Hands	Latex or vinyl gloves	Surgical style, thin type, any brand	Solvents	(2) pairs required. If tears are observed, replace gloves.

This ensemble of PPE represents level D2 protection

Table 8-1

Protective Clothing and Accessories by Task
(continued)

Task 9 - SUBSURFACE SOIL SAMPLING AT SEPTIC SYSTEM PRS 36-003(a)				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Head	Safety helmet (hard hat)	Plastic hard hat	Blows from falling and moving objects.	All hard hats must comply with OSHA 29 CFR 1910.135 "Head Protection" and ANSI Z89.1-1986 "Requirements for Protective Headwear for Industrial Workers".
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes with boot covers or chemical resistant steel toed safety boots	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction
Hands	Inner gloves - Latex or vinyl Outer gloves - Nitrile	Inner gloves - surgical style, thin, any brand Outer gloves - minimum 13 mil thickness, unlined with ribs for gripping	Thiosulfates, inorganic cyanide compounds	At least one pair of inner and one pair of outer gloves are required.
Whole Body	Disposable whole body suit	Tyvek suit or quivalent, no hood or booties. May use Kleenguard or other disposable garment	Dusts and limited splashes	If suit becomes wet or tears, replace or repair at the discretion of the SSO. Water will permeate suit rapidly. Will protect from dust for extended period of time
Hearing	Earplugs or muffs (during drilling activities)	Any item with a minimum 25dB noise reduction rating	Continuous and impact noise	Earplugs must be inserted properly. Muffs should be cleaned regularly.

This ensemble of PPE represents level D4 protection

Table 8-1
Protective Clothing and Accessories by Task
(continued)

Task 10 - WATER AND SEDIMENT SAMPLING AT ACTIVE FIRING SITES PRS 36-004(a-e)				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction
Hands	Latex or vinyl gloves	Surgical style, thin type, any brand	HE residuals and radiological contamination	(2) pairs required, if tears are observed, replace gloves

This ensemble of PPE represents level D2 protection

Table 8-1
Protective Clothing and Accessories by Task
(continued)

Task 11 - SURFACE SOIL SAMPLING AT THE BONEYARD PRS 36-005				
BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION / BRAND NAME	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear. Boots should provide good traction.
Hands	Latex or vinyl gloves	Surgical style, thin type, any brand	HE residuals and radiological contamination	(2) pairs required. If tears are observed, replace gloves.

This ensemble of PPE represents level D2 protection

Table 8-1
Protective Clothing and Accessories by Task
(continued)

Task 12 - SURFACE SOIL, SEDIMENT AND WATER SAMPLING AT THE PHOTO OUTFALL PRS C-36-003				
BODY PART PROTECTED	**TYPE OF CLOTHING OR ACCESSORY**	**DESCRIPTION / BRAND NAME**	**TYPE OF PROTECTION**	***USE AND CONSIDERATIONS***
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.
Feet	Protective footwear	Steel-toed safety shoes	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet the specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983, Personal Protection-Protective Footwear Boots should provide good traction
Hands	Latex or vinyl gloves	Surgical style, thin type, any brand	Thiosulfates and organic compounds	(2) pairs required, If tears are observed, replace gloves.

This ensemble of PPE represents level D2 protection

Task 13 - PRESERVING WATER SAMPLES, RINSATE BLANKS AND FIELD BLANKS				
BODY PART PROTECTED	**TYPE OF CLOTHING OR ACCESSORY**	**DESCRIPTION / BRAND NAME**	**TYPE OF PROTECTION**	***USE AND CONSIDERATIONS***
Eyes	Safety glasses	Any	Protects eyes against large particles and projectiles.	All safety glasses must have side shields Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133 "Eye and Face Protection and ANSI Z87.1-1989 "Practice for Occupational and Educational Eye and Face Protection".
Hands	(1) pair- Nitrile	Any style, minimum 13 mil thickness, unlined with ribs for gripping	Chemical protection for nitric and hydrochloric acid	Gloves may be reused

This ensemble of PPE represents level D1 protection

9.0 REQUIRED PERMITS

Table 9-1 provides information about work permits required for activities during this project.

Table 9-1
Checklist for Required Permits

Permit	Required (Y or N)	Task(s) Requiring Permit	Date Issued	Expiration Date
Excavation or Fill Permit	Y	Drilling and sump excavation 94e-184-36	4-22-94	
Radiological Work Permit(RWP)[1]	N			
Special Work Permit (SWP) for Spark/Flame-Producing Operations	N			
Confined Space Permit	N			
Lockout/Tagout Procedures	N			
Special Work Permit (SWP)	N			

[1]With approval of ESH-1, the SSHASP can substitute for an RWP if it meets the requirements of LANL RadCon Manual Articles 321-323. Also see Table 6-3 of the SSHASP

10.0 DECONTAMINATION

10.1 General Requirements

Decontamination is the process of removing or neutralizing contaminants that have accumulated on personnel and equipment. This process is critical to health and safety at hazardous waste sites. Decontamination protects personnel from hazardous substances that may contaminate PPE, tools, vehicles, and other equipment used on-site.

The following decontamination plans for personnel and equipment decontamination have been developed to meet the requirements of 1910.120(k). The decontamination procedures will be monitored by the SSO to determine their effectiveness. When procedures are found to be ineffective, appropriate steps will be taken to correct any deficiencies and these modifications will be documented using a Change Order Control Form. The plans will also be revised whenever the type of PPE used on the site changes, site conditions change, or site hazards are reassessed based on new information.

10.2 Personal Decontamination Plan

All personnel will follow the requirements of this section when leaving the EZ during work activities and be trained to these requirements.

All personnel in the EZ will exit through the CRZ. The ground under the area, within the CRZ, where decon will take place will be covered with plastic and will contain, at a minimum, a wash and rinse station for boots and gloves. Both stations will consist of basins with long-handled brushes and multigallon sprayers. The personnel decontamination facility may be modified, as appropriate, by the SSO. In addition, a wash facility will be available for personnel to use before eating and/or drinking and when leaving the site.

The following decon steps will be followed by personnel leaving the EZ. These steps may be modified, as appropriate, by the SSO.

1. Full body frisk prior to entering the CRZ.
2. Step into wash basin and wash boots and gloves
3. Step into rinse basin and rinse boots and gloves
4. Remove outer PPE for disposal or reuse
5. Remove inner PPE for disposal or reuse and any other potentially contaminated waste.
6. All personnel will frisk before leaving the CRZ.

In the event of a life-threatening emergency, bypass the stations, remove the PPE being worn, if feasible, and get medical help.

All PPE and decon water will be collected and disposed of in accordance with the approved site-specific waste management plan.

10.3 Equipment Decontamination Plan

All equipment in contact with potentially contaminated material used in the EZ will be deconned prior to leaving the site. Prior to decontamination, a double layer of plastic sheeting will be placed on the ground beneath the decontamination station and the decon process will involve either a soap water wash and rinse or steam cleaning. The plastic sheeting will be bermed using timbers, piping, or simillar materials to collect any liquids. A pre-fab, portable decon pad may also be used. Decon water will be collected and disposed or in accordance with the approved site-specific waste management plan. All equipment will be swiped for radiological evaluation prior to leaving the site. Release of equipment shall comply with the requirements of Section 6.2 of this SSHASP.

Table 10-1 shows the PPE required for the decontamination technician.

10.4 Waste Management

All waste management practices shall conform to the requirements of the approved site-specific waste management plan. This plan shall be referenced for all concerns regarding waste handling and disposal.

Table 10-1
Decontamination Technician PPE

BODY PART PROTECTED	TYPE OF CLOTHING OR ACCESSORY	DESCRIPTION	TYPE OF PROTECTION	USE AND CONSIDERATIONS
Head	Safety helmet (hard hat) if overhead hazard is present	Plastic hard hat	Blows from falling and moving objects	All hard hats must comply with OSHA 29 CFR 1910.135 "Head Protection" and ANSI Z89.1-1986 "Requirements for Protective Headwear for Industrial Workers".
Eyes	Safety glasses	Any	Large particles and projectiles.	All safety glasses must have side shields. Safety glasses and prescription safety glasses must meet OSHA 29 CFR 1910.133, Eye and Face Protection, and ANSI Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection".
Face	Face shield	Any	Splashes	Must attach to hard hat if one is required.
Feet	Protective footwear	Steel toed safety shoes with boot covers or chemical resistant steel toed safety boots	Compression, crushing, or puncture by falling, moving, or sharp objects.	All boots must at least meet specifications required by OSHA 29 CFR 1910.136 and ANSI Z41.1-1983 "Personal Protection- Protective Footwear". Boots should provide good traction.
Hand	Inner gloves - Latex or vinyl Outer gloves - Nitrile	Inner gloves - surgical style, thin, any brand Outer gloves - min. 13 mil thickness, unlined with ribs for gripping	Hazardous and radiological contamination	At least one pair of inner and outer gloves required.
Whole Body	Rain suit or disposable suit	Any brand two piece rain suit with hood. Poly coated Tyvek suit or equivalent, with hood but no booties	Splashes	If suit becomes torn, replace or repair at the discretion of the SSO.

This ensemble of PPE represents level D5 protection

11.0 MEDICAL SURVEILLANCE

Medical surveillance for the project will meet the requirements of 29 CFR 1910.120(f), DOE requirements (DOE Order 5480.10 and DOE Order 5480.8A), and LANL AR 2-1. All site personnel are required to be part of an annual medical surveillance program which meets the referenced requirements.

Table 11-1
Checklist for Proof of Medical Surveillance

Name	Job Function	√ If Physician's Statement Received	Date of Most Recent Physical
Lynn Kidman	Field Team Manager	√	12/28/93
Mike Henke	Field Team Leader	√	5/3/94
Peter Gram	Alternate Field Team Leader, Geomorphic Surveyor, Driller	√	3/23/94
Ken McFadden	Site Safety Officer (SSO)	√	3/9/94
Nancy Ness	Sampler	√	2/24/94
Joe Balderas	Site Assistance	√	5/3/94
Jeff Bingham	Sampler	√	5/2/94
Johnny Garcia	Sampler	√	5/3/94
Ambrose Coriz	Backhoe Operator	√	
Tom Peiffer	Engineering Surveyor	√	8/30/94
Martin Gabaldon	Engineering Surveyor	√	7/8/94
John Taylor	Health Physics Technician	√	4/29/94
Wayne Stevenson	Alternate SSO	√	3/25/94
Brian Pais	AlternateSSO	√	3/11/94
Willy Pilspanen	Alternate SSO		8/17/93
Andre Gonzalez	Alternate SSO		8/11/93

12.0 PERSONNEL TRAINING AND CERTIFICATION

12.1 Required Training

Field and support personnel are required to meet specific training requirements for this project. Training needs are based on the requirements listed in 29 CFR 1910.120 (e), DOE training requirements, and training requirements in the LANL RadCon Manual. The training matrix found in Appendix D presents the tasks assigned to each project team member, and outlines the training the individual must have to perform that task.

12.2 Site-Specific Training

Each field team member will receive a copy of the SSHASP, and the SSO will conduct training on the SSHASP before beginning site work. In addition, daily Tailgate Safety Meetings (TSMs) will be conducted by the SSO, to inform ER personnel and subcontractors working on the site of potential hazards and minimize the potential for injuries. Each meeting will be documented on the "Tailgate Safety Meeting" form, found in Appendix B. Additional site-specific training includes, HE training and TA-36 Orientation.

12.3 Training Documentation

The SSO will ensure that all required training listed in the Training Matrix (Appendix D) has been completed. A record documenting each field team member's completion of HAZWOPER training will be maintained on-site.

13.0 EMERGENCY ACTION PLAN

13.1 General Requirements

The following Emergency Action Plan has been completed to meet the requirements of 29 CFR 1910.38. Site personnel will not perform emergency response activities. These capabilities shall be provided by Laboratory emergency response teams only. The SSO will be responsible for the safe evacuation of all site personnel in case of an emergency. The SSO will gather all evacuated personnel in the muster area, and use the site entry log to account for all personnel on-site. A map showing the locations of medical facilities, muster areas, and the routes and distances to emergency services is provided following the Emergency Action Plan and will be posted at each work site. Prior to the commencement of site activities, all site personnel will receive training in the Emergency Action Plan.

13.2 Site Emergencies

The following are site emergencies which could occur:

- Mechanical failure of equipment resulting in injury or property damage
- Injury from slips, trips or falls
- Fire from operating equipment

In case of an emergency, an alarm consisting of an air horn will be used. All personnel will stop work and proceed to the designated Muster Area as prearranged for the work site. The SSO will act as Emergency Response Coordinator for the field team. All personnel will be made aware of emergency evacuation procedures, phone numbers of emergency services, and reporting protocol at the start of the field work and on a daily basis.

13.3 Emergencies at Adjacent Facilities

Emergencies at adjacent facilities could impact work activities at TA-36 and TA-18. Site personnel will be trained in the emergency plans for TA-36 and TA-18, and respond as required.

13.4 Illness and Injuries

The types of illnesses and injuries that could occur during this project include the following:

- Broken bones
- Cuts, scrapes, and abrasions
- Sprains and strains
- Heat stress

Emergency procedures for different types of injuries/illnesses are as follows:

- **Life-Threatening Emergencies**

  Implement appropriate first aid procedures and immediately call 9-911 for

emergency medical assistance. If using a **cellular phone**, dial the **Los Alamos Medical Center** directly at **662-4201**. Take measures to prevent further damage or injury. Notify the OUPL or HSPL or ER/HS Team as soon as possible.

Injuries/Illnesses Requiring More Than Minor First Aid

In the event of an injury or illness requiring more than minor first aid, or should personnel show signs or symptoms of overexposure to hazardous substances, proceed immediately to the **Los Alamos Medical Center** at 3917 West Road, Los Alamos or to **ESH-2 (Occupational Medicine)** located at TA-3, SM 409. Notify OUPL or HSPL as soon as possible.

Minor First-Aid Cases

Minor first-aid cases may be treated by on-site personnel trained in first-aid, using approved first-aid kits. All injuries resulting in dermal abrasions must be evaluated by ESH-2. After treatment by site personnel, the injured person shall report to ESH-2, TA-3, SM 409.

Bloodborne Pathogens

Anyone who renders first aid involving exposure to blood must proceed to the TA-3, SM-409 Occupational Medicine Clinic (ESH-2) as soon as possible but in no event later than 24 hours. This action is necessary to document the event and consider the need for Hepatitis B immunization. If blood exposure occurs during off-duty hours, proceed to the LAMC Emergency Room.

13.5 Other Information

The last pages of this section contain other information concerning emergency procedures for this site. These include emergency phone numbers and contacts, reporting information, and emergency equipment. These pages should be posted at the site when work begins, to facilitate quick response to an emergency.

13.6 Spill Containment

Hazardous material spills that may occur during field activities associated with this project will be handled following the approved Laboratory Spill Prevention Control and Countermeasures Plan (SPCC). If a spill of hazardous material occurs, the following actions will be taken:

- Notify the SSO or field operations leader immediately.
- Take immediate measures to control and contain the spill within site boundaries.
- Keep unnecessary personnel away, isolate the hazardous area and deny entry.
- Stay upwind and keep out of low-lying areas.
- Do not allow flares, smoking, or flames in hazard area.

- For liquids, keep combustible material away from spilled material and absorb with absorbent material. Place in container, cover, label, and remove to secure location.
- For dry materials, shovel into container and cover, label, and move to secure area. Use care not to make material airborne.
- A hazardous material spill of <u>any</u> quantity must be reported to the Emergency Management and Response Group (EM&R). The number to call in case of a hazardous material spill is 667-6211 (Laboratory EM&R). EM&R will make the appropriate determination for response requirements.

EMERGENCY CONTACTS AND PHONE NUMBERS

9-911	Los Alamos Emergency Response Number for medical emergency, fire, explosion, hazardous material release
667-6211	Emergency Management Response Group
662-4201 or 9-911	Los Alamos Medical Center Hospital
667-7848	Laboratory Occupational Medicine Clinic
667-6534	Security OS/Pro Force
662-8224	Los Alamos Police.
667-0402	OUPL
667-7377	Deputy or Assistant OUPL

Note: If a cellular phone is used, dialing 911 will call the Santa Fe Emergency Response services, not Los Alamos. Therefore, dial 9-911 instead of 911 when using a cellular phone.

ON-SITE EMERGENCY CONTACTS

Cellular Phone/Radio/Pager:

FTL or Alternate	1-699-1969, 1-699-2124	FTM	1-699-2126
OU 1130 Site	1-699-2124		

First aid/CPR: • Site Safety Officers • Phone Number 662-7300
Ken H. McFadden, Brian Pals, Wayne Stevenson, Willy Piispanen, and Andre Gonzalez

Site Safety Officer and Other Health and Safety Contacts:

Ken H. McFadden (SSO)	662-7300	Andre Gonzalez (SSO)	662-7300
Brian Pals (SSO)	662-7300	George Marino (ESH-5)	665-8458
Wayne Stevenson (SSO)	662-7300	Susan Alexander (ESH-5)	667-5722
Willy Piispanen(SSO)	662-7300		

EMERGENCY REPORTING INFORMATION:

For all calls for emergency services, have the following information available to report:

Site location:	Number of personnel involved:
Caller ID:	Name and condition of affected employees:
Nature of emergency:	Actions taken and assistance required:

EMERGENCY EQUIPMENT ON SITE

On-Site Emergency Equipment:

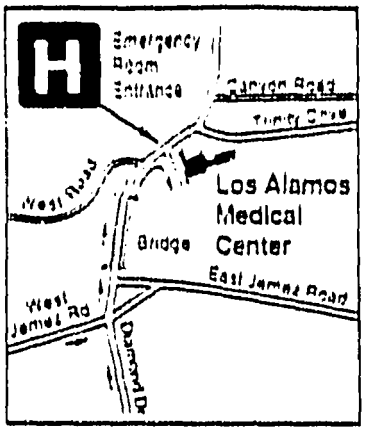
Fire extinguisher and air horn are located in the Support Zone at the records table.

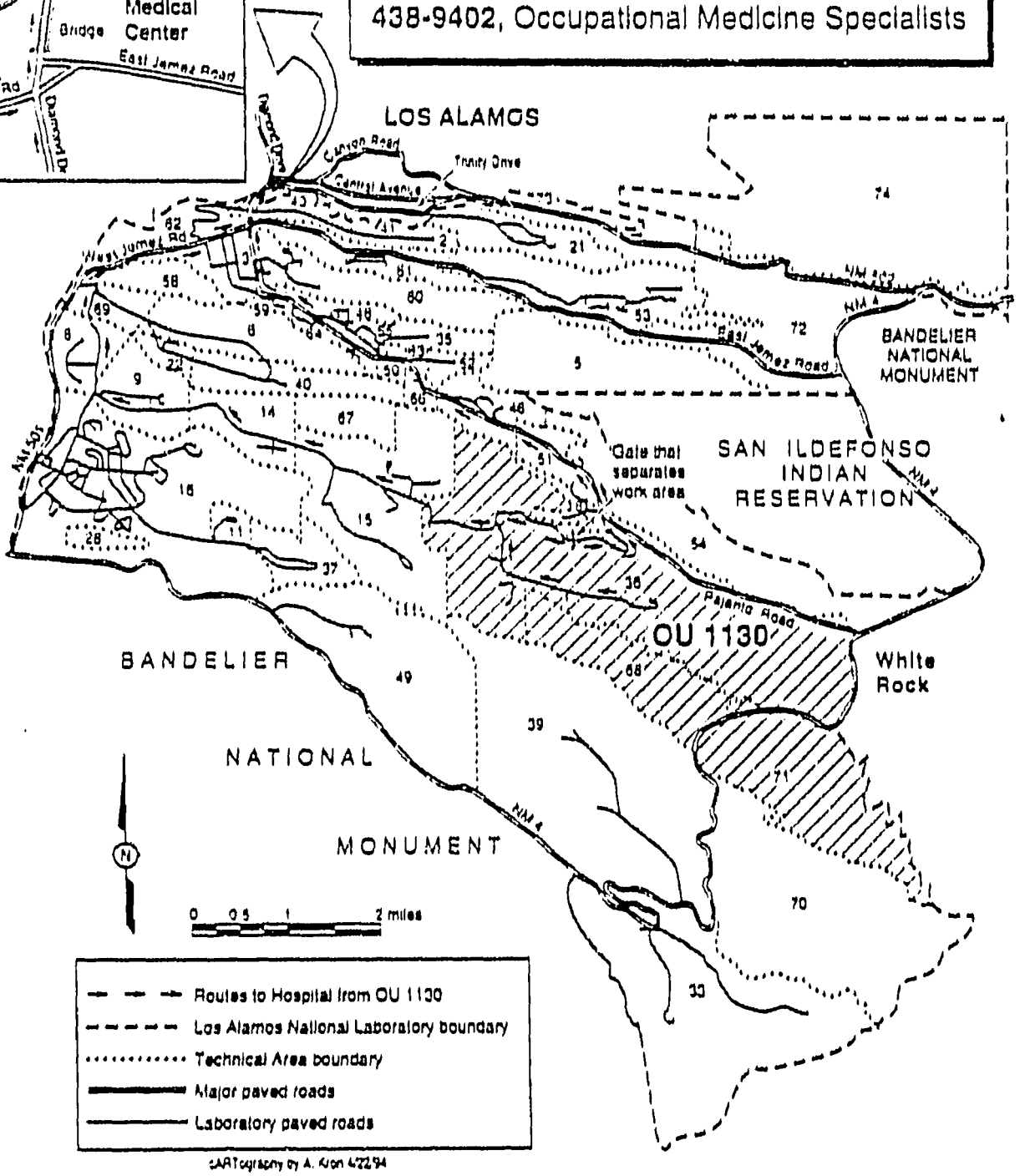
On-Site First-Aid Equipment:

Eyewash and first aid kit are available in the Support Zone at the records table.

Routes to Emergency Services

Important phone numbers:
667-7848, LAMC Hospital
438-9402, Occupational Medicine Specialists





CARTography by A. Kron 4/22/94

14.0 REPORTING AND RECORDKEEPING

14.1 Reporting Accidents, Occurrences, Illnesses and Injuries

The following types of accidents, occurrences, injuries, and illnesses must be reported as specified in ES&H AR 1-1, "Accident and Occurrence Reporting":

- Any work-related injury/illness/potential toxic exposure
- Radiation accident or incident where personnel are exposed to ionizing radiation
- Vehicle accidents
- Fire or property loss
- Any unusual occurrence that meets certain criteria found in the appendixes of AR 1-1.

In addition to the procedures contained in AR 1-1, the SSO will immediately notify the ER/HS Team whenever:

1) There is a work-related injury or illness;
2) Personnel contamination occurs;
3) The action level is exceeded; or
4) Radiological contamination occurs outside the Controlled Area .

14.2 Employee Notification Procedures

The SSO will complete an "Employee Notification Form," (ER/HS Team Form 07) for each employee sampled. These forms will be submitted to each person sampled who must sign it upon review. The original form will be retained with the sample data forms for the official site records. A copy of the form may be kept by the employee if desired.

14.3 Site Records

The following site records will be maintained on site and submitted to the ER/HS Team at the end of the project:

- Air monitoring data
- Medical and training certifications
- Inspection reports

In addition, the following records and documents will be maintained onsite for reference purposes:

- RFI Work Plan for OU 1130
- This SSHASP
- Quality Assurance Project Plan
- ER Program Administrative Procedures Manual

- OU 1130 Waste Management Plan
- Readiness Review Approval Form
- Material Safety Data Sheets

15.0 SAFETY CONSIDERATIONS

15.1 Heat Stress

15.1.1 Discussion

Hyperthermia, or heat stress, is a common hazard to employees working on projects that involve exposure to hazardous substances, most particularly when impermeable protective clothing is used. This problem can occur at ambient temperatures below what is normally considered "hot weather." The body normally sheds excess heat primarily through radiation (capillaries in the skin dilate, transferring heat from the body core to the surface) and evaporation of sweat. Thermodynamically, evaporation is much more effective than radiation. Heat stress results when the body's regulating mechanisms cannot adequately dispose of internally generated and externally supplied heat.

Heat is normally generated internally through metabolic processes, and the quantity of heat generated corresponds to the level of muscle activity. External heat sources include radiant bodies (the sun, furnaces, fires, etc.), and convection (temperature difference between the skin and ambient air). External heat gain can occur through conduction from hot surfaces, but this is normally not significant since such contact will be avoided (it is a very important factor if submersed in water, however).

The overall heat balance of a human can be written as an equation:

$$H = M \pm R \pm C - E$$

where:
- H = body heat burden
- M = metabolic heat gain
- R = radiant or infrared heat load
- C = convective heat load
- E = evaporative heat loss.

The "normal" person maintains a core body temperature of 37°C ± 1°C (98.5°F ± 1.8°F). Core body temperatures should not exceed 38°C (100.4°F) as a result of the total heat burden. Heat stroke occurs when the core temperature is greater than 40°C, and death is probable at core temperatures >42° C.

Working outdoors in hot, sunny weather places the worker under increased heat load from M, R, and C. If the heat loss from E is less than the sum of M, R, and C, the total body heat balance will increase. Unfortunately, the use of impermeable protective clothing can reduce the heat loss from E to near zero.

15.1.2 Controls

Heat stress is difficult to control in environmental work. Most work takes place outdoors and, in much of the country, during the spring and summer months. Three factors affect control of heat stress: work acclimatization, replacement of fluid lost through sweating, and reduced work schedules.

Acclimatization, the process by which the body adapts to higher environmental temperatures, is very significant in preventing heat-related illnesses. Acclimatization is gradual, requiring 7-10 days to complete. In an acclimatized worker, the heart rate is lower, the resting body temperature is lower, sweating begins more rapidly, and the sweat is more dilute (less salt is lost). Acclimatization is temporary, and much of the benefit can be lost if the worker is not exposed to heat stress for a week or so. Lack of acclimatization is the reason heat-related illnesses are more common and more severe in the early summer.

Replacement of lost fluids is critical for all workers, whether acclimated or not. The intake of fluid must be increased beyond that which satisfies thirst, and it is important to avoid "fluid debt," which will not be made up as long as the individual is sweating. Before starting work, two 8 oz. glasses of water should be consumed, then up to 32 oz. per hour during the work shift; fluid replacement at frequent intervals is more effective. The best fluid to drink is water; liquids such as coffee or soda do not provide efficient hydration and may increase loss of water. If commercial electrolyte drinks (Gatorade, Squincher, etc.) are used, the drink should be diluted one-third to one-half with water, or 8 oz. of water should be taken with each 8 oz. of electrolyte. Replacement fluids should be cool, but not cold. Additional salt is usually not needed; **salt tablets should never be taken.**

A reduced work schedule lowers the contribution of metabolic heat gain by periodically reducing the level of activity. Breaks should be taken in a cool, shaded location, and any impermeable clothing should be removed. Dry clothing or towels should be available when taking breaks to minimize chills. No manual labor may be performed during breaks, but paperwork and other similar light tasks may be performed.

Other controls include working at night or during the cooler parts of the day (6am - 10am, 3pm - 7pm), erecting a shade over the work area, and use of cooling garments. The last option is expensive and logistically difficult to implement.

15.1.3 Work Schedules

Work schedules with built-in rest periods must be implemented when employees are exposed to heat stress. Schedules may be developed based on instrumental measurements of the environment (temperature, radiant heat, humidity, and wind speed) and the resulting measurement compared with published guidelines (NIOSH REL, ACGIH TLV for heat stress). When using this method, allowance must be made for the use of impermeable protective clothing.

Alternative methods of establishing a work schedule are based on measuring physiological indices (heart rate or oral temperature) that correlate to the core body temperature. Oral temperature does not correlate well to increasing core temperature (during heat exhaustion, it may be normal or even depressed due to extreme peripheral vasodilation), and is subject to effects from drinking replacement fluids.

Measures of heart rate (pulse) appear to correlate well with heat-related stress, and can be used to estimate the impact of heat stress on individuals with differing levels of fitness (i.e. individuals with a pulse of 150/minute are experiencing about the same level of stress, even

though the work output required to reach this rate will be quite higher for a fit person). The heart rate also incorporates the combined effects of environmental heat, muscle activity, and elevated body temperature, making it useful, and easily measured variable.

The procedure for controlling heat stress using heart rate measurement is presented below.

The SSO and FTL shall determine the potential for heat stress based on planned activities, and weather forecasts. If the potential for heat stress exists:

- All workers shall be informed of heat stress potential for heat stress at the daily safety meeting.

- The SSO and FTL shall determine if any workers are at particular risk for heat stress.

- The SSO and FTL shall ensure that sufficient quantities of potable water and electrolyte drinks are available and that a shaded rest area is available at, or immediately outside, the decontamination area.

- All workers shall drink 16 oz. of water before starting work and at least 16 oz. during each rest period.

- Heart rates shall be recorded only for people working in the EZ and only for one week unless the person is not acclimatized. After each person is acclimatized, heart rates will no longer be recorded. The initial work period is set according to the table below and may be modified by the SSO as personnel become acclimatized.

  — Within the first minute of each rest period, each worker's heart rate shall be measured and compared with the following:
  Initial heart rate: ≤ 110 beats/minute (28 beats/15 sec).

  — Each worker's heart rate will be measured again three minutes later and compared with the following:
  Recovery heart rate: ≤ 80 beats/minute (20 beats/15 sec).

- If both heart rate criteria are met, the subsequent work period may be increased by one-third, <u>provided the temperature remains constant</u>. If the initial heart rate is > than 110 beats per minute, or the recovery rate is not less than 80 beats per minute, the subsequent work shift is decreased by one-third.

FREQUENCY OF MEASUREMENT

Ambient Temp. (°F)	Normal Work Clothing*	Impermeable Work Clothing
70° - 80°	N/A	90 min
80° - 85°	120 min	60 min
85° - 90	90 min	30 min
>90°	60 min	15 min

*Normal work clothing is cotton coveralls or other cotton clothing with long sleeves and pants.

- Note: Individuals with pre-existing medical conditions or restrictions contraindicating exposure to elevated environmental heat are precluded from assignments that involve exposure to high temperatures.

- Note: Healthy individuals will vary significantly in their tolerance to heat, and heat tolerance can be affected by minor illnesses (cold, flu) and by prescription and over-the-counter medications.

- Note: The heart rate measure is only a part of the overall situation to be considered; other objective and subjective symptoms of heat stress — extreme fatigue, nausea, disorientation, lightheadedness, and breathlessness — must be fully considered when evaluating the adequacy of control measures.

- Note: The heart rate measure will provide guidance that can be significantly different for each member of a field team based on their acclimatization, physical fitness, and heat tolerance. It is critical that all team members use the same work/break schedule; a schedule accommodates the least heat-tolerant team member will be observed.

15.2 Fall Protection

15.2.1 Discussion

During the execution of tasks 5 and 6, workers may be exposed to the fall hazard created by the excavated sump. Workers requiring access to the edge of the excavation with the exception of the backhoe operator will be at the greatest risk of the fall hazard. In order to reduce the likelihood of someone falling into the excavated sump, preventative measures such as caution tape, fall restraints and covering, as specified below, shall be employed.

15.2.2 Caution tape and Fall Restraint

To protect workers during Task 5, caution tape shall be erected to identify the hazard and control entry. The tape shall encircle the entire work area and be placed at least 3 ft from the edge of the excavation. Sampling of the excavated material shall occur outside of the tape. Sump inspection and sampling of the sludge or liquid at the bottom of the excavated sump may require workers to enter within the caution tape. If this is the case, and if the excavation is 4 ft or deeper, all workers entering within the caution tape shall be provided with fall restraint protection which shall consist of a full body harness attached to securely rigged restraint lines. No entry into the excavation is anticipated at this time.

15.2.3 Covering

To protect workers during Task 6, the excavation shall be covered with a suitable material to eliminate the fall hazard. The cover shall be capable of supporting the maximum intended load and so installed to prevent accidental displacement.

16.0 SITE INSPECTIONS

The SSO is responsible for conducting daily health and safety inspections. The results of the daily safety inspections, and the fact that an inspection was accomplished, will be recorded in the site Health and Safety Log.

The SSO will use the safety checklists provided in the Environmental Restoration Program Guidance Manual for Site Health and Safety Activities (draft) to record safety inspections. For this project these checklists include the following:

- Daily Safety Inspection Checklist

The PPE Inspection Checklist will be used by the SSO when new protective clothing is received, and periodically as a check on PPE condition and stock level.

The Daily Drill Rig Inspection Checklist will be used by the SSO to document daily rig inspections. The Pre-Startup Drill Rig Inspection Checklist is intended for use by the SSO before drilling operations are conducted at the site.

APPENDIX A

SSHASP ACKNOWLEDGMENT

Site Health and Safety Plan Acknowledgment

Plan Date

I have read, understand, and agree to follow the provisions detailed in this health and safety plan for (Title of Plan, Operable Unit):

I understand that my failure to comply with these provisions may lead to disciplinary actions and/or my dismissal from the site.

Printed Name	Organization	Employee No.	Signature	Date

APPENDIX B

TAILGATE SAFETY MEETING FORM

ENVIRONMENTAL RESTORATION TAILGATE SAFETY MEETING

GENERAL INFORMATION

Date: Time: Briefed by: Signature:
OU: TA: Site Group: Site Contact: Ph#:
Type Work: General Location:
Chemicals in use:

Site Specific Topics Discussed

___ Task Review, ___ Hazards of Nearby Site Operations, ___ Weather/Temperature, ___ Special SOP's,
___ SSHASP Change Orders, ___ Other (specify): _____

HAZARDS	PRS:	PRS:	PRS:
Chemical			
Physical			
Radiological			
PPE			
Safety Equipment			

Emergency Procedures

Hospital:
Emergency Procedures:
Muster Area:
First Aid Kit/Eye Wash Location:
Fire Extinguisher Location:
Vehicle/Gate Key Location:
Location of Emergency Numbers and Telephone:

Attendees

Name (Print)	Organization	Signature	Z# or SSN

APPENDIX C

CHANGE ORDER CONTROL FORM

Site-Specific Health and Safety Plan
Change Order Control Form for ER Field Operations

This form is to be used to document revisions to the SSHASP based on new or additional site data, contaminant monitoring, visual information, or changes in site conditions, work practices, or personnel. All changes must be approved by ESH-1 and or ESH-5 as appropriate. Once approved, changes shall be communicated to all field personnel via tailgate safety meetings.

Project Title:
Operable Unit (OU):
Technical Area (TA):
Change requested by:

Plan number:
Draft number:
Plan date:
Task Number and Name:

Duration of Authorization Requested:

Description of Modification: *(attach additional pages as necessary)*

Justification: *(attach additional pages as necessary)*

/ /

(Printed Name) (Title) (Signature) (Date)
ESH-1 (Health Physics) and/or ESH-5 (Industrial Hygiene/Safety)

/ /

(Printed Name) (Title) (Signature) (Date)
Site Safety Officer

cy: OUPL, HSPL

APPENDIX D

TRAINING MATRIX

TRAINING MATRIX - OU 1130

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	OUPL	Field Team Manager	Field Team Leader	Site Safety Officer	Geophysical Worker	Health Physics Tech.	Field Sampling Worker	Haz. Mat. Transporter	Drilling Crew	Explosives Spot Tester	Surveying Worker	Waste Coordinator	Visitors *
GET-General Employment Training	5668		X	X	X	X	X	X	X	X	X	X	X	X	
Basic Rad Worker/Rad Worker II	4428/7454		X	X	X	X		X	X		X	X			
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	X	X	X		X	X		X	X		X	
Hazardous Waste Operations - 24 hr Field Training	7173		X	X	X	X		X	X		X	X		X	
Hazardous Waste Operations - 24 hr or Refresher	4465/4466						X						X		
Hazardous Waste Operations - 8 hr Field Training	7174						X						X		
Hazardous Waste Operations - Supervisor	4467		X	X	X										
Waste Generation Overview	8477		X	X										X	
Waste Document Forms (Haz)	8504													X	
Waste Document Forms (Rad)	8508													X	
RCRA Personnel Training	7488													X	
HMPT Introduction	7513			X						X					
HMPT Indentification of Hazmat	8189			X						X					
HMPT Preparing Shipments	7514			X						X					
HMPT Movement by Highway	7515			X						X					
Explosive Training			X	X	X	X		X	X		X	X	X	X	
Field Spot Test for Explosives					X							X			
Site-Specific Orientation			X	X	X	X	X	X	X	X	X	X	X	X	X
First Aid/CPR	3574					X									
RFI Work Plan **		Jun-93	X	X	X	X	X	X	X	X	X	X	X		
Site-Specific Health and Safety Plan **			X	X	X	X	X	X	X	X	X	X	X	X	X
Waste Management Plan			X	X	X	X		X	X		X	X			
Stop Work and Restart	Directors Policy LP 116-01 0		X	X	X	X	X	X	X	X	X	X	X		
HS-5 Health and Safety Manual **			X	X	X	X	X	X	X	X	X	X	X		
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	X	X	X									
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	X	X	X									
SOPs and Special Work Permits	LANL-AR-1-3	10/3/87	X	X	X	X									
Hazard Communication	LANL-AR-1-9	10/1/88	X	X	X	X									
Excavation or Fill Permit Review	LANL-AR-1-12	10/18/91	X	X	X										
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	X	X	X		X							
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	X	X	X		X							
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	X	X	X		X							
Chemicals	LANL-AR-8-1	12/18/88	X	X	X	X									
Explosives	LANL AR 8-6	9/20/91	X	X	X	X						X			
Hearing Conservation	LANL-AR-8-2	10/1/93	X	X	X	X			X		X				
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	X	X	X									
Cultural Resources	LANL-AR-9-5	5/1/92	X	X	X										
Radioactive Liquid Waste	LANL-AR-10-1	5/30/92	X	X	X									X	
Low-Level Radioactive Solid Waste	LANL-AR-10-2	2/15/91	X	X	X									X	
Chemical, Hazardous and Mixed Waste	LANL-AR-10-3	4/27/93	X	X	X									X	

* Required if on a LANL site for more than 10 hours

** Pertinent sections only

TRAINING MATRIX - OU 1130

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	OUPL	Field Team Manager	Field Team Leader	Site Safety Officer	Geophysical Worker	Health Physics Tech.	Field Sampling Worker	Haz. Mat. Transporter	Drilling Crew	Explosives Spot Tester	Surveying Worker	Waste Coordinator	Visitors
Waste Minimization	LANL-AR-10-8	7/31/91	X	X	X									X	
Waste Profile Form	LANL-AR-10-9	4/27/93	X	X	X									X	
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	X	X	X									
Field Work	LANL-AR-15-1	7/20/91	X	X	X	X			X						
Review and Approval of ER Program Plans and Reports	LANL-ER-AP-01 3	3/27/91	X	X											
Distribution of Controlled Documents	LANL-ER-AP-01 4	5/26/91	X	X											
Approval Process for External Procedures Used in the ER Program	LANL-ER-AP-01 6	4/15/93	X	X											
Procedure for LANL ER Records Management	LANL-ER-AP-02 1	3/4/92	X	X											
Handling Media and Public Requests for Information During Field Work	LANL-ER-AP-03 2	12/5/96	X	X											
Ident., Doc., and Report Potential Release Sites	LANL-ER-AP-04 1	4/3/92	X	X											
Reporting New Releases from SWMUs	LANL-ER-AP-04 2	6/25/91	X	X	X										
Quality Assurance Objectives for Measurement Data	LANL-ER-QAP/P-05	5/20/91	X	X	X										
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	X	X				X						
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	X	X				X						
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	X	X	X	X	X	X				X		
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	X	X				X						
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	X	X	X	X	X	X	X	X	X	X	
Quality Assurance Reports to Management	LANL-ER-QAP/P-16	5/20/91	X	X											
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	X	X	X	X	X	X	X	X	X	X	X	
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	X	X				X						
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	3/16/92	X	X	X	X		X	X	X					
Sample Control and Field Documentation	LANL-ER-SOP-01 04	1/5/93	X	X	X				X						
Field Quality Control Samples	LANL-ER-SOP-01 05	3/16/92	X	X	X				X						
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	X	X	X		X	X		X	X		X	
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	X	X	X		X	X		X				
Equipment Decontamination	LANL-ER-SOP-01 08	Draft	X	X	X	X		X	X		X				
Land Surveying Procedures	LANL-ER-SOP-03 01	Draft	X	X									X		
General Surface Geophysics	LANL-ER-SOP-03 02	9/16/93	X	X	X		X								
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	6/1/92	X	X	X	X			X		X				
General Borehole Logging	LANL-ER-SOP-04 04	5/26/93	X	X	X										
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06 03	3/16/92	X	X	X				X						
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06 10	3/16/92	X	X	X				X						
Surface Water Sampling	LANL-ER-SOP-06 13	3/16/92	X	X	X				X						
Sediment Material Collection	LANL-ER-SOP-06 14	3/16/92	X	X	X				X						
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06 15	3/16/92	X	X	X				X						
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06 19	3/16/93	X	X	X				X						

* Required if on a LANL site for more than 10 hours

** Pertinent sections only

TRAINING MATRIX - OU 1130

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	OUPL	Field Team Manager	Field Team Leader	Site Safety Officer	Geophysical Worker	Health Physics Tech.	Field Sampling Worker	Haz. Mat. Transporter	Drilling Crew	Explosives Spot Tester	Surveying Worker	Waste Coordinator	Visitors
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06 23	5/20/93	X	X	X			X							
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06 24	5/20/93	X	X	X				X						
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06 29	9/18/93	X	X	X				X						
Fidler Instrument Systems	LANL-ER-SOP-10 04	9/17/93	X	X	X			X							
Field Logging, Handling and Documentation of Borehole Materials	LANL-ER-SOP-12 01	5/26/93	X	X	X										
Transportation, Receipt, and Admittance of Borehole Samples for the Sample Management Facility	LANL-ER-SOP-12 02	8/11/93	X	X	X										
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02 rev c	32945	X	X	X	X		X							
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	X	X	X		X							
Documenting Equipment and Item Release	LP 107-04 0	Draft	X	X	X	X		X							
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX 0	Draft	X	X	X	X		X							

* Required if on a LANL site for more than 10 hours
** Pertinent sections only

APPENDIX E

LIST OF MATERIAL SAFETY DATA SHEETS

The following list identifies the Material Safety Data Sheets (MSDS) that will be maintained on site. Upon request to the SSO, workers, or their designated representatives, may review MSDSs for any chemicals to which they may be exposed in their particular work area. In addition, MSDSs for potential contaminants in the work areas are also available.

A. CHEMICALS

1. Hydrochloric Acid
2. Nitric Acid
3. Gasoline
4. N,N-dimethylformamide
5. di-n-butylamine
6. dichlorofluorescein
7. tetra-n-butylammonium hydroxide
8. Methanol
9. dimethyl sulfoxide
10. potassium hydroxide

C. HE RESIDUALS

1. 2,4 DNT
2. 2,6 DNT
3. 1,3 DNB
4. 1,3,5 TNB
5. Barium Nitrate
6. Diphenxlyamine

B. POTENTIAL CONTAMINANTS

1. Acetone
2. Barium
3. Beryllium
4. Chromium
5. Copper
6. Depleted Uranium
7. Lead
8. Mercury
9. Nitro-methane
10. Silver cyanides
11. Uranium
12. Zinc
13. Zinc chloride

APPENDIX F

SUMMARY OF HISTORICAL SAMPLING DATA

SUMMARY OF HISTORICAL SAMPLING DATA

Chemical and Radiological Hazards

The following table identifies chemical and radioactive potential contaminants of concern for each PRS at OU 1130. The table also identifies the tasks which will be performed at each PRS, as enumerated in section 2.5 of this SSHASP.

		Chemical-Potential	Radioactive-Potential
PRS	TASK	Contaminants of Concern	Contaminants of Concern
36-002	1,5,6	Explosives,acetone,ZnCl2,alcohol,nitro-methane,glue,acids	Depleted uranium
36-003 (a)	1,7,9	Thiosulfates,silver cyanides,organic compounds	
36-003 (b)	1,3,4,7,8	Organic solvents,explosives,metals (See note 1)	Depleted uranium
36-004 (a)	1,4,10	Explosives and residues,Ba,Be,Pb,Hg	Depleted uranium (See note 2)
36-004 (b)	1,4,10	Explosives and residues,Ba,Be,Pb,Hg	Depleted uranium
36-004 (c)	1,4,10	Explosives and residues,Ba,Be,Pb,Hg	Depleted uranium
36-004 (d)	1,2,4,10,11	Explosives and residues,Ba,Be,Pb,Hg (See note 3)	Depleted uranium
36-004 (e)	1,3,4,10	Explosives and residues,Ba,Be,Pb,Hg	Depleted uranium (See note 4)
36-005	1,2,4,12	Explosives and residues,organic compounds,Cr,Ag,Zn,Be,Cu,Pb	U (See note 5)
C-36-003	1,4,13	Thiosulfates,Ag,organic compounds (See note 6)	

Note 1 In early 1981, the system tested negative for trinitrotoluene (TNT), cyclotetramethylene tetranitramine (HMX), and hexanitrosol (RDX), and was judged to have no problems and to require no action (Gonzales 1981, 13-0049).

Note 2 Sediment samples from the stream channel that travels from Eenie firing site contained total uranium concentrations ranging from 1.3 to 60.9 ppm, with a mean of 15.1 ppm (Becker 1991, 0699).

Note 3 The following table lists selected data from DOE Environmental Problem 1 (EG&G 1989, 0425). These results are measurements from five samples collected from the top 3 in. of soil at Lower Slobbovia. Each sample was a composite of four grab samples collected at equal distances from the center of the firing site.

Contaminant	Contamination at Selected Distances from the Center of the Firing Site (ppm)					Background Concentration in Soil (ppm)	Screening Action Level in Soil (ppm)
	5 ft	100 ft	250 ft	500 ft	750 ft		
Barium	104	177	101	133	82.2	120–8100[a]	5,500
Beryllium	1.0	1.2	...	...		1–3[a]	0.16
Chromium	9.5	4.1	6.2	6.9	4.9	1.6–71[b]	400 (VI)
Copper	145	974	14.5	...	...	2–18[a]	1,000
Lead	16.4	198	14.7	14.4	12.2	8–98[a]	500
Uranium(all isotopes)	91	43	11	13	4	1.3–3.9	240
Zinc	27.9	424	44.7	37.9	39.1	38–71[a]	24,000

[a](Ferenbaugh et al. 1990, 0099). [b](Longmire 1992, in preparation).

Contaminant	Contamination in Picocuries per Gram Deuterium at Selected Distances from the Site's Center					Background Concentration in Soil (pCi/g)	Screening Action Level in Soil
	5 ft	100 ft	250 ft	500 ft	750 ft		
Thorium-230	0.7	2.6	1.2	1.5	1.7		b
Thorium-232	<5.59	<10.11	<13.5	<15.5	<14.06		b
Cesium-137	...				0.534	<0.01–0.82[a]	b

[a](Purtymun et al. 1987, 021). [b]0.184 to 0.42 determined by LANL Risk Assessment Committee.

Note 4 Although plutonium was used, there have been no documented releases to the atmosphere (Becker 1991, 0699; Martin 1972, 13-0070; Kelkar 1992, 13-0060). Numerous pieces of depleted uranium and oxidized depleted uranium have been found at and around the firing area, and there is evidence of barium contamination in the Potrillo Canyon watershed near I-J site (Becker 1991, 0699). A surface radiological survey gave contamination results ranging from 40,000 to 255,000 counts per minute (readings are for hot spots) (Schlapper 1991, 13-0077).

Note 5 The Boneyard was included in Environmental Problem 23, a survey performed for DOE by INEL in 1988 (EG&G 1989, 13-0045). This radiological survey, Survey 818, identified four locations in the Boneyard that have above-background levels of radioactivity, a range from 31 to 100 mR/h. Six grab samples were collected from these locations. Two of these samples, from one part of the Boneyard, showed uranium at levels above screening action levels, with excess amounts of ^{238}U in evidence (suggesting the presence of depleted uranium). One of these two samples also had elevated concentrations of lead and silver.

Six additional surface soil grab samples were collected from visibly stained areas, or from areas downgradient of debris. The latter samples were screened using a PID, and, on the basis of the observations made during that screening process, two of the samples were submitted for screening for VOCs. Terpene was tentatively identified (at levels below quantitation limits) in one of these two samples, which was collected next to some empty pentane buckets. All samples were also analyzed for explosives, but none were detected in any of the samples.

Note 6 Water sampling performed in support of the NPDES permit (Bohn 1992, 13-0095) indicated very low levels of cyanide: a sample taken on September 11, 1990, measured 0.125 ppm; one taken on December 13, 1990, measured 0.010 ppm; and the rest of the samples taken measured 0.000 ppm. The screening action level for cyanide in water is 0.2 ppm. The levels of silver in water reported since 1989 have ranged from 0.004 ppm to 0.119 ppm. The screening action level for silver in water is 0.05 ppm.

APPENDIX 5

ATTACHMENT 2

Site-specific Health and Safety Plan Acknowledgement Form/Training Matrixes/Tailgate Safety Meeting Forms/

Site Health and Safety Plan Acknowledgment

MAY 19 1994

Plan Date

I have read, understand, and agree to follow the provisions detailed in this health and safety plan for (Title of Plan, Operable Unit): FIELD INVESTIGATION, OU-1130, TA 36

I understand that my failure to comply with these provisions may lead to disciplinary actions and/or my dismissal from the site.

Printed Name	Organization	Employee No.	Signature	Date
MICHAEL HENKE	LANL ESA-A	076031	[illegible]	5/26/94
JEFFREY D. BINGHAM	" "	095590	[illegible]	5/26/94
JOHN W TAYLOR	ICF KAISER/EDI	115273	[illegible]	5/26/94
ROBERT CATHERWOOD	LANL ESA-4	091603	[illegible]	5/26/94
SHANNON J DEMALA	LANL DX-11	80160	[illegible]	[illegible]
NANCY NESS	ICF KE	82700	[illegible]	5/27/94
CRISTY L ABEYTA	LANL ESH-4	107984	[illegible]	5/27/94
RICHARD CORDI	LANL/ESH-4	059874	[illegible]	5-27-94
GEORGE A MARINO	ESH-5	112444	[illegible]	[illegible] 5/27/94
PETER G. M. GRAM	ICF KE	203076	[illegible]	5/27/94
P. Bert Trujillo	ICF-KE	084605	P. Bert Trujillo	7/25/94
Michael A Powell	EDI	114724	[illegible]	7/25/94
[illegible]	MK	115643	[illegible]	5/27/94
KEN H. McFADDEN	MK	115392	[illegible]	3/25/94
Ambrose Corie	ICF KE	113384	[illegible]	5/9/94
L. Dewayne Bagwell	ICF KAISER	067166	[illegible]	[illegible]

TRAINING MATRIX • OU 1130

Manly B. Lee

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Health Physics Tech.	Date Completed	Initial Upon Completion
GET•General Employment Training	5668		X	4/19/94	MBL
Basic Rad Worker/Rad Worker II	4428/7454		X	5/13/94	MBL
Hazardous Waste Operations • 40 hr or Refresher	4404/4400		X	4/15/94	MBL
Hazardous Waste Operations • 24 hr Field Training	7173		X	IN PROGRESS	
HE Awareness Training			X	4/25/94	MBL
Health Physics Checklist Indoctrination	2389		X	[illegible]	[illegible]
TA•36 Orientation			X	11•21•94	[illegible]
RFI Work Plan **		Jun•93	X	[illegible]	[illegible]
Site•Specific Health and Safety Plan **			X	[illegible]	[illegible]
Waste Management Plan			X	11•21•94	[illegible]
Stop Work and Restart	Directors Policy LP 116•01.0	4/13/92	X	4/20/94	MBL
ER Health and Safety Program Plan	Annex III•IWP		X	[illegible]	[illegible]
HS•5 Health and Safety Manual **		Draft	X	4/21/94	MBL
Radiation Protection Program	LANL•AR•3•1	11/30/90	X	4/20/94	MBL
Shipment of Radioactive Materials	LANL•AR•3•5	1/18/91	X	[illegible]	[illegible]
Radiation Exposure Control	LANL•AR•3•7	1/11/91	X	4/20/94	MBL
Calibration Procedures and Frequency	LANL•ER•QAP/P•08	5/20/91	X	4/20/94	MBL
Corrective Action	LANL•ER•QAP/P•15	5/20/91	X	4/20/94	MBL
General Instructions for Field Investigations	LANL•ER•SOP•01.01	3/16/92	X	4/19/94	MBL
Sample Containers and Preservation	LANL•ER•SOP•01.02	3/16/92	X	[illegible]	[illegible]
Handling, Packaging, and Shipping of Samples	LANL•ER•SOP•01.03	5/5/94	X	4/19/94	MBL
Sample Control and Field Documentation	LANL•ER•SOP•01.04	5/5/94	X	[illegible]	[illegible]
Field Quality Control Samples	LANL•ER•SOP•01.05	3/16/92	X	[illegible]	[illegible]
Management of RFI•Generated Waste	LANL•ER•SOP•01.06	Draft	X	4/19/94	MBL
Personnel Decontamination	LANL•ER•SOP•01.07	Draft	X	4/19/94	MBL
Measurement of Gamma•Ray Fields Using a Sodium Iodide Detector	LANL•ER•SOP•06.23	5/19/93	X	4/20/94	MBL
Fidler Instrument Systems	LANL•ER•SOP•10.04	5/5/94	X	4/20/94	MBL
Surveying for Alpha and/or Beta/Gamma Contamination	ESH•1•02•02	3/14/94	X	4/20/94	MBL
Releasing Equipment and Items Standard	ESH•1•07•01	Draft	X	5/11/94	MBL
Documenting Equipment and Item Release	LP107•04.0	2/1/94	X	5/11/94	MBL
Operational Checks of Direct•Reading Beta•Gamma Survey Instruments	ESH•1•XXX.0	Draft	X	5/11/94	MBL

I hereby certify that I have received all of the training listed above.

Manly B. Lee

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

L. Dewight Bazzell

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Date Completed	Initial Upon Completion
GET-General Employment Training	5008		X	10/26/94	LDB
Basic Rad Worker/Rad Worker II	4428/7454		X	10/17/94	LDB
Hazardous Waste Operations - 40 hr or Refresher	4404/4460		X	10/24/94	LDB
Hazardous Waste Operations - 24 hr Field Training	7173		X		[illegible]
HE Awareness Training			X	10/18/94	LDB
Health Physics Checklist Indoctrination	2389		X	10/3/94	LDB
TA-36 Orientation			X	[illegible]	[illegible]
RFI Work Plan **		Jun-93	X	[illegible]	[illegible]
Site-Specific Health and Safety Plan **			X	[illegible]	[illegible]
Site-Specific Quality Assurance Plan		May-94	X	[illegible]	[illegible]
Waste Management Plan			X	[illegible]	[illegible]
Stop Work and Restart	Directors Policy LP 110-01.0	4/13/92	X	10/19/94	LDB
HS-5 Health and Safety Manual **		Draft	X	10/31/94	LDB
Hearing Conservation	LANL-AR-8-2	10/1/93	X	10/19/94	LDB
Field Work	LANL-AR-15-1	7/19/91	X	10/19/94	LDB
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	10/19/94	LDB
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	10/19/94	LDB
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	10/19/94	LDB
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	10/19/94	LDB
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	10/18/94	LDB
Sample Containers and Preservation	LANL-ER-SOP-01.02	3/16/92	X	10/18/94	LDB
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	5/5/94	X	10/18/94	LDB
Sample Control and Field Documentation	LANL-ER-SOP-01.04	5/5/94	X	10/18/94	LDB
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	10/19/94	LDB
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	10/19/94	LDB
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	11/2/94	LDB
Drilling Methods and Drill Site Management	LANL-ER-SOP-04.01	3/16/92	X	10/19/94	LDB
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06.09	3/16/92	X	10/19/94	LDB
Hand Auger and Thin-Wall Tube Sampler	LANL-ER-SOP-06.10	3/16/92	X	10/19/94	LDB
Surface Water Sampling	LANL-ER-SOP-06.13	3/16/92	X	[illegible]	[illegible]
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	10/19/94	LDB
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06.15	3/16/92	X	10/19/94	LDB
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.16	3/16/92	X	10/19/94	LDB
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	[illegible]	[illegible]
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.28	9/17/93	X	[illegible]	[illegible]

I hereby certify that I have recieved all of the training listed above.

L. Dewight Bazzell
Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Bob Staub

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Site Safety Officer	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	4/05/94	RS
Basic Rad Worker/Rad Worker II	4428/7454		X	4/13/94	RS
Hazardous Waste Operations - 40 hr or Refresher	4484/4486		X	10/28/93	RS
Hazardous Waste Operations - 24 hr Field Training	7173		X	6/04/93	RS
HE Awareness Training			X	8/22/94	
Health Physics Checklist Indoctrination	2389		X	4/25/94	RS
TA-36 Orientation			X	8/12/94	RS
First Aid/CPR	3574		X	2/02/94	RS
RFI Work Plan **		Jun-93	X	8/02/94	RS
Site-Specific Health and Safety Plan **			X	8/02/94	RS
Site-Specific Quality Assurance Plan		May-94	X	8/13/94	RS
Waste Management Plan			X	8/03/94	RS
Stop Work and Restart	Directors Policy LP 116-01 0	4/13/92	X	8/03/94	RS
ER Health and Safety Program Plan	Annex III-WP		X	7/29/94	RS
HS-5 Health and Safety Manual **		Draft	X	8/03/94	RS
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	8/03/94	RS
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	8/03/94	RS
SOPs and Special Work Permits	LANL-AR-1-3	10/30/87	X	7/29/94	RS
Hazard Communication	LANL-AR-1-9	10/1/86	X	7/29/94	RS
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	8/04/94	RS
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	8/05/94	RS
Personnel Radiation Dosimetry **	LANL-AR-3-6	8/30/91	X	8/05/94	RS
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	8/05/94	RS
Chemicals	LANL-AR-6-1	12/30/88	X	8/05/94	RS
Explosives	LANL AR 6-8	9/20/91	X	8/05/94	RS
Hearing Conservation	LANL-AR-8-2	10/1/93	X	7/19/94	RS
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	8/02/94	RS
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	8/15/94	RS
Field Work	LANL-AR-15-1	7/19/91	X	7/19/94	RS
Deficiency Reporting	LANL-ER-QP-01 30	3/18/91	X	8/13/94	RS
Calibration Procedures and Frequency	LANL-ER-QAPIP-08	5/20/91	X	8/13/94	RS
Data Reduction, Validation and Reporting	LANL-ER-QAPIP-10	5/20/91	X	8/13/94	RS
Performance and System Audits	LANL-ER-QAPIP-12	5/21/91	X	8/13/94	RS
Corrective Action	LANL-ER-QAPIP-15	5/20/91	X	8/13/94	RS
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	8/03/94	RS
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	8/03/94	RS
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	6/13/94	RS
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	6/14/94	RS
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	8/13/94	RS
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	8/13/94	RS
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	8/13/94	RS

** Pertinent sections only

TRAINING MATRIX - OU 1130

Bob Staub					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Site Safety Officer	Date Completed	Initial Upon Completion
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	2/13/94	RS
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX 0	Draft	X	2/13/94	RS.

I hereby certify that I have recieved all of the training listed above.

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Gene Gould					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	GUPL	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	[illegible]	
Basic Rad Worker/Rad Worker II	4428/7454		X		
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	9/9/91	
Hazardous Waste Operations - 24 hr Field Training	7173		X		
Hazardous Waste Operations - Supervisor	4467		X	4/28/92	
Waste Generation Overview	8477		X		
Explosive Testing [illegible]			X		
Tn-36 Orientation			X		
Site-Specific Health and Safety Plan **			X		
RFI Work Plan **		Jun-93	X	[illegible]	
Waste Management Plan			X	5/[illegible]	
Stop Work and Restart	Directors Policy LP 116-01.0		X	[illegible]	
HS-5 Health and Safety Manual **			X	[illegible]	
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	[illegible]	
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	[illegible]	
SOPs and Special Work Permits	LANL-AR-1-3	10/3/87	X	[illegible]	
Hazard Communication	LANL-AR-1-9	10/1/88	X	[illegible]	
Excavation or Fill Permit Review	LANL-AR-1-12	10/18/91	X	[illegible]	
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	[illegible]	
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	[illegible]	
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	[illegible]	
Chemicals	LANL-AR-8-1	12/18/88	X	[illegible]	
Explosives	LANL AR 8-6	9/20/91	X	[illegible]	
Heating Conservation	LANL-AR-8-2	10/1/93	X	[illegible]	
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	[illegible]	
Cultural Resources	LANL-AR-9-5	5/1/92	X	[illegible]	
Radioactive Liquid Waste	LANL-AR-10-1	5/30/92	X	[illegible]	
Low-Level Radioactive Solid Waste	LANL-AR-10-2	3/15/91	X	[illegible]	
Chemical, Hazardous, and Mixed Waste	LANL-AR-10-3	4/27/93	X	[illegible]	
Waste Minimization	LANL-AR-10-8	7/31/91	X	[illegible]	
Waste Profile Form	LANL-AR-10-9	4/27/93	X	[illegible]	
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	[illegible]	
Field Work	LANL-AR-15-1	7/20/91	X	[illegible]	
Review and Approval of ER Program Plans and Reports	LANL-ER-AP-013	3/27/91	X	[illegible]	
Distribution of Controlled Documents	LANL-ER-AP-014	5/20/91	X	[illegible]	
Approval Process for External Procedures Used in the ER Program	LANL-ER-AP-016	4/15/93	X	[illegible]	
Procedure for LANL ER Records Management	LANL-ER-AP-021	3/4/92	X	[illegible]	

** Pertinent sections only

TRAINING MATRIX - OU 1130

Gene Gould					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	OUPL	Date Completed	Initial Upon Completion
Handling Media and Public Requests for Information During Field Work	LANL-ER-AP-03.2	12/5/96	X	[illegible]	
Ident., Doc., and Report Potential Release Sites	LANL-ER-AP-04.1	4/3/92	X	[illegible]	
Reporting New Releases from SWMUs	LANL-ER-AP-04.2	6/25/91	X	[illegible]	
Quality Assurance Objectives for Measurement Data	LANL-ER-QAP/P-05	5/20/91	X	[illegible]	
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	[illegible]	
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	[illegible]	
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	[illegible]	
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	[illegible]	
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	[illegible]	
Quality Assurance Reports to Management	LANL-ER-QAP/P-16	5/20/91	X	[illegible]	
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	[illegible]	
Sample Containers and Preservation	LANL-ER-SOP-01.02	~~Draft~~	X	[illegible]	
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	~~Draft~~	X	[illegible]	
Sample Control and Field Documentation	LANL-ER-SOP-01.04	~~Draft~~	X	9/20/93	
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	[illegible]	
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	~~Draft~~	X	[illegible]	
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	[illegible]	
Equipment Decontamination	LANL-ER-SOP-01.08	Draft	X	[illegible]	
Land Surveying Procedures	LANL-ER-SOP-03.01	Draft	X	[illegible]	
General Surface Geophysics	LANL-ER-SOP-03.02	9/18/93	X	[illegible]	
Drilling Methods and Drill Site Management	LANL-ER-SOP-04.01	6/1/92	X	[illegible]	
General Borehole Logging	LANL-ER-SOP-04.04	5/20/93	X	[illegible]	
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06.09	3/16/92	X	[illegible]	
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06.10	3/16/92	X	[illegible]	
Surface Water Sampling	LANL-ER-SOP-06.13	3/16/92	X	[illegible]	
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	[illegible]	
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06.15	3/16/92	X	[illegible]	
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.19	3/16/92	X	[illegible]	
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06.23	5/20/93	X	[illegible]	
Sample Collection from Split-Spoon Samplers and Shelby Tube Samples	LANL-ER-SOP-06.24	5/20/93	X	[illegible]	
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.20	9/18/93	X	[illegible]	
Fidler Instrument Systems	LANL-ER-SOP-10.04	~~Draft~~	X	[illegible]	
Field Logging, Handling and Documentation of Borehole Materials	LANL-ER-SOP-12.01	5/20/93	X	[illegible]	

** Pertinent sections only

TRAINING MATRIX - OU 1130

Gene Gould					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	OUPL	Date Completed	Initial Upon Completion
Transportation, Receipt, and Admittance of Borehole Samples for the Sample Management Facility	LANL-ER-SOP-12.02	8/11/93	X	[illegible]	[illegible]
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02 rev c	3/14/94 Draft	X	[illegible]	[illegible]
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	[illegible]	[illegible]
Documenting Equipment and Item Release	LP107-04.0	Draft	X	[illegible]	[illegible]

I hereby certify that I have recieved all of the training listed above.

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Mike Henke

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Leader	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
GET-General Employment Training	5066		X	X	X	7/27/92	
Basic Rad Worker/Rad Worker II	4428/7454		X	O	X	8/26/93	
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	O	X	2/22/94	
Hazardous Waste Operations - 24 hr Field Training	7173		X	O	X	9/31/93	
Hazardous Waste Operations - Supervisor	4467		X	O	O	9/16/93	
HMPT: Introduction	7513		O	X	O	4/4/94	
HMPT: Indentification of Hazmat	8189		O	X	O	4/6/94	
HMPT: Preparing Shipments	7514		O	X	O	4/7/94	
HMPT: Movement by Highway	7515		O	X	O	4/8/94	
HE Awareness Training			X	X	X	4/25/94	
Field Spot Test for Explosives			X	O	X	3/17/94	
Health Physics Checklist Indoctrination	2389		X	X	X	unknown	
TA-36 Orientation			X	X	X	5/9/94	
RFI Work Plan **		Jun-93	X	X	X	10/1/93	
Site-Specific Health and Safety Plan **			X	X	X	5/9/94	
Site-Specific Quality Assurance Plan		May-94	X	O	O	5/19/94	
Waste Management Plan			X	O	X	5/19/94	
Stop Work and Restart	Directors Policy LP 116-01.0	4/13/92	X	O	X	5/19/94	
ER Health and Safety Program Plan	Annex III-IWP		X	O	O	5/19/94	
HS-5 Health and Safety Manual **		Draft	X	X	X	5/19/94	
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	O	O	5/19/94	
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	O	O	5/19/94	
SOPs and Special Work Permits	LANL-AR-1-3	10/30/87	X	O	O	5/19/94	
Hazard Communication	LANL-AR-1-9	10/1/86	X	O	O	5/19/94	
Excavation or Fill Permit Review	LANL-AR-1-12	10/18/91	X	O	O	5/19/94	
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	O	O	5/19/94	
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	O	O	5/19/94	
Personnel Radiation Dosimetry **	LANL-AR-3-6	8/30/91	X	O	O	5/24/94	
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	O	O	5/19/94	
Chemicals	LANL-AR-6-1	12/30/86	X	O	O	5/19/94	
Explosives	LANL AR 6-6	9/20/91	X	O	X	5/19/94	
Hearing Conservation	LANL-AR-8-2	10/1/93	X	O	O	5/19/94	
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	O	O	5/19/94	
Cultural Resources	LANL-AR-9-5	5/1/92	X	O	O	5/19/94	
Radioactive Liquid Waste	LANL-AR-10-1	5/29/92	X	O	O	5/19/94	
Low-Level Radioactive Solid Waste	LANL-AR-10-2	2/15/91	X	O	O	5/19/94	
Chemical, Hazardous, and Mixed Waste	LANL-AR-10-3	4/26/93	X	O	O	5/19/94	
Waste Minimization	LANL-AR-10-8	7/31/91	X	O	O	5/19/94	
Waste Profile Form	LANL-AR-10-9	4/26/93	X	O	O	5/19/94	
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	O	O	5/19/94	
Field Work	LANL-AR-15-1	7/19/91	X	O	O	5/19/94	
Reporting New Releases from SWMUs	LANL-ER-AP-04 2		X	O	O	5/19/94	
Deficiency Reporting	LANL-ER-QP-01 3Q	3/18/91	X	O	O	5/24/94	
Quality Assurance Objectives for Measurement Data	LANL-ER-QAP/P-05	5/20/91	X	O	O	5/19/94	
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	O	O	5/19/94	

** Pertinent sections only

TRAINING MATRIX • OU 1130

Mike Henke

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Leader	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	O	O	5/19/94	MH
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	O	O	5/19/94	MH
Data Reduction, Validation and Reporting	LANL-ER-QAP/P-10	5/20/91	X	O	O	5/24/94	MH
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	O	O	5/19/94	MH
Performance and System Audits	LANL-ER-QAP/P-12	5/21/91	X	O	O	5/24/94	MH
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	X	5/19/94	MH
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	X	X	5/19/94	MH
Sample Containers and Preservation	LANL-ER-SOP-01.02	3/16/92	X	O	O	5/19/94	MH
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	5/5/94	X	X	O	5/19/94	MH
Sample Control and Field Documentation	LANL-ER-SOP-01.04	5/5/94	X	O	O	5/19/94	MH
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	O	O	5/19/94	MH
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	O	X	5/19/94	MH
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	O	O	5/19/94	MH
General Surface Geophysics	LANL-ER-SOP-03.02	9/17/93	X	O	O	5/19/94	MH
Drilling Methods and Drill Site Management	LANL-ER-SOP-04.01	3/16/92	X	O	O	8/19/94	MH
General Borehole Logging	LANL-ER-SOP-04.04	6/25/93	X	O	O	5/11/94	MH
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06.09	3/16/92	X	O	O	5/19/94	MH
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06.10	3/16/92	X	O	O	5/19/94	MH
Surface Water Sampling	LANL-ER-SOP-06.13	3/16/92	X	O	O		MH
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	O	O	5/19/94	MH
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06.15	3/16/92	X	O	O	5/19/94	MH
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.19	3/16/92	X	O	O	5/19/94	MH
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06.23	5/19/93	X	O	O	5/19/94	MH
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	O	O	5/19/94	MH
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.29	9/17/93	X	O	O	5/19/94	MH
Fidler Instrument Systems	LANL-ER-SOP-10.04	5/5/94	X	O	O	5/19/94	MH
Field Logging, Handling and Documentation of Borehole Materials	LANL-ER-SOP-12.01	6/25/93	X	O	O	5/9/94	MH
Borehole Samples for the Sample Management	LANL-ER-SOP-12.02	11/17/93	X	O	O	5/10/94	MH
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	O	O	5/19/94	MH
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	O	O	5/19/94	MH
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	O	O	5/19/94	MH
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX.0	Draft	X	O	O		

I hereby certify that I have recieved all of the training listed above.

Michael Henke 5/24/94
Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Richard Cordi

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Date Completed	Initial Upon Completion
GET-General Employment Training	5608		X	3-93	RCC
Basic Rad Worker/Rad Worker II	4428/7454		X	7-94	RCC
Hazardous Waste Operations - 40 hr or Refresher	4404/4400		X	8-94	RCC
Hazardous Waste Operations - 24 hr Field Training	7173		X	3-93	RCC
HE Awareness Training			X	4-94	RCC
Health Physics Checklist Indoctrination	2389		X	5-94	RCC
TA-36 Orientation			X	6-94	RCC
RFI Work Plan **		Jun-93	X	5/19/94	RCC
Site-Specific Health and Safety Plan **			X	5/19/94	RCC
Site-Specific Quality Assurance Plan		May-94	X	5/19/94	RCC
Waste Management Plan			X	5/19/94	RCC
Stop Work and Restart	Directors Policy LP 110-01.0	4/13/92	X	5/19/94	RCC
HS-5 Health and Safety Manual **		Draft	X	5/19/94	RCC
Hearing Conservation	LANL-AR-6-2	10/1/93	X	5/19/94	RCC
Field Work	LANL-AR-15-1	7/19/91	X	5/19/94	RCC
Sampling Procedures	LANL-ER-QAPjP-00	5/20/91	X	5/19/94	RCC
Sample Custody	LANL-ER-QAPjP-07	5/20/91	X	5/19/94	RCC
Calibration Procedures and Frequency	LANL-ER-QAPjP-08	5/20/91	X	5/19/94	RCC
Internal Quality Control Checks	LANL-ER-QAPjP-11	5/20/91	X	5/19/94	RCC
Corrective Action	LANL-ER-QAPjP-15	5/20/91	X	5/19/94	RCC
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	5/19/94	RCC
Sample Containers and Preservation	LANL-ER-SOP-01.02	3/16/92	X	5/19/94	RCC
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	5/5/94	X	5/19/94	RCC
Sample Control and Field Documentation	LANL-ER-SOP-01.04	5/5/94	X	5/19/94	RCC
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	5/19/94	RCC
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	5/19/94	RCC
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	5/19/94	RCC
Drilling Methods and Drill Site Management	LANL-ER-SOP-04.01	3/16/92	X	8-93	RCC
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06.09	3/16/92	X	5/19/94	RCC
Hand Auger and Thin-Wall Tube Sampler	LANL-ER-SOP-06.10	3/16/92	X	5/19/94	RCC
Surface Water Sampling	LANL-ER-SOP-06.13	3/16/92	X	5-93	RCC
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	5/19/94	RCC
Collwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06.15	3/16/92	X	5/19/94	RCC
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.16	3/16/92	X	5/19/94	RCC
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	5/19/94	RCC
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.29	9/17/93	X	5/19/94	RCC

I hereby certify that I have recieved all of the training listed above.

Richard Cordi

Employee Signature

** Pertinent sections only

TRAINING MATRIX • OU 1130

Christy Abeyta

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Date Completed	Initial Upon Completion	
GET•General Employment Training	5008		X	5-31-94	5-31-94	CA
Basic Rad Worker/Rad Worker II	4428/7454		X	4-29-94	4-29-94	CA
Hazardous Waste Operations • 40 hr or Refresher	4404/4406		X	[illegible]	[illegible]	
Hazardous Waste Operations • 24 hr Field Training	7173		X	[illegible]	[illegible]	
HE Awareness Training			X	[illegible]	[illegible]	
Health Physics Checklist Indoctrination	2369		X	[illegible]	[illegible]	
TA•36 Orientation			X	5-31-94	5-31-94	CA
RFI Work Plan **		Jun•93	X	5/19/94	5-19-94	CA
Site•Specific Health and Safety Plan **			X	5/19/94	5-19-94	CA
Site•Specific Quality Assurance Plan		May•94	X	5/19/94	5-19-94	CA
Waste Management Plan			X	5/19/94	5-19-94	CA
Stop Work and Restart	Directors Policy LP 110•01.0	4/13/92	X	5/19/94	5-19-94	CA
HS•5 Health and Safety Manual **		Draft	X	5/19/94	5-19-94	CA
Hearing Conservation	LANL•AR•8•2	10/1/93	X	5/19/94	5-19-94	CA
Field Work	LANL•AR•15•1	7/19/91	X	5/19/94	5-19-94	CA
Sampling Procedures	LANL•ER•QAP|P•06	5/20/91	X	5/19/94	5-19-94	CA
Sample Custody	LANL•ER•QAP|P•07	5/20/91	X	5/19/94	5-19-94	CA
Calibration Procedures and Frequency	LANL•ER•QAP|P•08	5/20/91	X	5/19/94	5-19-94	CA
Internal Quality Control Checks	LANL•ER•QAP|P•11	5/20/91	X	5/19/94	5-19-94	CA
Corrective Action	LANL•ER•QAP|P•15	5/20/91	X	5/19/94	5-19-94	CA
General Instructions for Field Investigations	LANL•ER•SOP•01.01	3/18/92	X	5/19/94	5-19-94	CA
Sample Containers and Preservation	LANL•ER•SOP•01.02	3/18/92	X	5/19/94	5-19-94	CA
Handling, Packaging, and Shipping of Samples	LANL•ER•SOP•01.03	5/5/94	X	5/19/94	5-19-94	CA
Sample Control and Field Documentation	LANL•ER•SOP•01.04	5/5/94	X	5/19/94	5-19-94	CA
Field Quality Control Samples	LANL•ER•SOP•01.05	3/18/92	X	5/19/94	5-19-94	CA
Management of RFI•Generated Waste	LANL•ER•SOP•01.06	Draft	X	5/19/94	5-19-94	CA
Personnel Decontamination	LANL•ER•SOP•01.07	Draft	X	5/19/94	5-19-94	CA
Drilling Methods and Drill Site Management	LANL•ER•SOP•04.01	3/18/92	X	6-2-94	6-2-94	CA
Spade and Scoop Collection of Soil Samples	LANL•ER•SOP•06.09	3/18/92	X	5/19/94	5-19-94	CA
Hand Auger and Thin•wall Tube Sampler	LANL•ER•SOP•06.10	3/18/92	X	5/19/94	5-19-94	CA
Surface Water Sampling	LANL•ER•SOP•06.13	3/18/92	X			
Sediment Material Collection	LANL•ER•SOP•06.14	3/18/92	X	5/19/94	5-19-94	CA
Coliwasa Sampler for Liquids and Slurries	LANL•ER•SOP•06.15	3/18/92	X	5/19/94	5-19-94	CA
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL•ER•SOP•06.19	3/18/92	X	5/19/94	5-19-94	CA
Sample Collection from Split•Spoon Samplers and Shelby Tube Samplers	LANL•ER•SOP•06.24	5/19/93	X	5/19/94	5-19-94	CA
Single•Stage Sampling for Surface Water Run•Off	LANL•ER•SOP•06.29	9/17/93	X	5/19/94	5-19-94	CA

I hereby certify that I have received all of the training listed above.

Christy L Abeyta
Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Jeff Bingham

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	X	X	11/22/93	JB
Basic Rad Worker/Rad Worker II	4428/7454		X	O	X	12/3/93	JB
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	O	X	10/25/93	JB
Hazardous Waste Operations - 24 hr Field Training	7173		X	O	X	12/15/93	JB
HMPT: Introduction	7513		O	X	O	4/4/94	JB
HMPT: Indentification of Hazmat	8189		O	X	O	4/6/94	JB
HMPT: Preparing Shipments	7514		O	X	O	4/7/94	JB
HMPT: Movement by Highway	7515		O	X	O	4/8/94	JB
HE Awareness Training			X	X	X	4/25/94	JB
Field Spot Test for Explosives			O	O	X	3/17/94	JB
Health Physics Checklist Indoctrination	2389		X	X	X	12/13/93	JB
TA-36 Orientation			X	X	X	11-93	JB
RFI Work Plan **		Jun-93	X	X	X	5/19/94	JB
Site-Specific Health and Safety Plan **			X	X	X	5/19/94	JB
Site-Specific Quality Assurance Plan		May-94	X	O	O	5/19/94	JB
Waste Management Plan			X	O	X	5/19/94	JB
Stop Work and Restart	Directors Policy LP 116-01 0	4/13/92	X	O	X	5/19/94	JB
HS-5 Health and Safety Manual **		Draft	X	X	X	5/19/94	JB
Explosives	LANL AR 6-6	9/20/91	O	O	X	5/19/94	JB
Hearing Conservation	LANL-AR-8-2	10/1/93	X	O	O	5/19/94	JB
Field Work	LANL-AR-15-1	7/19/91	X	O	O	5/19/94	JB
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	O	O	5/19/94	JB
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	O	O	5/19/94	JB
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	O	O	5/19/94	JB
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	O	O	5/19/94	JB
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	X	5/19/94	JB
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	X	X	5/19/94	JB
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	O	O	5/19/94	JB
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	X	O	5/19/94	JB
Sample Control and Field Documentation	LANL-ER-SOP-01.04	5/5/94	X	O	O	5/19/94	JB
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	O	O	5/19/94	JB
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	O	X	5/19/94	JB
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	O	O	5/19/94	JB
Drilling Methods and Drill Site Management	LANL-ER-SOP-04.01	3/16/92	X	O	O	5-9-94	JB
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06 09	3/16/92	X	O	O	5/19/94	JB
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06 10	3/16/92	X	O	O	5/19/94	JB
Surface Water Sampling	LANL-ER-SOP-06.13	3/16/92	X	O	O	5-9-94	JB
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	O	O	5/19/94	JB
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06 15	3/16/92	X	O	O	5/19/94	JB
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.19	3/16/92	X	O	O	5/19/94	JB

** Pertinent sections only

TRAINING MATRIX • OU 1130

Jeff Bingham							
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	O	O	5/19/94	JB
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.29	9/17/93	X	O	O	5/19/94	JB

I hereby certify that I have recieved all of the training listed above.

Jeffrey D. Bingham
Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Nancy Ness

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	X	X	4/13/93	NN
Basic Rad Worker/Rad Worker II	4428/7454		X	O	X	4/9/93	NN
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	O	X	4/16/94	NN
Hazardous Waste Operations - 24 hr Field Training	7173		X	O	X	6/16/93	NN
HMPT: Introduction	7513		O	X	O	4/4/94	NN
HMPT: Indentification of Hazmat	8189		O	X	O	4/6/94	NN
HMPT: Preparing Shipments	7514		O	X	O	4/7/94	NN
HMPT: Movement by Highway	7515		O	X	O	4/8/94	NN
HE Awareness Training			X	X	X	4/25/94	NN
Field Spot Test for Explosives			O	O	X	3/17/94	NN
Health Physics Checklist Indoctrination	2389		X	X	X	4/5/93	NN
TA-36 Orientation			X	X	X	5/9/94	NN
RFI Work Plan **		Jun-93	X	X	X	5/19/94	NN
Site-Specific Health and Safety Plan **			X	X	X	5/19/94	NN
Site-Specific Quality Assurance Plan		May-94	X	O	O	5/19/94	NN
Waste Management Plan			X	O	X	5/19/94	NN
Stop Work and Restart	Directors Policy LP 110-01.0	4/13/92	X	O	X	5/19/94	NN
HS-5 Health and Safety Manual **		Draft	X	X	X	5/19/94	NN
Explosives	LANL AR 6-6	9/20/91	O	O	X	5/19/94	NN
Hearing Conservation	LANL-AR-6-2	10/1/93	X	O	O	5/19/94	NN
Field Work	LANL-AR-15-1	7/19/91	X	O	O	5/19/94	NN
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	O	O	5/19/94	NN
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	O	O	5/19/94	NN
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	O	O	5/19/94	NN
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	O	O	5/19/94	NN
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	X	5/19/94	NN
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	X	X	5/19/94	NN
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	O	O	5/19/94	NN
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	5/5/94	X	X	O	5/19/94	NN
Sample Control and Field Documentation	LANL-ER-SOP-01 04	5/5/94	X	O	O	5/19/94	NN
Field Quality Control Samples	LANL-ER-SOP-01 05	3/16/92	X	O	O	5/19/94	NN
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	O	X	5/19/94	NN
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	O	O	5/19/94	NN
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	O	O	5/24/94	NN
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06 09	3/16/92	X	O	O	5/19/94	NN
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06 10	3/16/92	X	O	O	5/19/94	NN
Surface Water Sampling	LANL-ER-SOP-06 13	3/16/92	X	O	O	5/24/94	NN
Sediment Material Collection	LANL-ER-SOP-06 14	3/16/92	X	O	O	5/19/94	NN
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06 15	3/16/92	X	O	O	5/19/94	NN
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06.19	3/16/92	X	O	O	5/19/94	NN

** Pertinent sections only

TRAINING MATRIX - OU 1130

Nancy Ness

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	O	O	5/19/94	NN
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.29	9/17/93	X	O	O	5/19/94	NN

I hereby certify that I have received all of the training listed above.

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Ken McFadden

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Site Safety Officer	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	2/23/94	KMM
Basic Rad Worker/Rad Worker II	4428/7454		X	2/28/94	KMM
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	10/30/93	KMM
Hazardous Waste Operations - 24 hr Field Training	7170		X	6/20/94	KMM
HE Awareness Training			X	4/25/94	KMM
Health Physics Checklist Indoctrination	2389		X	4/25/94	KMM
TA-36 Orientation			X	5/9/94	KMM
First Aid/CPR	3574		X	10/30/93	KMM
RFI Work Plan **		Jun-93	X	5/25/94	KMM
Site-Specific Health and Safety Plan **			X	5/23/94	KMM
Site-Specific Quality Assurance Plan		May-94	X	5/25/94	KMM
Waste Management Plan			X	5/24/94	KMM
Stop Work and Restart	Directors Policy LP 116-01 0	4/13/92	X	5/12/94	KMM
ER Health and Safety Program Plan	Annex III-IWP		X	5/23/94	KMM
HS-5 Health and Safety Manual **		Draft	X	5/12/94	KMM
Accident and Occurrence Reporting	LANL-AR-1-1	6/3/92	X	5/13/94	KMM
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	5/14/94	KMM
SOPs and Special Work Permits	LANL-AR-1-3	10/30/87	X	5/13/94	KMM
Hazard Communication	LANL-AR-1-9	10/1/80	X	5/14/94	KMM
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	5/13/94	KMM
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	5/15/94	KMM
Personnel Radiation Dosimetry **	LANL-AR-3-6	8/30/91	X	5/13/94	KMM
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	5/14/94	KMM
Chemicals	LANL-AR-6-1	12/30/86	X	5/21/94	KMM
Explosives	LANL AR 6-6	9/20/91	X	5/21/94	KMM
Hearing Conservation	LANL-AR-8-2	10/1/93	X	5/20/94	KMM
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	5/14/94	KMM
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	5/13/94	KMM
Field Work	LANL-AR-15-1	7/19/91	X	5/21/94	KMM
Deficiency Reporting	LANL-ER-OP-01 30	3/18/91	X	5/20/94	KMM
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	5/23/94	KMM
Data Reduction, Validation and Reporting	LANL-ER-QAP/P-10	5/20/91	X	5/23/94	KMM
Performance and System Audits	LANL-ER-QAP/P-12	5/21/91	X	5/21/94	KMM
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	5/20/94	KMM
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	5/15/94	KMM
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	5/15/94	KMM
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	5/15/94	KMM
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	5/24/94	KMM
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	5/23/94	KMM
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	5/13/94	KMM
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	5/15/94	KMM

** Pertinent sections only

TRAINING MATRIX - OU 1130

Ken McFadden					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Site Safety Officer	Date Completed	Initial Upon Completion
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	5/24/94	KHM
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX.0	Draft	X	5/24/94	KHM

I hereby certify that I have recieved all of the training listed above.

Ken H. McFadden

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Bert Trujillo

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Sampling Worker	Date Completed	Initial Upon Completion
GET-General Employment Training	5688		X	11/3/93	P B T
Basic Rad Worker/Rad Worker II	4428/7454		X	11/15/93	P B T
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	12/10/93	P. B. T
Hazardous Waste Operations - 24 hr Field Training	7173		X	11/17/93	P B T
HE Awareness Training			X	5/94	P B T
Health Physics Checklist Indoctrination	2389		X		
TA-36 Orientation			X		
RFI Work Plan **		Jun-93	X	5/19/94	P B
Site-Specific Health and Safety Plan **			X	5/19/94	P B T
Site-Specific Quality Assurance Plan		May-94	X	5/19/94	P B T
Waste Management Plan			X	5/19/94	P. B. T
Stop Work and Restart	Directors Policy LP 116-01 0	4/13/92	X	5/19/94	P. B. T
HS-5 Health and Safety Manual **		Draft	X	5/19/94	P. B. T
Hearing Conservation	LANL-AR-8-2	10/1/93	X	5/19/94	P. B. T
Field Work	LANL-AR-15-1	7/19/91	X	5/19/94	P. B. T
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	5/19/94	P. B. T.
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	5/19/94	P. B. T.
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	5/19/94	P. B. T
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	5/19/94	P. B. T.
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	5/19/94	P B T.
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	5/19/94	P. B. T.
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	5/19/94	P. B. T.
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	5/19/94	P. B. T
Sample Control and Field Documentation	LANL-ER-SOP-01 04	5/5/94	X	5/19/94	P. B T
Field Quality Control Samples	LANL-ER-SOP-01 05	3/16/92	X	5/19/94	P. B. T
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	5/19/94	P. B T
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	5/19/94	P. B T.
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	5/25/94	P B T
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06 09	3/16/92	X	5/19/94	P. B. T
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06 10	3/16/92	X	5/19/94	P. B. T
Surface Water Sampling	LANL-ER-SOP-06 13	3/16/92	X	5/25/94	P B T
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	5/19/94	P B. T.
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06 15	3/16/92	X	5/19/94	P. B T.
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06 19	3/16/92	X	5/19/94	P. B. T
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	5/19/94	P. B. T.
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06 29	9/17/93	X	5/19/94	P. B. T.

I hereby certify that I have recieved all of the training listed above.

Peter B Trujillo

Employee Signature

** Pertinent sections only

TRAINING MATRIX • OU 1130

Peter Gram

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Leader	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	X	X	1/26/93	
Basic Rad Worker/Rad Worker II	4428/7454		X	O	X	5/7/93	
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	O	X	8/3/93	
Hazardous Waste Operations - 24 hr Field Training	7173		X	O	X	8/15/93	
Hazardous Waste Operations - Supervisor	4467		X	O	O	9/16/93	
HMPT: Introduction	7513		O	X	O	4/4/94	
HMPT: Indentification of Hazmat	8169		O	X	O	4/6/94	
HMPT: Preparing Shipments	7514		O	X	O	4/7/94	
HMPT: Movement by Highway	7515		O	X	O	4/8/94	
HE Awareness Training			X	X	X	4/25/94	
Field Spot Test for Explosives			X	O	X	3/17/94	
Health Physics Checklist Indoctrination	2389		X	X	X	4/26/93	
TA-36 Orientation			X	X	X	5/9/94	
RFI Work Plan **		Jun-93	X	X	X	5/19/94	
Site-Specific Health and Safety Plan **			X	X	X	5/19/94	
Site-Specific Quality Assurance Plan		May-94	X	O	O	5/19/94	
Waste Management Plan			X	O	X	5/19/94	
Stop Work and Restart	Directors Policy LP 110-01.0	4/13/92	X	O	X	5/19/94	
ER Health and Safety Program Plan	Annex III-IWP		X	O	O	5/19/94	
HS-5 Health and Safety Manual **		Draft	X	X	X	5/19/94	
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	O	O	5/19/94	
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	O	O	5/19/94	
SOPs and Special Work Permits	LANL-AR-1-3	10/30/87	X	O	O	5/19/94	
Hazard Communication	LANL-AR-1-9	10/1/88	X	O	O	5/19/94	
Excavation or Fill Permit Review	LANL-AR-1-12	10/18/91	X	O	O	5/19/94	
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	O	O	5/19/94	
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	O	O	5/19/94	
Personnel Radiation Dosimetry **	LANL-AR-3-6	8/30/91	X	O	O	5/19/94	
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	O	O	5/19/94	
Chemicals	LANL-AR-6-1	12/30/86	X	O	O	5/19/94	
Explosives	LANL AR 6-6	9/20/91	X	O	X	5/19/94	
Hearing Conservation	LANL-AR-6-2	10/1/93	X	O	O	5/19/94	
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	O	O	5/19/94	
Cultural Resources	LANL-AR-9-5	5/1/93	X	O	O	5/19/94	
Radioactive Liquid Waste	LANL-AR-10-1	5/29/92	X	O	O	5/19/94	
Low-Level Radioactive Solid Waste	LANL-AR-10-2	2/15/91	X	O	O	5/19/94	
Chemical, Hazardous, and Mixed Waste	LANL-AR-10-3	4/26/93	X	O	O	5/19/94	
Waste Minimization	LANL-AR-10-8	7/31/91	X	O	O	5/19/94	
Waste Profile Form	LANL-AR-10-9	4/26/93	X	O	O	5/19/94	
Personal Protective Equipment	LANL-AR-13-1	9/20/91	X	O	O	5/19/94	
Field Work	LANL-AR-15-1	7/19/91	X	O	O	5/19/94	
Reporting New Releases from SWMUs	LANL-ER-AP-04.2		X	O	O	5/19/94	
Deficiency Reporting	LANL-ER-OP-01.30	3/18/91	X	O	O	5/19/94	
Quality Assurance Objectives for Measurement Data	LANL-ER-QAP/P-05	5/20/91	X	O	O	5/19/94	

** Pertinent sections only

TRAINING MATRIX - OU 1130

Peter Gram

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Leader	Haz. Mat. Transporter	Explosives Spot Tester	Date Completed	Initial Upon Completion
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	O	O	5/19/94	
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	O	O	5/19/94	
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	O	O	5/19/94	
Data Reduction, Validation and Reporting	LANL-ER-QAP/P-10	5/20/91	X	O	O	5/19/94	
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	O	O	5/19/94	
Performance and System Audits	LANL-ER-QAP/P-12	5/21/91	X	O	O	5/19/94	
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	X	5/19/94	
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	X	X	5/19/94	
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	O	O	5/19/94	
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	X	O	5/19/94	
Sample Control and Field Documentation	LANL-ER-SOP-01 04	5/5/94	X	O	O	5/19/94	
Field Quality Control Samples	LANL-ER-SOP-01.05	3/16/92	X	O	O	5/19/94	
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	O	X	5/19/94	
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	O	O	5/19/94	
General Surface Geophysics	LANL-ER-SOP-03 02	9/17/93	X	O	O	5/19/94	
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	O	O	9/1/93	
General Borehole Logging	LANL-ER-SOP-04 04	6/25/93	X	O	O	9/1/93	
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06.09	3/16/92	X	O	O	5/19/94	
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06.10	3/16/92	X	O	O	5/19/94	
Surface Water Sampling	LANL-ER-SOP-06 13	3/16/92	X	O	O	9/1/93	
Sediment Material Collection	LANL-ER-SOP-06.14	3/16/92	X	O	O	5/19/94	
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06.15	3/16/92	X	O	O	5/19/94	
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06 19	3/16/92	X	O	O	5/19/94	
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06 23	5/19/93	X	O	O	5/19/94	
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06 24	5/19/93	X	O	O	5/19/94	
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06 29	9/17/93	X	O	O	5/19/94	
Fidler Instrument Systems	LANL-ER-SOP-10 04	5/5/94	X	O	O	5/19/94	
Field Logging, Handling and Documentation of Borehole Materials	LANL-ER-SOP-12.01	6/25/93	X	O	O	9/1/93	
Borehole Samples for the Sample Management	LANL-ER-SOP-12.02	11/17/93	X	O	O	5/19/94	
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	O	O	5/19/94	
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	O	O	5/19/94	
Documenting Equipment and Item Release	LP107-04 0	2/1/94	X	O	O	5/19/94	
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX 0	Draft	X	O	O	5/19/93	

I hereby certify that I have received all of the training listed above

Peter G. M. Gram

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Ambrose Coriz

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Excavation Crew	Date Completed	Initial Upon Completion
QET-General Employment Training	5668		X	12/2/93	AC
Basic Rad Worker/Rad Worker II	4428/7454		X	5/94	AC
Hazardous Waste Operations - 40 hr or Refresher	4484/4486		X	[illegible]/93	AC
Hazardous Waste Operations - 24 hr Field Training	7173		X	10/93	AC
HE Awareness Training			X	6/94	AC
Health Physics Checklist Indoctrination	2369		X	5/16/94	AC
Site-Specific Orientation			X	5/13/94	AC
RFI Work Plan **		Jun-93	X	5/13/94	AC
Site-Specific Health and Safety Plan **			X	5/13/94	AC
Waste Management Plan			X	5/13/94	AC
Stop Work and Restart	116-01.0	4/13/92	X	5/13/94	AC
HS-5 Health and Safety Manual **		Draft	X	5/13/94	AC
Hearing Conservation	LANL-AR-8-2	10/1/93	X	5/13/94	AC
Corrective Action	LANL-ER-QAP-P-15	5/20/91	X	5/13/94	AC
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	5/13/94	AC
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	5/13/94	AC
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	5/13/94	AC

I hereby certify that I have received all of the training listed above.

Ambrose Coriz

Employee Signature

* Required if on a LANL site for more than 10 hours

** Pertinent sections only

TRAINING MATRIX • OU 1130

Bob Catherwood

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Waste Coordinator	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	5/18/93	
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	10/5/93	
Hazardous Waste Operations - 24 hr Field Training	7173		X	11/16/93	
Waste Generation Overview	8477		X	5/11/94	
Waste Document Forms (Haz)	8504		X	[illegible]	
Waste Document Forms (Rad)	8506		X	[illegible]	
RCRA Personnel Training	7488		X	[illegible]	
HE Awareness Training			X	4/25/94	
Health Physics Checklist Indoctrination	2389		X	[illegible]	
TA-36 Orientation			X	[illegible]	
Site-Specific Health and Safety Plan **			X	5/19/94	
Waste Management Plan			X	5/19/94	
Radioactive Liquid Waste	LANL-AR-10-1	5/29/92	X	5/19/94	
Low-Level Radioactive Solid Waste	LANL-AR-10-2	2/15/91	X	5/19/94	
Chemical, Hazardous, and Mixed Waste	LANL-AR-10-3	4/26/93	X	5/19/94	
Waste Minimization	LANL-AR-10-8	7/31/91	X	5/19/94	
Waste Profile Form	LANL-AR-10-9	4/26/93	X	5/19/94	
Corrective Action	LANL-ER-QAPjP-15	5/20/91	X	5/19/94	
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/16/92	X	5/19/94	
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	5/19/94	

I hereby certify that I have recieved all of the training listed above.

Robert Catherwood
Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

Lynn Kidman

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Manager	Haz. Mat. Transporter	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	X	12/1/92	LK
Basic Rad Worker/Rad Worker II	4428/7454		X	O	12/2/92	LK
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	O	2/22/94	LK
Hazardous Waste Operations - 24 hr Field Training	7173		X	O	6/15/93	LK
Hazardous Waste Operations - Supervisor	4467		X	O	4/12/93	LK
Hazards Communication Introduction	2398		X	O	12/1/92	LK
Waste Generation Overview	8477		X	O	12/2/92	LK
HMPT Introduction	7513		X	X	4/4/94	LK
HMPT Indentification of Hazmat	5189		X	X	4/6/94	LK
HMPT Preparing Shipments	7514		X	X	4/7/94	LK
HMPT Movement by Highway	7515		X	X	4/8/94	LK
HE Awareness Training			X	X	4/25/94	LK
Health Physics Checklist Indoctrination	2389		X	X		LK
TA-36 Orientation			X	X	5/9/94	LK
RFI Work Plan **		Jun-93	X	X	5/19/94	LK
Site-Specific Health and Safety Plan **			X	X	5/19/94	LK
Site-Specific Quality Assurance Plan		May-94	X	O	5/19/94	LK
Waste Management Plan			X	O	5/19/94	LK
Stop Work and Restart	Directors Policy LP 116-01.0	4/13/92	X	O	5/19/94	LK
ER Health and Safety Program Plan	Annex III-IWP		X	O	5/19/94	LK
HS-5 Health and Safety Manual **		Draft	X	X	5/19/94	LK
Accident and Occurrence Reporting	LANL-AR-1-1	8/3/92	X	O	5/19/94	LK
Emergency Preparedness	LANL-AR-1-2	5/15/90	X	O	5/19/94	LK
SOPs and Special Work Permits	LANL-AR-1-3	10/30/87	X	O	5/19/94	LK
Hazard Communication	LANL-AR-1-9	10/1/88	X	O	5/19/94	LK
Excavation or Fill Permit Review	LANL-AR-1-12	10/18/91	X	O	5/19/94	LK
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	O	5/19/94	LK
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	O	5/19/94	LK
Personnel Radiation Dosimetry **	LANL-AR-3-6	8/30/91	X	O	5/23/94	LK
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	O	5/19/94	LK
Chemicals	LANL-AR-6-1	12/30/86	X	O	5/19/94	LK
Explosives	LANL AR 6-6	9/20/91	X	O	5/19/94	LK
Hearing Conservation	LANL-AR-8-2	10/1/93	X	O	5/19/94	LK
Accidental Oil, Chemical, and Airborne Releases	LANL-AR-9-4	8/30/91	X	O	5/19/94	LK
Cultural Resources	LANL-AR-9-5	5/1/92	X	O	5/19/94	LK
Radioactive Liquid Waste	LANL-AR-10-1	5/29/92	X	O	5/19/94	LK
Low-Level Radioactive Solid Waste	LANL-AR-10-2	2/15/91	X	O	5/19/94	LK
Chemical, Hazardous, and Mixed Waste	LANL-AR-10-3	4/26/93	X	O	5/19/94	LK
Waste Minimization	LANL-AR-10-8	7/31/91	X	O	5/19/94	LK

** Pertinent sections only

Lynn Kidman

APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Manager	Haz. Mat. Transporter	Date Completed	Initial Upon Completion
Waste Profile Form	LANL-AR-10-9	4/26/93	X	O	5/19/94	[illegible]
Personal Protective Equipment	LANL-AR-12-1	9/20/91	X	O	5/19/94	[illegible]
Field Work	LANL-AR-15-1	7/19/91	X	O	5/19/94	[illegible]
Review and Approval of ER Program Plans and Reports	LANL-ER-AP-01 3	3/27/91	X	O	5/23/94	[illegible]
Distribution of Controlled Documents	LANL-ER-AP-01 4	3/26/91	X	O	5/23/94	[illegible]
Approval Process for External Procedures Used in the ER Program	LANL-ER-AP-01 6	7/14/93	X	O	5/23/94	[illegible]
Procedure for LANL ER Records Management	LANL-ER-AP-02 1	3/4/92	X	O	5/19/94	[illegible]
Handling Media and Public Requests for Information During Field Work	LANL-ER-AP-03 2	12/4/96	X	O	5/23/94	[illegible]
Ident., Doc., and Report Potential Release Sites	LANL-ER-AP-04 1	3/4/92	X	O	5/19/94	[illegible]
Reporting New Releases from SWMUs	LANL-ER-AP-04 2		X	O	5/19/94	[illegible]
Deficiency Reporting	LANL-ER-QP-01 3C	3/18/91	X	O	5/23/94	[illegible]
Quality Assurance Objectives for Measurement Data	LANL-ER-QAP/P-05	5/20/91	X	O	5/19/94	[illegible]
Sampling Procedures	LANL-ER-QAP/P-06	5/20/91	X	O	5/19/94	[illegible]
Sample Custody	LANL-ER-QAP/P-07	5/20/91	X	O	5/19/94	[illegible]
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	O	5/19/94	[illegible]
Data Reduction, Validation and Reporting	LANL-ER-QAP/P-10	5/20/91	X	O	5/23/94	[illegible]
Internal Quality Control Checks	LANL-ER-QAP/P-11	5/20/91	X	O	5/19/94	[illegible]
Performance and System Audits	LANL-ER-QAP/P-12	5/21/91	X	O	5/23/94	[illegible]
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	X	5/19/94	[illegible]
Quality Assurance Reports to Management	LANL-ER-QAP/P-16	5/20/91	X	O	5/23/94	[illegible]
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	X	5/19/94	[illegible]
Sample Containers and Preservation	LANL-ER-SOP-01 02	3/16/92	X	O	5/19/94	[illegible]
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/5/94	X	X	5/19/94	[illegible]
Sample Control and Field Documentation	LANL-ER-SOP-01 04	5/5/94	X	O	5/19/94	[illegible]
Field Quality Control Samples	LANL-ER-SOP-01 05	3/16/92	X	O	5/19/94	[illegible]
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	O	5/19/94	[illegible]
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	O	5/19/94	[illegible]
Land Surveying Procedures	LANL-ER-SOP-03 01	5/5/94	X	O	5/23/94	[illegible]
General Surface Geophysics	LANL-ER-SOP-03 02	9/17/93	X	O	5/19/94	[illegible]
Drilling Methods and Drill Site Management	LANL-ER-SOP-04 01	3/16/92	X	O	5/23/94	[illegible]
General Borehole Logging	LANL-ER-SOP-04 04	8/25/93	X	O	5/23/94	[illegible]
Spade and Scoop Collection of Soil Samples	LANL-ER-SOP-06 09	3/16/92	X	O	5/19/94	[illegible]
Hand Auger and Thin-wall Tube Sampler	LANL-ER-SOP-06 10	3/16/92	X	O	5/19/94	[illegible]
Surface Water Sampling	LANL-ER-SOP-06 13	3/16/92	X	O	5/23/94	[illegible]
Sediment Material Collection	LANL-ER-SOP-06 14	3/16/92	X	O	5/19/94	[illegible]
Coliwasa Sampler for Liquids and Slurries	LANL-ER-SOP-06 15	3/16/92	X	O	5/19/94	[illegible]
Weighted Bottle Sampler for Liquids and Slurries in Tanks	LANL-ER-SOP-06 19	3/16/92	X	O	5/19/94	[illegible]

** Pertinent sections only

TRAINING MATRIX • OU 1130

Lynn Kidman						
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Field Team Manager	Haz. Mat. Transporter	Date Completed	Initial Upon Completion
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06.23	5/19/93	X	O	5/19/94	LK
Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers	LANL-ER-SOP-06.24	5/19/93	X	O	5/19/94	LK
Single-Stage Sampling for Surface Water Run-Off	LANL-ER-SOP-06.29	9/17/93	X	O	5/19/94	LK
Fidler Instrument Systems	LANL-ER-SOP-10.04	5/5/94	X	O	5/19/94	LK
Field Logging, Handling and Documentation of Borehole Materials	LANL-ER-SOP-12.01	6/25/93	X	O	5/23/94	LK
Borehole Samples for the Sample Management	LANL-ER-SOP-12.02	11/17/93	X	O	5/23/94	LK
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	O	5/19/94	LK
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	O	5/19/94	LK
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	O	5/19/94	LK
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX.0	Draft	X	O	5/23/94	LK

I hereby certify that I have recieved all of the training listed above.

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

John Taylor					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Health Physics Tech.	Date Completed	Initial Upon Completion
GET-General Employment Training	5668		X	4/19/94	
Basic Rad Worker/Rad Worker II	4426/7454		X	[illegible]	
Hazardous Waste Operations - 40 hr or Refresher	4464/4466		X	4/15/94	
Hazardous Waste Operations - 24 hr Field Training	7173		X		
HE Awareness Training			X	4/25/94	
Health Physics Checklist Indoctrination	2389		X	[illegible]	
TA-38 Orientation			X	[illegible]	
RFI Work Plan **		Jun-93	X	5/19/94	
Site-Specific Health and Safety Plan **			X	5/19/94	
Waste Management Plan			X	5/19/94	
Stop Work and Restart	Directors Policy LP 116-01 0	4/13/92	X	5/19/94	
ER Health and Safety Program Plan	Annex III-IWP		X	5/19/94	
HS-5 Health and Safety Manual **		Draft	X	5/19/94	
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	5/19/94	
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	5/19/94	
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	5/19/94	
Calibration Procedures and Frequency	LANL-ER-QAP/P-08	5/20/91	X	5/19/94	
Corrective Action	LANL-ER-QAP/P-15	5/20/91	X	5/19/94	
General Instructions for Field Investigations	LANL-ER-SOP-01 01	3/16/92	X	5/19/94	
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01 03	5/6/94	X	5/19/94	
Management of RFI-Generated Waste	LANL-ER-SOP-01 06	Draft	X	5/19/94	
Personnel Decontamination	LANL-ER-SOP-01 07	Draft	X	5/19/94	
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06 23	5/19/93	X	5/19/94	
Fidler Instrument Systems	LANL-ER-SOP-10 04	5/5/94	X	5/19/94	
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	5/19/94	
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	5/19/94	
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	5/19/94	
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX 0	Draft	X	5/19/94	

I hereby certify that I have recieved all of the training listed above.

Employee Signature

** Pertinent sections only

TRAINING MATRIX - OU 1130

John Taylor					
APPLICABLE TRAINING COURSES/ PLANS AND PROCEDURES	Ident. No.	Effective Date	Health Physics Tech.	Date Completed	Initial Upon Completion
GET-General Employment Training	5006		X	4/19/94	
Basic Rad Worker/Rad Worker II	4428/7454		X	5/13/94	
Hazardous Waste Operations - 40 hr or Refresher	4404/4460		X	4/15/94	
Hazardous Waste Operations - 24 hr Field Training	7173		X	5-13-94	
HE Awareness Training			X	4/25/94	
Health Physics Checklist Indoctrination	2389		X	5/19/94	
TA-36 Orientation			X	5/9/94	
RFI Work Plan **		June-93	X	5/19/94	
Site-Specific Health and Safety Plan **			X	5/19/94	
Waste Management Plan			X	5/19/94	
Stop Work and Restart	Directors Policy LP 110-01.0	4/13/92	X	5/19/94	
ER Health and Safety Program Plan	Annex III-WP		X	5/19/94	
HS-5 Health and Safety Manual **		Draft	X	5/19/94	
Radiation Protection Program	LANL-AR-3-1	11/30/90	X	5/19/94	
Shipment of Radioactive Materials	LANL-AR-3-5	1/18/91	X	5/19/94	
Radiation Exposure Control	LANL-AR-3-7	1/11/91	X	5/19/94	
Calibration Procedures and Frequency	LANL-ER-QAPjP-08	5/20/91	X	5/19/94	
Corrective Action	LANL-ER-QAPjP-15	5/20/91	X	5/19/94	
General Instructions for Field Investigations	LANL-ER-SOP-01.01	3/10/92	X	5/19/94	
Sample Containers and Preservation	LANL-ER-SOP-01.02	3/10/92	X	5-19-94	
Handling, Packaging, and Shipping of Samples	LANL-ER-SOP-01.03	5/5/94	X	5/19/94	
Sample Control and Field Documentation	LANL-ER-SOP-01.04	5/5/94	X	5-19-94	
Field Quality Control Samples	LANL-ER-SOP-01.05	3/10/92	X	5-19-94	
Management of RFI-Generated Waste	LANL-ER-SOP-01.06	Draft	X	5/19/94	
Personnel Decontamination	LANL-ER-SOP-01.07	Draft	X	5/19/94	
Measurement of Gamma-Ray Fields Using a Sodium Iodide Detector	LANL-ER-SOP-06.23	5/19/93	X	5/19/94	
Field Instrument Systems	LANL-ER-SOP-10.04	5/5/94	X	5/19/94	
Surveying for Alpha and/or Beta/Gamma Contamination	ESH-1-02-02	3/14/94	X	5/19/94	
Releasing Equipment and Items Standard	ESH-1-07-01	Draft	X	5/19/94	
Documenting Equipment and Item Release	LP107-04.0	2/1/94	X	5/19/94	
Operational Checks of Direct-Reading Beta-Gamma Survey Instruments	ESH-1-XXX.0	Draft	X	5/19/94	

I hereby certify that I have recieved all of the training listed above.

Employee Signature

** Pertinent sections only

ENVIRONMENTAL RESTORATION TAILGATE SAFETY MEETING

General Information

Date: 1-7-94 Time: 1120 OU-1130 TA-36

Site Group: EM/ER Site Contact/ Ph#: 1-669-2124

Briefed by: Ken McFadden Signature: [illegible]

Type Work: Surface Soil Sampling (DRY RUN) General Location: KAISER

Chemicals in use: Alconox

SiteSpecific Topics Discussed

√ Task Review ___ Hazards of Nearby Site Operations √ Weather/Temperature

___ Special SOP ___ SSHASP Change Orders ___ Other (specify)_____

HAZARDS	PRS -	PRS -	PRS -
Chemical RAD / HE Res.			
Physical HE			
Radiological UR			
PPE D			
Safety Equipment			

Emergency Procedures

Hospital: LAMC Other:_____

Emergency Procedures: Support Zone

Muster Area: Support Zone

First Aid Kit/Eye Wash Location: Support Zone

Fire Extinguisher Location: Support Zone

Vehicle/Gate Key Location: Support Zone/Mike Henke or Jeff Bingham

Location of Emergency Numbers and Telephone: Support Zone

Attendees			
Name (Print)	Organization	Signature	Z# or SSN
Peter Gram	ICF Kaiser	[illegible]	103076
Nancy Ness	ICF Kaiser	[illegible]	V40336
Mike Henke	LANL	Michael Henke	076031
Bert Trujillo	ICF Kaiser		084605
Ken McFadden	MK	[illegible]	115392
Jeff Bingham	LANL	[illegible]	098580
VICTOR HUSCH	LANL	[illegible]	[illegible]
RICHARD CORDI	LANL	Richard Cordi	089874
Cristy Abeyta	LANL	Cristy L. Abeyta	107984
John Taylor	EDI	[illegible]	115773

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 7-14-94

Specific Location Building 1 Photo outfall C-36-003 (PRS)

Type of Work Surface Soil Sampling (Task #12) Groups Represented TCE/MIC, EDT, CANE

Chemicals Used Alconox

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. CHANGE ORDERS 01, 02, AND 03
2. WORK ZONE IDENTIFICATION
3. TASK DESCRIPTION

HAZARDS:

Chemical Thiosulfates, silver, organic compounds

Physical STEEP SLOPE and HEAT STRESS

Radioactive No Dose

Personal Protective Equipment LEVEL D2

Special Equipment Rope grab, first aid kit, eye wash station and fire extinguisher locations

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other ES1-2 for Injuries involving Blood

Meeting Conducted By KEN H. McFADDEN (Name Printed) [signature] (Signature)

SSO KEN H. McFADDEN HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	Jeff Bingham
RICHARD CORDI	089874	NOT HERE TODAY
PETER GRAN	103076	[illegible]
MICHAEL HENKE	076031	Michael Henke
VICTOR HESCH	074493	[illegible]
GEORGE A. MARINO	113444	[illegible]
KEN H. MCFADDEN	113392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	113773	[illegible]
BERT TRUJILLO	084605	[illegible]
WENDELL GAINE	110204	[illegible]
JIM KERNS	073608	Jim Kerns

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 7-21-94 / ~~[illegible]~~ 1000-1020

Specific Location Building 1 Septic Tank

Type of Work Septic Tank Sampling Task #7 PPS 36-0036 Groups Represented MK/FDI/Kaiser/LANL

Chemicals Used Alconox, HCl

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work Zone Layout
2. Work Activities
3.

HAZARDS:

Chemical Thiosulfates, silver cyanides, organic compounds

Physical Lifting, moving lid, explosion, electrical cord, slips trips & falls

Radioactive No radioactive peaks identified KHM 7-21-94

Personal Protective Equipment Level D3

Special Equipment First Aid Kit, Eyewash Station, Fire Extinguisher

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other ESH-2

Meeting Conducted By Ken H. McFadden (Name Printed) Ken H. McFadden (Signature)

SSO Ken H. McFadden HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BENCHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAN	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR RESCH	074493	NOT HERE TODAY
GEORGE A. NARINO	112444	NOT HERE TODAY
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	John W Taylor
BERT TRUJILLO	084605	NOT HERE TODAY
Tim Ickes	101407	Tim Ickes
Cleaves Martinez	113825	[illegible]

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 7-28-94/1030 am

Specific Location Building #1, Photo outfall, C-36-CX13

Type of Work Water sampling Task #12 Groups Represented Kaiser/MK, EDE, CANE

Chemicals Used Alcohol, HNO3 (20% 1:6 DI) nitric acid, Sodium Hydroxide

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work zone layout
2. Work activities
3. Hazcom

HAZARDS:

Chemical Thioulfates, silver, organic compounds

Physical Heat stress, Pinch points on equipment, Back injury, slips, trips and falls

Radioactive No radioactive PCOC's identified

Personal Protective Equipment Level D2

Special Equipment Fire extinguisher, First aid kit and eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other ESH-2

Meeting Conducted By Ken H McFadden (Name Printed) Ken H McFadden (Signature)

SSO Ken H. McFadden HPT/RCT John Tom [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	080874	NOT HERE TODAY
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR JESCH	074493	[illegible]
GEORGE A. MARINO	112466	NOT HERE TODAY
BEN H. MCFADDEN	113392	[illegible]
NANCY NESS	060336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 7-29-94/1115

Specific Location Bldg 4400 PCS 27-005

Type of Work Surface Soil Sampling (TASK #1) / Borehole Sampling (TASK #2) Groups Represented TUE/MK, EDT, LANL

Chemicals Used Alconox

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work Area Layout
2. Communication (Radio/Cellular)
3. Todays Activities

HAZARDS:

Chemical HE Residuals, Organic compounds Cr, Ag, Zn, Be, Cu, Pb

Physical HE, Heat stress, slips trips & falls, biological

Radioactive Uranium

Personal Protective Equipment LEVEL D2

Special Equipment Fire Extinguisher, First Aid Kit, Eye Wash Station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious injuries)

Other ESH-2 (Minor injuries)

Meeting Conducted By Ken H. McFadden (Name Printed) [signature] (Signature)

SSO Ken H. McFadden HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	NOT HERE TODAY
RICHARD CORDT	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	[illegible]
GEORGE A. MARINO	112444	[illegible]
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W60336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]
WENDELL GALAS	110204	[illegible]
Michael A Powell		[illegible]
~~Michael Henke~~		

TAILGATE SAFETY MEETING

Group EM/CR TA/OU 36/1130 Date & Time 8-3-94/0952

Specific Location BUEYARD PCS 36-2PM 8-3-94 27-0005

Type of Work SURFACE SOIL SAMPLING (TASK #11) EXAMINING SURVEYS (TASK #2) Groups Represented TEFINK, EDT, LANL

Chemicals Used ALCOHOL FOR DRUM, HE SPOT TEST KIT REAGENTS

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. WORK AREA LAYOUT
2. COMMUNICATIONS (RADIOS, CELLULAR PHONES)
3. TODAY'S ACTIVITIES, PAST MONITORING RESULTS

HAZARDS:

Chemical HE RESIDUALS, ORGANIC COMPOUNDS CR, AG, ZN, BE, CU, PB

Physical HE, HEAT STRESS, SLIPS, TRIPS & FALLS, biological

Radioactive URANIUM

Personal Protective Equipment LEVEL D2

Special Equipment FIRE EXTINGUISHER, FIRST AID KIT, EYE WASH STATION

EMERGENCY PROCEDURES

Hospital LOS ALAMOS MEDICAL CENTER (SERIOUS INJURIES)

Other ESH-2 (MINOR INJURIES)

Meeting Conducted By KEN H. MCFARREN (Name Printed) Ken H. McFarren (Signature)

SSO KEN H. MCFARREN HPT/RCT John Longhurst

Rev 2 11-1-93

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENKE	076031	
VICTOR HESCH	074493	NOT HERE TODAY
GEORGE A. MARINO	112444	NOT HERE TODAY
KEN H. MCFADDEN	115392	
NANCY NESS	V40336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	
Michael A Powell	114724	

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 9-4-99
KHM 9-4-99

Specific Location BOXEYARD PBS 36-CMT

Type of Work Surface Soil Sampling (Task #11) Groups Represented TCE/MK, EDT, LANL

Chemicals Used ALCONOX, HE SPOT TEST KIT REAGENTS

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. TODAYS ACTIVITIES

2. Yesterdays monitoring results (PRL and personnel) was at or below background level of 0.2 rem, and results showed no significant exposure to HE + HE residual.

3.

HAZARDS:

Chemical HE Residuals, Organic compounds, Cr, Ag, Zn, Be, Cu, Pb

Physical HE, Heat stress, Slips, Trips & Falls, Biological

Radioactive Uranium

Personal Protective Equipment Level D

Special Equipment Fire Extinguisher, First Aid Kit, Eye Wash Station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious injuries)

Other ESH-2 (Minor injuries)

Meeting Conducted By KEN H. McFADDEN (Name Printed) Ken H. McFadden (Signature)

SSO KEN H. McFADDEN HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTI ABEITA	107984	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	[illegible]
GEORGE A. MARINO	113444	[illegible]
KEN H. MCEADDEN	115392	[illegible]
NANCY NESS	040336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/EE TA/OU 36/1130 Date & Time 8-5-94/10:[illegible]

Specific Location TJ Flying Site PRS 36-003(b)

Type of Work Cutting surface soil samples (Case 8-8) Groups Represented IT/NK, EDT, [illegible]

Chemicals Used Alcohol, HCl and nitric acid, pH strip test reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work area setup
2. Tornado activities, don't touch sample material due to possible Bio/Toxic Poisonous or other infectious organisms
3. Weather

HAZARDS:

Chemical Organic Solvents, HE Energetics, metals

Physical HE, Pressures, Sharp Tools, Falls

Radioactive Depleted Uranium

Personal Protective Equipment Level D3

Special Equipment Fire Extinguisher, First Aid Kit, Eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious injuries)

Other ESH-2 (Minor injuries including Blood)

Meeting Conducted By Ken H. McFadden (Name Printed) Ken H. McFadden (Signature)

SSO Ken H. McFadden HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	NOT HERE TODAY
RICHARD CORDI	080874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	NOT HERE TODAY
GEORGE A. MARINO	113444	NOT HERE TODAY
KEN H. MCFADDEN	113392	[illegible]
NANCY NESS	W0336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/EG TA/OU 36/1130 Date & Time 9-8-94/1045

Specific Location IT Bldg. Site PRS 36-003(b)

Type of Work Outfall surface soil sampling with ~~[illegible]~~ (Tank 69) Groups Represented IT/EM, EG, LANL

Chemicals Used Alumina, HE soil test products

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Close area set up
2. Today's activities, engineering controls to reduce airborne releases
3. Post monitoring results

HAZARDS:

Chemical Organic solvents, HE, Biocides, metals

Physical HE, heat stress, slips, trips and falls

Radioactive Depleted Uranium

Personal Protective Equipment Level D3

Special Equipment Fire extinguisher, first aid kit, eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious injuries)

Other ESH-2 (minor injuries involving blood)

Meeting Conducted By Ken H. McFadden (Name Printed) [signature] (Signature)

SSO Ken H. McFadden HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	NOT HERE TODAY
GEORGE A. MARINO	112444	NOT HERE TODAY
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	V40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group Ein/EB TA/OU 36/1130 Date & Time 8-11-94/1000

Specific Location Fence location PO 36-004

Type of Work Surface soil sampling Trench #10 Groups Represented IOE/MK, EOE, LANL

Chemicals Used Alcohol, HE spot test reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work area layout
2. Today's activities
3.

HAZARDS:

Chemical HE residues, Ba, Be, Pb, Hg

Physical HE, heat stress, slips, trips, falls, back injury, biological

Radioactive Depleted Uranium

Personal Protective Equipment LEVEL D2

Special Equipment Fire extinguisher, first aid kit, eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (serious injuries)

Other EOH-2 minor injuries (work up blood)

Meeting Conducted By Ken H McFadden (Name Printed) [signature] (Signature)

SSO Ken H McFadden HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	[illegible]
RICHARD GORDI	089874	[illegible]
PETER GRAH	103076	[illegible]
MICHAEL HENSE	076031	[illegible]
VICTOR HESCH	073693	NOT HERE TODAY
GEORGE A. MARINO	112444	NOT HERE TODAY
REN H. MCFADDEN	115392	[illegible]
NANCY NESS	040336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group Ember TA/OU 36/1130 Date & Time 8-12-99/1000

Specific Location ~~Pueblo~~ KHM 8-12-99 Potrillo Canyon 36-004

Type of Work Surface Soil Sampling Task #10 Groups Represented JOE/MK, EDT, LANL

Chemicals Used Alcohol, HE Spot Test Reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work area layout
2. Todays activities
3. Yesterdays monitoring results HNU Background

HAZARDS:

Chemical HE Residuals, Ba, Be, ~~Pb~~ Pb KHM 8-12-99, Hg

Physical Heat, Heat stress, slips, trips & Falls, Bee injuries, Biological

Radioactive Depleted Uranium

Personal Protective Equipment Level D2

Special Equipment Fire extinguisher, First aid kit, Eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious Injuries)

Other ESH-2 Minor injuries (Involving Blood)

Meeting Conducted By Ken H. McFadden (Name Printed) Ken H. McFadden (Signature)

SSO Ken H. McFadden HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	NOT HERE TODAY
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	NOT HERE TODAY
GEORGE A. MARINO	11244[illegible]	NOT HERE TODAY
REN P. MCFADDEN	115392	[illegible]
NANCY NESS	040336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	NOT HERE TODAY

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 8-16-94 / 1030 am

Specific Location Lower Potrillo Canyon PRS 36-004

Type of Work Surface Soil Sampling Task #6 Groups Represented ICF/MK, EDT, LANL

Chemicals Used Akrolox, HE SPOT TEST REAGENTS

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work area setup
2. Previous monitoring results
3. Todays activities

HAZARDS:

Chemical HE Residuals, Ba, Be, ~~Pb~~ Pb, ~~Hg~~ Hg 8-16-94

Physical HE, Heat stress, slips trips and falls, Back injuries, Biological (snakes)

Radioactive Depleted Uranium

Personal Protective Equipment Level D2

Special Equipment Fire Extinguisher, First aid kit, Eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (serious injuries)

Other ESH-2 (minor injuries involving Blood)

Meeting Conducted By KEN H. McFADDEN (Name Printed) [signature] (Signature)

SSO KEN H. McFADDEN HPT/RCT [signature]

Rev 0 11.1.93

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N.A.
JEFF BENGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N.A.
GEORGE A. MARINO	113444	N.A.
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	V40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]
Robert Stark	115643	[illegible]

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. [illegible]
3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed — Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	[illegible]
JEFF BINGHAM	098380	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAN	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	NOT HERE TODAY
GEORGE A. MARINO	112444	NOT HERE TODAY
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	NOT HERE TODAY
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]

2. [illegible]

3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Rev [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABETTA	107984	N/A
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENRE	076031	
VICTOR HESCH	071603	N/A
GEORGE A. MARINO	113664	N/A
KEN H. MCFADDEN	115392	
NANCY NESS	040336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	
Ambrose Cone	115334	

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. [illegible]
3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENKE	076031	
VICTOR HESCH	074493	
GEORGE A. MARINO	113444	N/A
EEN H. MCFADDEN	115392	N/A
NANCY NESS	W0336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	
Ambrose Corie	113359	

TAILGATE SAFETY MEETING

Group EM/EE TA/OU 36/1130 Date & Time 9/26/94/[illegible]

Specific Location Perimeter Caution Pits 36 [illegible]
Similar to Task #10

Type of Work Drill sample equipment Decontamination
Reinforcement sample locations

Groups Represented TFE/ME, EDT, [illegible]

Chemicals Used [illegible] Test [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Tasks activities, spread out top layer of soil to [illegible] [illegible] Bottom HE Sample test [illegible] Dig hole no more than 12" and place [illegible]
2. Power monitoring equipment (Nuclear energy [illegible] background), Rad (no equipment damage)
3. Have new layout

HAZARDS:

Chemical HE [illegible], Ba, Be, Pb, Hg

Physical HE, Slip trip, Fall, Biological

Radioactive Depleted uranium

Personal Protective Equipment Level D2

Special Equipment Fire Extinguisher, First aid kit, Eye wash station

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Extraordinary)

Other ESH-2 (Management working blood)

Meeting Conducted By Ken H McFarlane (Name Printed) [signature] (Signature)

SSO Ken H McFarlane HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAN	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	113444	N/A
REN H. MCFADDEN	115392	[illegible]
NANCY NESS	W60336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. [illegible]
3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Rev [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BENGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENKE	076031	
VICTOR HESCH	074693	
GEORGE A. MARINO	113444	
KEN H. MCFADDEN	115392	
NANCY NESS	W40336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]/1115

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. [illegible]
3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BENGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENSE	076031	N/A
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]

2. [illegible]

3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAN	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	N/A

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/11 30 Date & Time [illegible]

Specific Location MDA [illegible] - Lower Slabtown, PCS [illegible]

Type of Work Drilling, Phase II/V Groups Represented ER/DMR, EDT, [illegible]

Chemicals Used Alcohol, HNO3 [illegible] test kit reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Line activities / change order [illegible]
2. Yesterday's incident review
3. PPE / Decon requirements

HAZARDS:

Chemical Ba, Cr, Cu, Fe, Hg, Pb, He [illegible]

Physical Lift hoist, heat stress, [illegible] hoists, [illegible] pipes, [illegible] Drum [illegible], overhead [illegible] moving parts, [illegible]

Radioactive Uranium, Depleted Uranium

Personal Protective Equipment Level D+

Special Equipment Fire extinguisher, eye wash station, first aid kit

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other ESH-2

Meeting Conducted By Ken H. McFarren (Name Printed) [illegible] (Signature)

SSO Ken H. McFarren HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENSE	076031	
VICTOR HESCH	074693	
GEORGE A. MARINO	112444	
BEN H. MCFADDEN	115392	
NANCY NESS	060336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	
[illegible]	116079	
Roger K [illegible]	062083	
BRUCE [illegible]	103035	

TAILGATE SAFETY MEETING

Group EM/LER TA/OU 36/11.30 Date & Time 9-29-94/0700

Specific Location MDA NA TRENCHES, COLORS WALKWAY PAS 36.001

Type of Work Drilling Groups Represented TETRA, EDE, LANL

Chemicals Used None, HE SPILL TEST KIT REQUIRED

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. TODAYS ACTIVITIES

2. YESTERDAYS MONITORING RESULTS

3.

HAZARDS:

Chemical Pb, U, Zn, Cd, Cu, Pb, HE Contents

Physical HE, Noise, Heat Stress, Pinch Points, Heavy Equipment, Slips Trips & Falls, Flying debris, overhead hazards, overhead lines, Biological, Sharp objects or equipment

Radioactive Uranium & Depleted Uranium

Personal Protective Equipment LEVEL D+

Special Equipment Fire extinguisher, Eye wash station, First aid kit

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other TSM-2

Meeting Conducted By Ken M. McFarlen (Name Printed) [signature] (Signature)

SSO Ken M. McFarlen HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	[illegible]
GEORGE A. MARINO	112444	[illegible]
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	040336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 9-30-94/0737

Specific Location MDA-A1 TRENCHES PRS 36-001

Type of Work DRILLING Groups Represented RE/MK, EDT, IAW

Chemicals Used ALCONOX, HE SPOT TEST KIT REAGENTS

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. TODAY'S ACTIVITIES
2. YESTERDAY'S MONITORING RESULTS
3.

HAZARDS:

Chemical Ba, Cr, Zn, Cd, Co, Pb, Hg Radionuclides

Physical HE HOT SPOTS, NOISE, PINCH POINTS, ELEVATORS, SLIP, TRIP & FALL, FLYING DEBRIS, OVERHEAD LOADS, ROLLING, PINCH, SHOVELING, BURNING

Radioactive URANIUM, DEPLETED URANIUM

Personal Protective Equipment LEVEL D

Special Equipment FIRST AID KIT, FIRE EXTINGUISHER, FIRE EXTINGUISHER

EMERGENCY PROCEDURES

Hospital LOS ALAMOS MEDICAL CENTER (SECOND TURNOUT)

Other ESH-2 NOTIFIED, INJURED COMMUNITY BLOOD AT REQUESTING ORGANIZATION

Meeting Conducted By KEN H. MCFARLAND (Name Printed) [signature] (Signature)

SSO KEN H. MCFARLAND HPT/RCT [signature]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	113444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/ER TA/OU 36/1130 Date & Time 11-3-94/0942

Specific Location MDA-AA TRENCHES PRS 36-001

Type of Work Drilling Groups Represented ICF/MK, EDI, LANL

Chemicals Used ALGONIX, HE SPOT TEST KIT REAGENTS

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Today's Activities
2. Previous monitoring results
3. Who's in charge

HAZARDS:

Chemical Ba, Cr, Zn, Cd, Cu, Pb, Hg Residuals

Physical HE, HEAT STRESS, NOISE, PINCH POINTS, BURR ACTIVITIES, SLIPS TRIPS & FALLS, FLYING DEBRIS, OVERHEAD HAZARD, MOVING PARTS, SHARP OBJECTS, BIOLOGICAL

Radioactive Uranium, Depleted Uranium

Personal Protective Equipment LEVEL D+

Special Equipment FIRST AID KIT, EYEWASH STATION, FIRE EXTINGUISHERS

EMERGENCY PROCEDURES

Hospital LAS ALAMOS Medical Center

Other ESH-2

Meeting Conducted By KEN H. MCFADEN (Name Printed) [signature] (Signature)

SSO KEN H. MCFADEN HPT/RCT [signature]

Rev 3 11 1 93

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	Cristy L Abeyta
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	Richard Cordi
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	Michael Henke
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115393	[illegible]
NANCY NESS	W40336	Nancy Ness
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	Bert Trujillo
Everett A Trabinger	115355	[illegible]
Tracy McFarland	113022	Tracy [illegible]

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]

2.

3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Rev [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	102984	
JEFF BENGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HESSE	076031	
VICTOR HESCH	074493	
GEORGE A. MARINO	113444	N/A
REN H. MCCADDEN	115392	N/A
NANCY NESS	040336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]

2. [illegible]

3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Rev [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENSE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	113392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/EL TA/OU 36/1130 Date & Time 10-11-94/0700

Specific Location MDA-MD TRENCHES PIS 36, 001

Type of Work Drilling Groups Represented IT/MK, EIT, LWG

Chemicals Used Alcohol, HF Spot test kit reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. TODAY'S ACTIVITIES
2. PAST HOW TO DO ACTIVITY
3. EXCAVATION ISSUES

HAZARDS:

Chemical Ba, Cr, Fe, Cd, Cu, Pb, Hg Compounds

Physical Pinch points, eye hazard, back injury, slip trip & falls, strong odors, contact irritant, moving parts, sharp edges, Bugs

Radioactive Uranium, Depleted Uranium

Personal Protective Equipment Level D

Special Equipment First aid kit, eye wash station, fire extinguisher

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Central Avenue)

Other 911 (Major injuries involving blood or other injuries requiring medical attention)

Meeting Conducted By Ken H. McFarlane (Name Printed) [signature] (Signature)

SSO Ken H. McFarlane HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAM	103076	
MICHAEL HENKE	076031	
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	113444	N/A
KEN H. MCFADDEN	115392	
NANCY NESS	V40336	
JOHN TAYLOR	115773	
BERT TRUJILLO	084605	

TAILGATE SAFETY MEETING

Group EM/EE TA/OU 30/1130 Date & Time 10-12-94/0930

Specific Location NDH-AH Trench

Type of Work Digging Groups Represented TE/INC, LANL, EWI

Chemicals Used Alcohol, HE Spot Test Kit Reagents

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Yesterday's Monitoring Results

2. Today's Activities

3.

HAZARDS:

Chemical Be, Cr, Ba, Cd, Cu, Pb, HE Reagents

Physical Pinch points, HE, wire, Backhoes, sharp objects, Falls, Flying debris, overhead hazard, many pointy sharp edges, Rebar

Radioactive Uranium, Depleted Uranium

Personal Protective Equipment Level D+

Special Equipment First aid kit, Eye wash station, Fire extinguisher

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (Serious Injuries)

Other ESH2 Minor injuries involving blood or minor injuries ~~within~~ 24 hr requiring medical attention

Meeting Conducted By KEN H. McFADEN (Name Printed) [signature] (Signature)

SSO KEN H. McFADEN HPT/RCT [signature]

Rev 0 11/1/93

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENSE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112044	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	W40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	Bert Trujillo

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location Pueblo Canyon

Type of Work Water sampling

Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Work Activity - Placing lid on sample bottles, transport bottles to support truck, split sample with regulators
2. The [illegible] to shovel the inside opening and [illegible] significant [illegible]
3. [illegible]

HAZARDS:

Chemical Pu, Pa, Pb, Hg, HE [illegible]

Physical HE, Cold Stress, Slips, Trips, Falls

Radioactive Depleted Uranium

Personal Protective Equipment Level D2 modified Gloves (Vinyl & Latex) work boots, Safety Glasses

Special Equipment First Aid Kit

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center

Other ESH-2

Meeting Conducted By Ken H. McFarlan (Name Printed) [illegible] (Signature)

SSO Ken H. McFarlan HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEITA	107984	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	113644	N/A
KEN R. MCFADDEN	115392	[illegible]
NANCY NESS	040336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	[illegible]

TAILGATE SAFETY MEETING

Group EM/EE TA/OU TA 18/1130 Date & Time [illegible]

Specific Location SEPTIC system PBS 36-003 (a)

Type of Work DRILLING TASK #9 IN HASP Groups Represented TCE/MK, EDE, LANL

Chemicals Used ALCONOX

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]

2. [illegible]

3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive NO radioactive ROCs identified in HASP

Personal Protective Equipment LEVEL D/C IN HASP

Special Equipment FIRST AID KIT, EYE WASH STATION, FIRE EXTINGUISHER, AND HAND RADIO IN RIDER VAN

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (662-4201) for serious injuries

Other ESH-2 for all minor injuries involving blood or any minor injuries requiring medical attention

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

[illegible]	5775	[illegible]
[illegible] Dwight Bassett	[illegible]	[illegible]
Jeff Bingham	075550	[illegible]
[illegible]	076031	Michael Henke
Peter Gram	103076	[illegible]
[illegible]	[illegible]	[illegible]

TAILGATE SAFETY MEETING

Group EM/EE TA/OU TA 18/1130 Date & Time [illegible]/0914

Specific Location Septic system PRS 36-003 (a)

Type of Work Drilling Task #9 in HASP Groups Represented TCF/MK, EDE, LANL

Chemicals Used Accuvax

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. Tailgate meetings
3. Cold stress

HAZARDS:

Chemical Trimethylamine, sulfur compounds, organic compounds, metals

Physical Noise, pinch points on equipment, fire ignition (static, heating, friction), slips, trips & falls, flying debris, overhead hazards, falling loads from ladder, slope

Radioactive No radioactive RCOC's identified in HASP

Personal Protective Equipment Level D+ in HASP

Special Equipment First aid kit, eye wash station, fire extinguisher, air horn located in rider van

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (662-4201) for serious injuries

Other ESH-2 for all minor injuries involving blood or any minor injuries requiring medical attention

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	N/A
PETER GRAM	103076	[illegible]
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	140336	N/A
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	N/A
L. Dwight Brazell	067020	[illegible]

TAILGATE SAFETY MEETING

Group EM/ES TA/OU TA 18/1130 Date & Time 11-17-94/0700

Specific Location SEPTIC System PBS 36-003 (a)

Type of Work DRILLING TASK #9 IN HASP Groups Represented TCE/ME, EDE, LANL

Chemicals Used ALCONOX

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. WEATHER CONDITIONS
2. PAST MISHAPS/LESSONS
3. SITE & TCE CONCERNS

HAZARDS:

Chemical PESTICIDES, SOLVENTS, ORGANIC COMPOUNDS, METALS

Physical NOISE, PINCH POINTS ON EQUIPMENT, PERSONNEL (LIFTING, BENDING, TURNING), SLIPS, TRIPS & FALLS, FLYING OBJECTS, OVERHEAD HAZARDS, FALLING HAZARDS, BURN HAZARDS

Radioactive NO RADIOACTIVE ROCS identified in HASP

Personal Protective Equipment LEVEL D-4 IN HASP

Special Equipment FIRST AID KIT, EYE WASH STATION, FIRE EXTINGUISHER, AIR HORN located in RIDER VAN

EMERGENCY PROCEDURES

Hospital LOS ALAMOS Medical Center (662-4201) for SERIOUS INJURIES

Other ESH-2 for all MINOR INJURIES involving Blood or any MINOR INJURIES requiring medical ATTENTION

Meeting Conducted By KEN H. MCFARLAND (Name Printed) [signature] (Signature)

SSO KEN H. MCFARLAND HPT RCT [signature]

Meeting Attendees

Print Name & #		Signature
CRISTY ABEITA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAN	103076	
MICHAEL HENSE	076031	
VICTOR HESCH	074493	
GEORGE A. MARINO	112444	
KEN H. MCFADDEN	115392	
NANCY NESS	110336	
JOHN TAYLOR	113773	
BERT TRUJILLO	084605	
L. Dwight Bassett	060030	
Jim Nordstrom	114523	

TAILGATE SAFETY MEETING

Group EM/EE TA/OU TA 19/1130 Date & Time 11-19-94/[illegible]

Specific Location Septic System PBS 36-003 (a) and [illegible] PBS [illegible]

Type of Work Drilling Task #9 in HASP Groups Represented ICF/MK, EGE, LANL

Chemicals Used Alconox

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Westerly's inclimate weather: No above background readings for VOC's [illegible] Signature - Reading above background [illegible] use of [illegible]
2. Today's activities
3. [illegible] Cold, [illegible] at [illegible] tomorrow

HAZARDS:

Chemical Tailgates, [illegible] (Alconox Acid) Thioxolate, [illegible] (Alconox [illegible])

Physical Not [illegible] PPE [illegible], [illegible], [illegible], [illegible] spills, [illegible] overhead hazards [illegible]

Radioactive No radioactive RCA's identified in HASP

Personal Protective Equipment Level D in HASP (Drilling) D2 for (Alconox [illegible])

Special Equipment First aid kit, eye wash station, fire extinguisher, air horn located in [illegible]

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (662-4201) for serious injuries

Other ESH-2 for all minor injuries involving blood or any minor injuries requiring medical attention

Meeting Conducted By Ken H McFarlane (Name Printed) [illegible] (Signature)

SSO Ken H. McFarlane HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENSE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	120336	N/A
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084603	Bert Trujillo
L. Dwight Bassol	062084	[illegible]

TAILGATE SAFETY MEETING

Group EM/EE TA/OU TA 18/1130 Date & Time 11-21-97/0845

Specific Location Septic System PRS 36-003 (a)

Type of Work Drilling (Remove) Task #9 in HASP Groups Represented ICF/MK, EDI, LANL

Surface soil sampling at PRS 36-003

Chemicals Used Alconox, Ca OH, HCL, Nitric Acid

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Tasks Activities: Taking Bioscope, Rock and Debris Site HSC Collect (2) Soil Sample at PRS 36-003 FALL
2. Excavation Hazards: Hot to take background radiation readings and not in contact - reading above background. Reading at 15 to 20 cm
3.

HAZARDS:

Chemical Tailgates, Sunscreen, Insect Repellent, Poisons

Physical Not Any Points on Equipment Pinch Points (Lifting, Backing, Turning), Slips, Trips, Falls, Flying Debris, Overhead Hazards Lifting Loads Bee Stings

Radioactive No radioactive RCC's identified in HASP

Personal Protective Equipment Level D+ in HASP

Special Equipment First Aid Kit, Eye Wash Station, Fire Extinguisher, Air Horn located in Rover van

EMERGENCY PROCEDURES

Hospital Los Alamos Medical Center (662-4201) for serious injuries

Other ESH-2 for all minor injuries involving blood or eye minor injuries requiring medical attention

Meeting Conducted By Ken H. McFarlen (Name Printed) [signature] (Signature)

SSO Ken H. McFarlen HPT RCT

Meeting Attendees

First Name & Z #		Signature
CRISTY ABEYTA	10798[illegible]	[illegible]
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	[illegible]
PETER GRAM	103076	[illegible]
MICHAEL HENSE	076031	N/A
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	110336	[illegible]
JOHN TAYLOR	115773	N/A
BERT TRUJILLO	084605	[illegible]
[illegible] LEE	115777	[illegible]
L. DWIGHT BROWN	067020	[illegible]

TAILGATE SAFETY MEETING

Group EA/EC TA/OU 36/1130 Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. Tasks activities [illegible]
2. PPE requirements: [illegible] (~~[illegible]~~ [illegible])
3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	
JEFF BINGHAM	098580	
RICHARD CORDI	089874	
PETER GRAN	103076	
MICHAEL HENSE	076031	
VICTOR HESCH	074493	
GEORGE A. MARINO	112444	
KEN H. MCFADDEN	115393	
NANCY NESS	V40336	
JOHN TAYLOR	115773	
BURT TRUJILLO	084605	Burt Trujillo

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2. [illegible]
3. [illegible]

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed Signature [illegible]

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRESTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	N/A
PETER GRAY	103076	[illegible]
MICHAEL HENKE	076031	Michael Henke
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112464	N/A
REN H. MCFADDEN	115382	[illegible]
NANCY NESS	W00336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	Bert Trujillo

TAILGATE SAFETY MEETING

Group [illegible] TA/OU [illegible] Date & Time [illegible]

Specific Location [illegible]

Type of Work [illegible] Groups Represented [illegible]

Chemicals Used [illegible]

Safety Topics Presented

SUBJECTS DISCUSSED (Including Change Orders)

1. [illegible]
2.
3.

HAZARDS:

Chemical [illegible]

Physical [illegible]

Radioactive [illegible]

Personal Protective Equipment [illegible]

Special Equipment [illegible]

EMERGENCY PROCEDURES

Hospital [illegible]

Other [illegible]

Meeting Conducted By [illegible] Name Printed [illegible] Signature

SSO [illegible] HPT/RCT [illegible]

Meeting Attendees

Print Name & Z #		Signature
CRISTY ABEYTA	107984	N/A
JEFF BINGHAM	098580	[illegible]
RICHARD CORDI	089874	N/A
PETER GRAM	103076	N/A
MICHAEL HENKE	076031	[illegible]
VICTOR HESCH	074493	N/A
GEORGE A. MARINO	112444	N/A
KEN H. MCFADDEN	115392	[illegible]
NANCY NESS	V40336	[illegible]
JOHN TAYLOR	115773	[illegible]
BERT TRUJILLO	084605	Bert Trujillo

APPENDIX 5

ATTACHMENT 3

Direct Reading Monitoring Records/Daily Calibration Records/Integrated Industrial Hygiene Monitoring Result Records

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1131 TA 36 SSHASP No. 026 Date 7/14/94
Project Title Field Investigation
Page 1 of 1
Instrument Hnu 10.2 ev Probe Model PI-101
Serial Number 301064
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 PPM	100 PPM AT 100 SCFM	0730	[illegible]	7-14-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1148	AAB 1915	0.2 PPM	Prior to dual drilling sample at source
1157	AAB 1914	0.2 PPM	"
1206	AAB 1913	0.2 PPM	"
1216	AAB 1911	0.2 PPM	"
1218	Inside of outfall pipe	0.2 PPM	No moisture or stains observed in pipe
1226	AAB 1912	0.2 PPM	Prior to dually sampling at source

Measurements by KEN H. McFADDEN SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

OHSS Team form 10 [illegible]

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU [illegible] TA 36 SSHASP No. 036 Date 7/21/94
Project Title [illegible]
Page 1 of 1

Instrument [illegible] Model [illegible]

Serial Number [illegible]

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7-21-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1220	Septic tank [illegible]	0.2 ppm	[illegible]
1221	MW3 1873	0.2 ppm	Septic tank [illegible] sample
1237	MW3 1874	0.2 ppm	"
1247	MW3 1875	0.2 ppm	"
1249	MW3 1876	0.2 ppm	Septic tank [illegible] sample
1252	"	2 ppm	[illegible]
1312	"	0.4 ppm	"
1312	MW3 1876	0.2 ppm	Taken in the breathing zone
1315	MW3 1877	0.2 ppm	Source sample
1325	MW3 1878	0.2 ppm	"

Measurements by [illegible] (Print Name) [illegible] (Title) [illegible] (Signature)

* Background = 0.2 ppm

[illegible] 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 36 SSHASP No. 026 Date 7/25/94
Project Title Field Investigation
Page 1 of 1

Instrument Hanna 10.2 eV Probe Model HI 101

Serial Number 301024

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm at 10.51 eV	0722	K. H. McFadden	7-25-94

* For detector tubes, write "not applicable".

Measurements/Indications

Time	Location	Meter Reading/Indication *†	Comments
1045	PHOTO OUTFALL	0.2 ppm	Inside of pipe
1113	"	0.2 ppm	"

Measurements by Ken H. McFadden SSO
(Print Name) (Title)

Ken H. McFadden
(Signature)

*Background = 0.0 ppm

CRHS Team Form 10 1/1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 36 SSHASP No. 020 Date 7/29/94
Project Title Field Investigation
Page 1 of 1

Instrument HNU 10.2 eV Probe Model PI-101

Serial Number 301024

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in N2	100 ppm	50 ppm / 0.50 div	0800	[illegible]	7-29-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1214	AAB 1852 / 1853	0.2 ppm	Hold to hold during sampling at place
1240	AAB 1854	0.2 ppm	"
1257	AAB 1855	0.2 ppm	"
1315	AAB 1856	0.2 ppm	"
1331	AAB 1857	0.2 ppm	"
1418	AAB 1858	0.2 ppm	"
1435	AAB 1859	0.2 ppm	"
1449	AAB 1860	0.2 ppm	"

Measurements by Ken H. McFarren SSO [illegible]
(Print Name) (Title) (Signature)

*BACKGROUND = 0.2 PPM

SRMS Team form 10 [illegible]/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 36 SSHASP No. 036 Date 9/3/94
Project Title Field Investigation
Page 1 of 1
Instrument HNU w/ 10.2 ev Probe Model PI-101
Serial Number 301024
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm at 10:30 a.m.	0220	K.H. McG.	9-3-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1144	AAB 1834, 1835	0.2 ppm	(Prior to main drilling sampling at source)
1116	AAB 1836	0.2 ppm	"
1121	AAB 1837	0.2 ppm	"
1135	AAB 1838	0.2 ppm	"
1148	AAB 1839	0.2 ppm	"
1200	AAB 1840	0.2 ppm	"
1213	AAB 1841	0.2 ppm	"
1227	AAB 1842	0.2 ppm	"

Measurements by Ken H. McGoon SSO Ken H. McGoon
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

ER115 Team form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

1130 TA 36 SSHASP No. 026 Date 8/4/94
ect Title Field Investigation
L # 2
ment HNU IN 10.2 eV Probe Model PI-101
Number 301024
tion Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	1000 ppm	100 ppm at	0720	[illegible]	8-4-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1037	AAB 1861 & 1862	0.2 ppm	Prior to and during sampling at source
1058	AAB 1863	0.2 ppm	"
1113	AAB 1864	0.2 ppm	"
1132	AAB 1865	0.2 ppm	"
1146	AAB 1866	0.2 ppm	"
1201	AAB 1867	0.2 ppm	"
1215	AAB 1868	0.2 ppm	"
1229	AAB 1869	0.2 ppm	"
1248	AAB 1843	0.2 ppm	"

Measurements by Ken H. McFadden SSO [illegible]
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

ERHS Team Form IV 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

DC 1120 TA-26 SSHASP No. 026 Date 9/15/94
Project Title Fuel Tank Removal
Page 1 of 1

Instrument Mine Co MSA Model PT-101
Serial Number 30107 6

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	[illegible]	0950	[illegible]	9-15-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
0950	IT SEPTIC TANK	0.2 PPM	INITIAL READING OF TANKS HEAD SPACE
1100	"	0.2 PPM	WHILE COLLECTING WATER SAMPLES
1117	"	0.2 PPM	"
1123	"	0.2 PPM	"
1130	"	0.2 PPM	WHILE COLLECTING SURFACE SAMPLES
1144	"	0.2 PPM	"
1152	"	0.2 PPM	"

Measurements by Ken H. McFadden SSO
(Print Name) (Title)

Ken H. McFadden
(Signature)

* BACKGROUND = 0.2 PPM

SHMS Team form IV 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1120 TA 36 SSHASP No. 006 Date 8/4/94
Project Title Field Investigation
Page 2 of 2

Instrument _____ Model PT-1011

Serial Number _____

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date

SEE PAGE 2

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication**	Comments
1413	ABB 1870 & 1871	0.2 PPM	PRIOR TO ANY DRILLING DISPLAY OUT SINCE
1428	ABB 1872	0.2 PPM	"

Measurements by KEN H McFADDEN SSO
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

ERHS Team form 10 1/1/94

CORRECTION

START

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 36 SSHASP No. 036 Date 9/3/94
Project Title Field Investigation
Page 1 of 1

Instrument HNU w/ 10.2 ev Probe Model PI-101

Serial Number 301024

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm at 100 span	0720	KH McGregor	9-3-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1044	AAB 1834 & 1835	0.2 ppm	After 10 min during sampling at source
1106	AAB 1836	0.2 ppm	"
1121	AAB 1837	0.2 ppm	"
1135	AAB 1838	0.2 ppm	"
1148	AAB 1839	0.2 ppm	"
1200	AAB 1840	0.2 ppm	"
1213	AAB 1841	0.2 ppm	"
1227	AAB 1842	0.2 ppm	"

Measurements by Ken H. McGregor SSO
(Print Name) (Title)

Ken H. McGregor
(Signature)

* Background = 0.2 ppm

ERHS Team form 19 1/1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1132 TA 36 SSHASP No. 0226 Date 8/4/94
Project Title Field Investigation
Page 1 of 2

Instrument HNU IS 101.2 eV Probe Model PI-101

Serial Number 301024

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm HT	0920	R.H. McFadden	8-4-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1037	AAB 1861 / 1862	0.2 ppm	Prior to and during sampling at source
1058	AAB 1863	0.2 ppm	"
1113	AAB 1864	0.2 ppm	"
1132	AAB 1865	0.2 ppm	"
1146	AAB 1866	0.2 ppm	"
1201	AAB 1867	0.2 ppm	"
1215	AAB 1868	0.2 ppm	"
1229	AAB 1869	0.2 ppm	"
1348	AAB 1843	0.2 ppm	"

Measurements by Ken H. McFadden SSO
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

ER-HS Team Form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1120 TA 36 SSHASP No. 036 Date 9/15/94
Project Title Field Investigation
Page 1 of 1
Instrument HNU IS 101.2 or equivalent Model PI-101
Serial Number 300034
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	99.5 ppm	0950	[illegible]	9-15-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
0950	IS SEPTIC TANK	0.2 PPM	INITIAL READING OF TANK HEAD SPACE
1100	"	0.2 PPM	WHILE COLLECTING WATER SAMPLES
1117	"	0.2 PPM	"
1123	"	0.2 PPM	"
1130	"	0.2 PPM	WHILE COLLECTING SURFACE SAMPLES
1144	"	0.2 PPM	"
1152	"	0.2 PPM	"

Measurements by Ken H. McFarren SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

ESHS Team form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1150 TA 36 SSHASP No. 006 Date 8/4/94
Project Title Field Investigation
Page 2 of 2

Instrument _____ Model PT-101

Serial Number _____

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date

SEE PAGE #2

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1413	AAB 1870; 1871	0.2 PPM	PRIOR TO AND DURING SAMPLING CUT SHOE
1428	AAB 1872	0.2 PPM	"

Measurements by KEN H. McFADDEN SSO
(Print Name) (Title)

(Signature)

* BACKGROUND = 0.2 PPM

ERHS Team form 10 1/1/94

CORRECTION

END

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1180 TA 36 SSHASP No. 026 Date 8/18/94
Project Title Fire Investigation
Page 1 of 1
Instrument HNU 10.2 eV probe Model PI-101
Serial Number 301044
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene Bu gas	100 PPM	100 PPM AT 2 [illegible]	0730	[illegible]	8-18-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1111	AAB 1885 & 1886	0.1 PPM	Prior to and during sampling at [illegible]
1130	AAB 1887	0.1 PPM	"
1141	AAB 1888	0.1 PPM	"
1152	AAB 1889	0.1 PPM	"

Measurements by Ken H. Nagano SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.1 PPM

ERHS Form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1221 TA 36 SSHASP No. 0220 Date 8/11/94
Project Title Field Investigation
Page 1 of 1
Instrument HNU 10.2 eV Probe Model PI-101
Serial Number 301024
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm out 10.50 ppm	0220	[illegible]	8-11-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1050	AAB 1812	0.2 ppm	Back to background [illegible] at [illegible]
1104	AAB 1813	0.2 ppm	"
1123	AAB 1814	0.2 ppm	"
1138	AAB 1815	0.2 ppm	"

Measurements by Kevin H. McFarren SSO [signature]
(Print Name) (Title) (Signature)

*Background = 0.2 ppm

LANL Form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

DU 1130 TA 36 SSHASP No. 026 Date 8/12/94
Project Title Soil Investigation
Page 1 of 1
Instrument Hnu Systems Analyzer Model PI-101
Serial Number 301034
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm or 10.50 ppm	2.725	[illegible]	8-12-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1154	PHB 1920	0.2 ppm	Prior to drilling sampling at select
1108	PHB 1919	0.2 ppm	"
1121	PHB 1918	0.2 ppm	"
1132	PHB 1917 & 1916	0.2 ppm	"

Measurements by Ken H. McFarren SSO
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

ERHS Team form 10 1/1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 30 SSHASP No. 026 Date [illegible]
Project Title [illegible]
Page 1 of 1
Instrument HNU 10.2 eV Probe Model PI-101
Serial Number 301024
Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm	50 ppm at 100 span	[illegible]	K. H. McFadden	9-16-94

* For detector tubes, write not applicable

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1052	AAB 1942	0.2 ppm	Hole to mud [illegible] [illegible] at [illegible]
1112	AAB 1941	0.2 ppm	"
1126	AAB 1940	0.2 ppm	"
1140	AAB 1939	0.2 ppm	"

Measurements by KEN H. McFADDEN SSO [illegible]
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

29,345 Team Form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1132 TA 36 SSHASP No. 0826 Date 5/20/94
Project Title Field Investigation
Page 1 of ___

Instrument [illegible] Model PT-[illegible]

Serial Number 30024

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	[illegible]	50 PPM AT [illegible]	0.250	[illegible]	5/20/94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1100	AHB 1821	0.2 PPM	Bkgd reading during sampling at [illegible]
1118	AHB 1822	0.2 PPM	"
1141	AHB 1823	0.2 PPM	"
1200	AHB 1824	0.2 PPM	"

Measurements by [illegible] SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

ERHS Team form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU [illegible] TA [illegible] SSHASP No. [illegible] Date 9/13/94
Project Title [illegible]
Page 1 of 1

Instrument [illegible] Model PT-101

Serial Number 401084

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	100 ppm	[illegible]	[illegible]	[illegible]	9-13-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication #	Comments
1135	SUMP	0.2 ppm	TOP OF SUMP OUTLET REMOVAL OF LID
1330	SUMP	0.2 ppm	MONITORED THE FIRST LEVEL OF SOIL REMOVAL FROM SUMP
1423	SAMPLE # AA13 1801	0.2 ppm	PRIOR TO CLOSE OUT SAMPLING AT SUMP

Measurements by [illegible] SSO [signature]
(Print Name) (Title) (Signature)

BACKGROUND = 0.2 ppm

ER315 Team form 10 [illegible]

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU [illegible] TA [illegible] SSHASP No. [illegible] Date [illegible]
Project Title [illegible]
Page [illegible] of [illegible]

Instrument [illegible] Model [illegible]

Serial Number [illegible]

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1019	AAB 1903	0.2 PPM	[illegible]
1039	AAB 1903, 1904	0.2 PPM	"
1157	AAB 1905	0.2 PPM	"
1210	AAB 1906	0.2 PPM	"

Measurements by [illegible] 350
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

SAHS Team Form 10 MM

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1220 TA 36 SSHASP No. [illegible] Date 9/20/94
Project Title Field Investigation
Page 1 of 1

Instrument Hnu [illegible] Model PI 101

Serial Number [illegible]

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in Air	100 ppm	99 ppm at [illegible]	1750	[illegible]	9-20-94

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1052	Local 36-3090	0.2 ppm	Prior to turning Digitiye to place sample [illegible]
1104	Local 36-3091	0.2 ppm	"
1118	Local 36-3092	0.2 ppm	"
1130	Local 36-3093	0.2 ppm	"
1200	Local 36-3119	0.2 ppm	"
1310	Local 36-3120	0.2 ppm	"
1320	Local 36-3121	0.2 ppm	"
1332	Local 36-3122	0.2 ppm	"

Measurements by Ken H. McFarland SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 ppm

SRHS Team form 10 1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU [illegible] TA 36, SSHASP No. [illegible]
Project Title [illegible]
Page [illegible] of [illegible]

Date [illegible]

Instrument [illegible]

Model [illegible]

Serial Number [illegible]

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1023	LOCAL 36-3086	0.2 PPM	[illegible]
1034	LOCAL 36-3087	0.2 PPM	"
1102	LOCAL 36-3088	0.2 PPM	"
1122	LOCAL 36-3089	0.2 PPM	"

Measurements by [illegible] SSO [illegible]
(Print Name) (Title) (Signature)

* BACKGROUND = 0.2 PPM

ER/HS Team form IV

1/1/94

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

DU [illegible] TA-36 SSHASP No. [illegible] Date 9/[illegible]/94
Project Title [illegible]
Page 1 of 1

Instrument [illegible] Model PT-[illegible]

Serial Number [illegible]

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
[illegible]	[illegible] ppm	[illegible]	[illegible]	[illegible]	[illegible]

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1140	[illegible] 36-[illegible]	0.2 ppm	[illegible]
1153	[illegible] 36-[illegible]	0.2 ppm	"
[illegible]	[illegible] 36-[illegible]	0.2 ppm	"
1217	[illegible] 36-[illegible]	0.2 ppm	"

Measurements by [illegible] SSO [signature]
(Print Name) (Title) (Signature)

* BACKGROUND - 0.2 ppm

CRHS Form form 10 (1/94)

Figure 8-6.

DIRECT READING AIR SAMPLING FORM

OU 1130 TA 36 SSHASP No. 036 Date 11/21/90
Project Title Field Investigations
Page 1 of 1

Instrument Hnu Systems Model PI-101
Serial Number 401090

Calibration Data*

Type of Gas	Concentration	Instrument Response	Comments	Calibrated by	Date
Isobutylene in air	100 ppm ~~[illegible]~~ 11-21-90	98 ppm at 9.8 eV	OTS	[illegible]	11-21-90

* For detector tubes, write "not applicable"

Measurements/Indications

Time	Location	Meter Reading/Indication*	Comments
1025	Sample # AA13 1916	0.2 ppm	Prior to and during handling air sample
1030	Sample # AA13 A17	0.2 ppm	"

Measurements by Ken H. McGahan SSO [signature]
(Print Name) (Title) (Signature)

* Background = 0.2 ppm

ERHS Team form 10 11/94

Date 4-27-4 Work Ca[illegible] Sheet

Project Descri[illegible] Drilling Location [illegible] OU Number 1130 Interim Action # [illegible]/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
TEST HOLE #1	0'	2'	drilling [illegible] BZ		0.2 PPM	N/A	N/A	N/A	1125
			drill hole						
			core						
			sample prep						
			drilling						
TEST HOLE #1	2'	3'	drill hole [illegible]		CLEAN	N/A	N/A	N/A	1140
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

70°-80°

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # 401CH1 Calibration Date CALIB ON 4-27-94 : 5 PPM AT 7:00 AM

Four Runner # _____ Calibration Date _____ Other _____ Calibraton Date _____

Sampling Notes BACKGROUND = 0.2 PPM

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 24 92

Date 9-28-94 Page 1 of 2 Work Card Number

Project Description Demo Location [illegible] OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
TEST HOLE #1	2'	3'	drill hole cuttings		0.2ppm	N/A	N/A	N/A	1043
			core						
			sample prep						
			drilling						
TEST HOLE #1	3'	3½'	drill hole cuttings		0.2ppm	N/A	N/A	N/A	1102
			core						
			sample prep						
			drilling						
TEST HOLE #1	3½'	6'	drill hole cuttings / fabric		0.2ppm	N/A	N/A	N/A	1110
			core						
			sample prep						
			drilling						
TEST HOLE #1	6'	8'	drill hole cuttings		0.2ppm	N/A	N/A	N/A	KM 9-28-94 1120
			core						
			sample prep						

Field Verification Results:

Temperatures

80's

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # 401084 Calibration Date 9-28-94 at 0842: 53ppm at 7.84ppm

Four Runner # _____ Calibration Date _____ Other _____ Calibraton Date _____

Sampling Notes Background = 0.2ppm

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7-21-9

Date 9-28-94 Page 2 of 2 Work Card Number

Project Description Drilling Location FDA-A2 Tier OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
EST HOLE #1	8'	10'	drill hole		0.2ppm	N/A	N/A	N/A	1129
			core						
			sample prep						
			drilling						
EST HOLE #1	10'	12'	drill hole cuttings		0.2ppm	N/A	N/A	N/A	1135
			core						
			sample prep						
EST HOLE #1	12'	15'	drilling cuttings		0.2ppm	N/A	N/A	N/A	1146
EST HOLE #1	12'	15'	drill hole		1ppm	N/A	N/A	N/A	1350
EST HOLE #1	12'	15'	core		0.2ppm	N/A	N/A	N/A	1205
EST HOLE #1	12'	15'	sample prep		0.2ppm 0.2ppm	N/A	N/A	N/A	1205
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

80°

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # 40084 Calibration Date See Page #1

Four Runner # _____ Calibration Date _____ Other _____ Calibration Date _____

Sampling Notes Background = 0.2 ppm

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 24 92

Work Card Number

Date 9-29-94

Project Description Drilling Location MDP-AB TB-2 GH Number 1130 Interim Action #

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
36-3125	0'	3'	drilling ~~2nd pipe~~ BZ		0.2mm	N/A	N/A	N/A	1020
36-3125	0	3'	drill hole ~~Split Spoon~~		0.2mm	N/A	N/A	N/A	1020
			core						
			sample prep						
			drilling						
36-3125	3'	3'3"	drill hole		0.2mm	N/A	N/A	N/A	1045
36-3125	3'	3'3"	core		0.2mm	N/A	N/A	N/A	~~1030~~ 1130
			sample prep						
			drilling						
36-3125	3'3"	3'9"	drill hole Split		0.2mm	N/A	N/A	N/A	1200
			core						
			sample prep						
			drilling						
36-3125	3'9"	4'	drill hole		0.2mm	N/A	N/A	N/A	1403
36-3125	4'	5'	~~core~~ cuttings		0.2mm	N/A	N/A	N/A	1421
			sample prep						

Field Verification Results:

Temperatures

80°

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # 401084 Calibration Date 9-29-94 at 0.2ppm SBW at 7.6 ppm

Four Runner # _____ Calibration Date _____ Other _____ Calibraton Date _____

Sampling Notes Background = 0.2 ppm

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form 7 21 92

Work Card Number

te 9-30-94

ject Description Drilling Location/MA-A2 Test Pit OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
			drill hole						
-3125	5'	7'	~~core~~ cuttings		0.2 ppm	N/A	N/A	N/A	1039
			sample prep						
			drilling						
			drill hole						
-3125	5'	7'	core screen		0.2 ppm	N/A	N/A	N/A	1100
-3125	5'	7'	sample prep		0.2 ppm	N/A	N/A	N/A	1111 Sample #AA3 1952
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

62°

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # 46084 Calibration Date 9-30-94 at 0745: 58 ppm at 7.24 ppm

Four Runner # _____ Calibration Date _____ Other _____ Calibration Date _____

Sampling Notes Background = 0.2 ppm

[signature]

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 21 92

Date 10-3-94 PAGE 1 of 2

Work Card Number

Project Description Drilling Location [illegible] OU Number 1130 Interim Action N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
36-3125	5'	7'	drill hole		0.2ppm	N/A	N/A	N/A	1000 after removal of pug cover.
			core						
			sample prep						
			drilling						
36-3125	7'	10'	drill hole		0.2ppm	N/A	N/A	N/A	1125
36-3125	7'	10'	core OUTSIDE OF SPOON		0.2ppm	N/A	N/A	N/A	1134
36-3125	7'	10'	sample prep		0.2ppm	N/A	N/A	N/A	1134 Sample # AAB 1853
			drilling						
36-3125	10'	12'	drill hole		0.2ppm	N/A	N/A	N/A	1212
36-3125	12'	14'	core OUTSIDE OF SPOON		0.2ppm	N/A	N/A	N/A	1407
36-3125	12'	14'	sample prep		0.2ppm	N/A	N/A	N/A	1407 Sample # AAB 1854
			drilling						
36-3125	14'	19'	drill hole		0.2ppm	N/A	N/A	N/A	1453
			core						
			sample prep						

Field Verification Results:

Temperatures

~~SEE PAGE~~ KHA 10-3-94
62°

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 46087 Calibration Date 10-3-94 at 0832 [illegible]

Four Runner # N/A Calibration Date N/A Other N/A Calibration Date N/A

Sampling Notes Background = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible] Form/7-21-9

Date 10-3-4[illegible] Page 2 of 2 Work Card Number

Project Description Drilling Location [illegible] OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
36-3125	19'	22'	drill hole		0.2ppm	N/A	N/A	N/A	1430
			core						
			sample prep						
			drilling						
36-3125	22'	30'	drill hole		0.2ppm	N/A	N/A	N/A	1444
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

SEE PAGE #1

Instrumentation Information

OVA # _____ Calibration Date _____ HNU # _____ Calibration Date _____ SEE PAGE #1

Four Runner # _____ Calibration Date _____ Other _____ Calibraton Date _____

Sampling Notes Background = 0.2 ppm

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7-24-9

Date 10-6-94 Page 1 of 2 Work Card Number

Project Description Drilling Location [illegible] OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
36-3126	0'	2'	drill hole		0.2ppm	N/A	N/A	N/A	1103
36-3126	0'	2'	core		0.2ppm	N/A	N/A	N/A	1103
			sample prep						
			drilling						
36 3126	2'	3'	drill hole (PID)		0.2ppm	N/A	N/A	N/A	1135
			core						
			sample prep						
			drilling						
36-3126	3'	4'	drill hole (PID)		0.2ppm	N/A	N/A	N/A	1152
36 3126	3'	4'	core		0.2ppm	N/A	N/A	N/A	1207
36 3126	3'	4'	sample prep		0.2ppm	N/A	N/A	N/A	1215 samples APIS 1503 and 1504
			drilling						
36-3126	4'	6'	drill hole		0.2ppm	N/A	N/A	N/A	1230
			core						
			sample prep						

Field Verification Results:

Temperatures

50

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 40084 Calibration Date 10-6-94 at 0700 Stop at 1630

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes [illegible]

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested Form/7-21-9

Date 10-2-7[illegible] Work Card Number

Project Description Phase Location [illegible] OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
3C-3126	6'	8'	drill hole Dust Pic		0 ppm	N/A	N/A	N/A	1418
3C 3126	6'	8'	core		0 ppm	N/A	N/A	N/A	1423
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

50°

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # SEE PAGE 1 Calibration Date

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes Background = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7-21-9[illegible]

Work Card Number

Date 10-[illegible] Project Description Drilling Location [illegible] OU Number 1130 Interim Action [illegible] N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
3L 3126	8'	8½'	drill hole		0.2 ppm	N/A	N/A	N/A	1045
3L-3126	8'	8½'	core (soil)		0.2 ppm	N/A	N/A	N/A	1100
			sample prep						
			drilling						
3L 3126	8½'	10'	drill hole		0.2 ppm	N/A	N/A	N/A	1030
3L 3126	8½'	10'	core (soil)		0.2 ppm	N/A	N/A	N/A	1100
3L 3126	8½	10'	sample prep		0.2 ppm	N/A	N/A	N/A	1101 Sample # [illegible]
			drilling						
3L 3126	10'	12'	drill hole		0.2 ppm	N/A	N/A	N/A	1127
3L-3126	10'	12'	core (soil)		0.2 ppm	N/A	N/A	N/A	1154
3L-3126	8½	10'	sample prep		0.2 ppm	N/A	N/A	N/A	1200 Sample # [illegible]
	12'	14'	drilling						
3L-3126	12'	22'	drill hole		0.2 ppm	N/A	N/A	N/A	1230
3L-3126	12'	22'	core (soil)		0.2 ppm	N/A	N/A	N/A	1257
3L-3126	12'	22'	sample prep		0.2 ppm	N/A	N/A	N/A	1301 Sample # [illegible]

Field Verification Results:

Temperatures

No 50's

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 40634 Calibration Date 10-11-94 at 0.2 ppm span at 0.2 ppm

Four Runner # N/A Calibration Date N/A Other N/A Calibration Date N/A

Sampling Notes Background = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible] Form/7-21-[illegible]

Date 10-12-94 Work Card Number

Project Description Drilling Location [illegible] OH Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
36-3127	0'	8'	drill hole		0.2 ppm	N/A	N/A	N/A	1050
			core						
			sample prep						
			drilling						
36-3127	8'	9'	drill hole		0.2 ppm	N/A	N/A	N/A	1107
			core						
			sample prep						
			drilling						
36-3127	9'	17'	drill hole		0.2 ppm	N/A	N/A	N/A	1201
36-3127	12'	17'	core (material in [illegible])		0.2 ppm	N/A	N/A	N/A	1211
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

Upper 50's

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 46184 Calibration Date 10-12-94 at 08:40 59 ppm at 6.88 ppm

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes Background: 0.2 ppm

Ken N. Pitts

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7-24-9

Date 11-14-94 Work Card Number

Project Description Dallas Location LEACH FIELD OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
	8:44 AM 11-14-94		drilling BZ						
1ST TEST HOLE FOR 3L-3052	0"	22"	drill hole		1.8 PPM 0.0 PPM	N/A	N/A	N/A	1038
"	0"	22"	core (SOIL)		0.2 PPM	N/A	N/A	N/A	1038
"	0"	22"	sample prep (MATERIAL IN SOIL)		0.2 PPM	N/A	N/A	N/A	1038
			drilling						
2nd TEST HOLE FOR 3L-3052	0'	2½'	drill hole		0.2 PPM	N/A	N/A	N/A	1140
"	0'	2½'	core (SOIL)		0.2 PPM	N/A	N/A	N/A	1140
"	0'	2½'	sample prep (MATERIAL IN SOIL)		0.2 PPM	N/A	N/A	N/A	1140
			drilling						
3rd TEST HOLE FOR 3L-3052	0"	38"	drill hole		0.2 PPM	N/A	N/A	N/A	1319
"	0"	38"	core (SOIL)		0.2 PPM	N/A	N/A	N/A	1319
"	0"	38"	sample prep (MATERIAL IN SOIL)		0.2 PPM	N/A	N/A	N/A	1319
			drilling						
3L-3053	0"	42"	drill hole		0.2 PPM	N/A	N/A	N/A	1400
"	0"	42"	core (SOIL)		0.2 PPM	N/A	N/A	N/A	1400
"	0"	42"	sample prep		0.2 PPM	N/A	N/A	N/A	1400 SAMPLES CONTAIN MATERIAL

Field Verification Results:

Temperatures

MID 30°s

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 46034 Calibration Date 11-14-94 at 0826 58 PM at 8.24 SPAN

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes BACKGROUND = 0.2 PPM

K. H. Kelly

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 24

Date 11-15 [illegible] PAGE 2 OF 3 Work Card Number

Project Description DRILL Location LEACH FIELD OU Number 130 Interim Action N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
[illegible] 11-15-91			drilling BZ						
2nd TEST HOLE FOR 36 X 55	0"	36"	drill hole		0.2 ppm	N/A	N/A	N/A	1315
"	0"	36"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1315
"	0"	36"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1315
			drilling						
3rd TEST HOLE FOR 36 X 55	0"	41"	drill hole		0.2 ppm	N/A	N/A	N/A	1340
"	0"	41"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1340
"	0"	41"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1340
			drilling						
4TH TEST HOLE FOR 36 X 55	0"	38"	drill hole		0.2 ppm	N/A	N/A	N/A	1405
"	0"	38"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1405
"	0"	38"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1405
			drilling						
5TH TEST HOLE FOR 36 X 55	0"	38"	drill hole		0.2 ppm	N/A	N/A	N/A	1425
"	0"	38"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1425
"	0"	38"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1425

Field Verification Results:

Temperatures

SEE PAGE 1

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # SEE PAGE 1 Calibration Date

Four Runner # N/A Calibration Date N/A Other N/A Calibration Date N/A

Sampling Notes [illegible] = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible] Form/7 21

Date 11-15-91 Page 3 of 3 Work Card Number

Project Description Drilling Location LOCH FIELD OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
~~36~~ 11-15-91			drilling BZ						
36-3055	0"	40"	drill hole		2.0mm 0.2mm	N/A	N/A	N/A	1445
"	0"	40"	core (Sims)		0.2mm	N/A	N/A	N/A	1445
"	0"	40"	sample prep		0.2mm	N/A	N/A	N/A	1445
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

SEE page 1

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # SEE page 1 Calibration Date

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes Background = 0.2 ppm

T. R. Tibbs

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 24

Date 11-15-9[illegible] PAGE 1 of 3 Work Card Number [illegible]

Project Description DRILLING Location LSAAP Field OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
1ST TEST HOLE FOR 36-3054	0"	27"	drill hole		0.2 ppm	N/A	N/A	N/A	1103
"	0"	27"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1103
"	0"	27"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1103
			drilling						
2ND TEST HOLE FOR 36-3054	0"	31"	drill hole		0.2 ppm	N/A	N/A	N/A	1025
"	0"	31"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1025
"	0"	31"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1025
			drilling						
36-3054	0"	37"	drill hole		0.2 ppm	N/A	N/A	N/A	1044
"	0"	37"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1044
"	0"	37"	sample prep		0.2 ppm	N/A	N/A	N/A	1044
			drilling						
1ST TEST HOLE FOR 36-3055	0"	42"	drill hole		0.2 ppm	N/A	N/A	N/A	1235
"	0"	42"	core (SOIL)		0.2 ppm	N/A	N/A	N/A	1235
"	0"	42"	sample prep (MATERIAL IN SOIL)		0.2 ppm	N/A	N/A	N/A	1235

Field Verification Results:

Temperatures

AMB 30°C

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 9[illegible] Calibration Date 11-15-94 AT 0737: START AT 0.2 ppm

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes BACKGROUND = 0.2 ppm

K. M. Kelly

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7-24-9[illegible]

Date 11-17-94 PAGE 2 OF 3 Work Card Number

Project Description DRILLING Location [illegible] OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
[illegible] 11-17-94			drilling BZ						
1ST TEST HOLE For 3-30[illegible]	0'	3'	drill hole		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	core (SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	sample prep (MATERIAL IN SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
			drilling						
2nd TEST HOLE For 3-30[illegible]	0'	3'	drill hole		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	core (SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	sample prep (MATERIAL IN SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
			drilling						
3rd TEST HOLE For 3-30[illegible]	0'	3'	drill hole		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	core (SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	sample prep (MATERIAL IN SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
			drilling						
4TH TEST HOLE For 3-30[illegible]	0'	3'	drill hole		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	core (SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]
"	0'	3'	sample prep (MATERIAL IN SPOON)		0.2PPM	N/A	N/A	N/A	[illegible]

Field Verification Results:

Temperatures

UPPER 20[illegible]

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # [illegible] Calibration Date 11-17-94 at 0940 [illegible] PPM at [illegible]

Four Runner # N/A Calibration Date N/A Other Calibraton Date

Sampling Notes BACKGROUND = 0.2PPM

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible]/7 21

Date 11-17 PAGE 2 OF 3 Work Card Number

Project Description DRILLING Location CATCH FIELD OU Number 1130 Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
[illegible]	C		drilling BZ						
5TH TEST HOLE FOR 36-3056	0'	2½'	drill hole		0.2PPM	N/A	N/A	N/A	1120
"	0'	2½'	core (SAMPLE)		0.2PPM	N/A	N/A	N/A	1120
"	0'	2½'	sample prep (MATERIAL IN SAMPLE)		0.2PPM	N/A	N/A	N/A	1120
			drilling						
6TH TEST HOLE FOR 36-3056	0'	2½'	drill hole		0.2PPM	N/A	N/A	N/A	1133
"	0'	2½'	core (SAMPLE)		0.2PPM	N/A	N/A	N/A	1133
"	0'	2½'	sample prep (MATERIAL IN SAMPLE)		0.2PPM	N/A	N/A	N/A	1133
			drilling						
7TH TEST HOLE FOR 36-3056	0'	3½'	drill hole		0.2PPM	N/A	N/A	N/A	1144
"	0'	3½'	core (SAMPLE)		0.2PPM	N/A	N/A	N/A	1144
"	0'	3½'	sample prep (MATERIAL IN SAMPLE)		0.2PPM	N/A	N/A	N/A	1144
			drilling						
8TH TEST HOLE FOR 36-3056	0"	52"	drill hole			N/A	N/A	N/A	1200
"	0"	52"	core (SAMPLE)			N/A	N/A	N/A	1200
"	0"	52"	sample prep (MATERIAL IN SAMPLE)			N/A	N/A	N/A	1200

Field Verification Results:

Temperatures

SEE PAGE 1

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # SEE PAGE 1 Calibration Date

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes BACKGROUND = 0.2 PPM

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible] Form/7 21

Date 11-17-[illegible] Page 3 of 3 Work Card Number

Project Description Drilling Location [illegible] OU Number 1130 Interim Action # n/a

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
			drilling BZ						
9TH TEST HOLE FOR 36 SERIES	0'	5'	drill hole		0.2 ppm	n/a	n/a	n/a	1257
"	0'	5'	core (screw)		0.2 ppm	n/a	n/a	n/a	1257
"	0'	5'	sample prep (material in screw)		0.2 ppm	n/a	n/a	n/a	1257
			drilling						
36 SERIES	0"	66"	drill hole		0.2 ppm	n/a	n/a	n/a	1324
"	0"	66"	core (screw)		0.2 ppm	n/a	n/a	n/a	1324
"	0"	66"	sample prep		0.2 ppm	n/a	n/a	n/a	1324
			drilling						
			drill hole						
			core						
			sample prep						
			drilling						
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

See page 1

Instrumentation Information

OVA # n/a Calibration Date n/a HNU # See page 1 Calibration Date

Four Runner # n/a Calibration Date n/a Other n/a Calibraton Date n/a

Sampling Notes Background = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

[illegible] 6mm/7 24

Date 11-18-94 PAGE 1 OF 2 Work Card Number-

Project Description Drilling Location LEAH FIELD OH Number 1130 Interim Action N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
1			drilling BZ						
1ST HOLE FOR 36-3057	0'	5'	drill hole		0.2 ppm	N/A	N/A	N/A	1020
"	0'	5'	core (screen)		0.2 ppm	N/A	N/A	N/A	1020
"	0'	5'	sample prep (material in screen)		0.2 ppm	N/A	N/A	N/A	1020
			drilling						
2ND TEST HOLE FOR 36-3057	0'	6'	drill hole		0.2 ppm	N/A	N/A	N/A	1102
"	0'	6'	core (screen)		0.2 ppm	N/A	N/A	N/A	1102
"	0'	6'	sample prep (material in screen)		0.2 ppm	N/A	N/A	N/A	1102
			drilling		SAM HIGH				
36-3057	0'	6'	drill hole		2 ppm TO 0.2 ppm	N/A	N/A	N/A	1122
36-3057	0'	6'	core (screen)		0.2 ppm	N/A	N/A	N/A	1122
36-3057	0'	6'	sample prep		0.2 ppm 0.2 ppm	N/A	N/A	N/A	1122 SAMPLE PREP WITHIN 1130
			drilling						
2ST TEST HOLE FOR 36-3052	0'	2½'	drill hole		0.2 ppm	N/A	N/A	N/A	1342
"	0'	2½'	core (screen)		0.2 ppm	N/A	N/A	N/A	1342
"	0'	2½'	sample prep (material in screen)		0.2 ppm	N/A	N/A	N/A	1342

Field Verification Results:

Temperatures

40°F

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # 40054 Calibration Date 11-18-94 AT 0725: SAM AT 8 ppm

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes BACKGROUND = 0.2 ppm

[signature]

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 21

Date 11-18-96 PAGE 2 OF 2 Work Card Number

Project Description Drilling Location [illegible] OU Number 1(3) Interim Action # N/A

Hole #	Depth		Activity	OVA	HNU	Rad Screen	Four Runner	Detector Tubes	
2nd TEST HOLE FOR RDM 11-18-96			drilling BZ						
2nd TEST HOLE FOR 36-3052	0	2'10"	drill hole		0.2ppm	N/A	N/A	N/A	1407
"	0	2'10"	core (2'10")		0.2ppm	N/A	N/A	N/A	1407
"	0	2'10"	sample prep (material in 2'10")		0.2ppm	N/A	N/A	N/A	1427
			drilling						
3rd TEST HOLE FOR 36-3052	0'	3'	drill hole		0.2ppm	N/A	N/A	N/A	1424
"	0'	3'	core (3'0")		0.2ppm	N/A	N/A	N/A	1424
"	0'	3'	sample prep (material in 3'0")		0.2ppm	N/A	N/A	N/A	1424
			drilling						
36-3052	0"	38"	drill hole		0.4ppm	N/A	N/A	N/A	1445
"	0"	38"	core (0'38")		0.4ppm	N/A	N/A	N/A	1445
"	0"	38"	sample prep		0.4ppm	N/A	N/A	N/A	1445 Samples ABI82
			drilling						Bal ABI 1374
			drill hole						
			core						
			sample prep						

Field Verification Results:

Temperatures

SEE PAGE 1

Instrumentation Information

OVA # N/A Calibration Date N/A HNU # SEE PAGE 1 Calibration Date

Four Runner # N/A Calibration Date N/A Other N/A Calibraton Date N/A

Sampling Notes Background = 0.2 ppm

[illegible]

ND= Not Detectable NDA= None detected above background NT= Not Tested

Form/7 21

Noise Monitoring Data Sheet # 1 IHWF # N/A

Organization: IEF/MK Location IA: 3 Bldg: N/A Room: N/A Sampled By: Ken H. [illegible] Date: 10-11-94

Sample #	Instrument & model #	Emp Z#	Operation	Location of Measurement	Sample Time	Dosimeter Levels: Max dBA	Pk dB	Avg dBA	Dose (%)	Sound Level Measurement: Background dBA	Background dBC	Actual dBA	Actual dBC	Type* of noise
1	QUEST M-27	N/A	Drilling	Area survey around the Drill Rig.	5 min					70		84		S
2	QUEST M-27	N/A	Drilling	30' away from rig behind blast shield	4 min					70		75		S
				84 dB? was taken near the drill rig engine while doing site: fan plays										
				are being worn by all workers in the EZ 30' distance is measured										
				between the workers and Drill rig during actual drilling operations. This										
				distance further reduces noise exposure. At the 30' distance all workers										
				must stay behind a local Blast shield. This shield provides further noise reduc.										

Octave Band Measurement (dB)					Frequency (Hz)								dBA	dBC	
					62.5	125	250	500	1k	2k	4k	8k			

Employee's Signature: _____

Z #: _____

* Type of Noise: H – Intermittent IMP = Impulse M – Mixed

Noise Monitoring Data Sheet # 2 IIWF # N/A

Organization: IOF/mc Location: TA: 36 Bldg: N/A Room: N/A Sampled By: Ken H. Hamed Date: 11-14-94

Sample #	Instrument & model #	Emp. Z#	Operation	Location of Measurement	Sample Time	Dosimeter Levels Max. dBA	Pk. dB	Avg. dBA	Dose (%)	Sound Level Measurement Background dBA	Background dBC	Actual dBA	Actual dBC	Type[a] of noise
1	Quest M-27	N/A	Drilling	Behind Blast shield 30' from drilling	3min					70		74.7	!	IT

Octave Band Measurement (dB)

Frequency (Hz) 62.5	125	250	500	1k	2k	4k	8k	dBA	dBC

Employee's Signature: _____

Z #: _____

[a] S = Steady State IT = Intermittent IMP = Impulse M = Mixed

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 7/14/94
Project Title Field Investigation
Page 1 of 1

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code N/A Log Date N/A
Logger Code N/A Field Rep [illegible]
CGI Manufacturer GASTECH, INC. CGI Model No. 1314 S
Serial No. 9419190 Calibration Date/Time 7/14/94 0100 Battery Condition Good
Calibration Gas (% LEL)
Type 2.5% Methane in Air Concentration 50 %LEL Cylinder Serial No. 940504-11
Calibration Gas (PPM)
Type 100% Nitrogen Concentration N/A PPM Cylinder Serial No. 940517-41
Comments

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT)		Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
	North	East					
Septic Tank			5 minutes	Tank	0%	N/A	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Ken H. McFadden SSO [illegible]
(Print Name) (Title) (Signature)

Technical Review
(Print Name) (Title) (Signature)

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 7/21/94
Project Title Field Investigation
Page 1 of 2

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code _____ Log Date _____
Logger Code _____ Field Rep _____
CGI Manufacturer Gas Tech, Inc CGI Model No. 1214S
Serial No. 9419180 Calibration Date/Time 7/20/94 0115 Battery Condition Good
Calibration Gas (% LEL)
Type 2.5% Methane Concentration 50 %LEL Cylinder Serial No. 940509-11
Calibration Gas (PPM)
Type Nitrogen Concentration 100% PPM Cylinder Serial No. 940517-41
Comments _____

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring* Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
Septic Tank Head Space			1220	Septic Tank	0	**	21
Septic Tank Head Space Anaerobic			1221	"	0	**	21
"			1239	"	0	**	21
"			1247	"	0	**	21
"			1249	"	0	**	21
"			1312	"	0	**	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By: Ken H. McFann SSO (Print Name) (Title) Ken H. McFann (Signature)

Technical Review _____ (Print Name) (Title) _____ (Signature)

ER/HS Team Form 08 2/23/94

* Continual monitoring for the duration of the activity was performed
** See Direct Reading Air Sampling Form for the results

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 7/21/94
Project Title Field Investigation
Page 2 of 2

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code _____ Log Date _____
Logger Code _____ Field Rep _____
CGI Manufacturer _____ CGI Model No. _____
Serial No. _____ Calibration Date/Time _____ Battery Condition _____
Calibration Gas (% LEL)
Type _____ Concentration _____ %LEL Cylinder Serial No. _____
Calibration Gas (PPM)
Type _____ Concentration _____ PPM Cylinder Serial No. _____
Comments _____

POST Calibration Results
CGI _____ % LEL _____ % O_2 _____

Location ID or Description	Coordinates (FT)		Monitoring * Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
	North	East					
Septic Tank Head Space			1315	Septic Tank	0	**	21
"			1325	"	0	**	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Ken H. McFadden SSO
(Print Name) (Title)

[signature]
(Signature)

Technical Review _____
(Print Name) (Title)

_____
(Signature)

ER/HS Team Form 08 2/23/94

* Continual monitoring for the duration of the activity was performed
** See Direct Reading Air Sampling Form for HNU Results

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1130 TA 30 SSHASP No. 66 Date 8/5/94
Project Title Field Investigation
Page 1 of ____

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code ____ Log Date ____
Logger Code ____ Field Rep [illegible]
CGI Manufacturer MSA CGI Model No. 261
Serial No. ____ Calibration Date/Time 8-5-94/0940 Battery Condition OK
Calibration Gas (% LEL)
Type Pentane Concentration 50 ppm 8-5-94 %LEL Cylinder Serial No. 37828
Calibration Gas (PPM)
Type Oxygen Concentration 15 % PPM Cylinder Serial No. 37828
Comments ± 2% of value, pentane
± 5% of value, oxygen

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring* Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
IJ Firing Site Septic Tank Hand Dug			0950	Septic Tank	0	**	21
"			1100	"	0	**	21
"			1117	"	0	**	21
"			1123	"	0	**	21
"			1130	"	0	**	21
"			1144	"	0	**	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Ken H. McFadden SSO [signature]
(Print Name) (Title) (Signature)

Technical Review ____ ____
(Print Name) (Title) (Signature)

ER/HS Team Form 08 * ~~Continuous~~ KHM 8-5-94 KHM 8-5-94 monitoring was conducted for the duration of the sampling. 2/23/94
** See Direct Reading Air Sampling form for HNU Results.

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

(Continuation Sheet)

SEE NOTE #1

Facility Code _____ Log Date _____

Logger Code _____ Field Rep _____

CGI Manufacturer _____ CGI Model No. _____

Serial No. _____ Calibration Date/Time _____

Battery Condition _____

Location ID or Description	Coordinates (FT)		Monitoring* Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
	North	East					
IT FIELD SITE Sample Tank Monitoring			1152	Sample Tank	0	**	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By KEN H. McFARLAND SSO (Print Name) (Title) _____ (Signature)

Technical Review _____ (Print Name) (Title) _____ (Signature)

* Continuous monitoring was conducted for the duration of the sampling activity

** [illegible] Day for this results

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1180 TA 36 SSHASP No. 036 Date 9/13/94
Project Title Field Investigation
Page 1 of

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code N/A Log Date N/A
Logger Code N/A Field Rep Ken H. McFarlan
CGI Manufacturer Gas-Tech, Inc CGI Model No. 1214 S
Serial No. 9419190 Calibration Date/Time 9/13/94/1130 Battery Condition Good
Calibration Gas (% LEL)
Type 2.5% Methane Concentration 50 %LEL Cylinder Serial No. 940509-11
Calibration Gas (PPM)
Type 100% Nitrogen Concentration 0% O_2 ~~PPM~~ KHM 9-13-94 Cylinder Serial No. 940511-41
Comments

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT)		Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
	North	East					
Top of sump after removal of liq	N/A	N/A	1135	Sump	0	N/A	21
Space # AAB 1801	N/A	N/A	1423	Sump 2016	0	N/A	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Ken H. McFarlan SSO
(Print Name) (Title)
Ken H. McFarlan
(Signature)

Technical Review
(Print Name) (Title)
(Signature)

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 9/14/94
Project Title FUEL INVESTIGATION
Page 1 of

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code N/A Log Date N/A
Logger Code N/A Field Rep KEN H. NITRADEN
CGI Manufacturer GASTECH INC CGI Model No. 1245
Serial No. 9419160 Calibration Date/Time 9-14-94/0940 Battery Condition GOOD
Calibration Gas (% LEL)
Type 2.5% METHANE Concentration 50 %LEL Cylinder Serial No. 9405019-11
Calibration Gas (PPM)
Type 100% Nitrogen Concentration 0% O_2 ~~PPM~~ KHN 9-14-94 Cylinder Serial No. 940517-41
Comments

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT)		Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
	North	East					
AAB 1902	N/A	N/A	1019	SOIL FROM SUMP EXCAVATION	0	N/A	21
AAB 1903 + 1904	N/A	N/A	1039	"	0	N/A	21
AAB 1905	N/A	N/A	1151	"	0	N/A	21
AAB 1906	N/A	N/A	1210	"	0	N/A	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By KEN H. NITRADEN SSO (Print Name) (Title) [signature] (Signature)

Technical Review (Print Name) (Title) (Signature)

COMBUSTIBLE GAS INDICATOR/02 MONITORING DATA FORM

JC 1130 TA 36 SSHASP No. 026 Date 11/17/94
Project Title EMG Investigation
Page 1 of 7

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code N/A Log Date N/A
Logger Code N/A Field Rep [illegible]
CGI Manufacturer MSA CGI Model No. 261
Serial No. _____ Calibration Date/Time 11-17-94/0915 Battery Condition OK

Calibration Gas (% LEL)
Type Propane Concentration 50 %LEL Cylinder Serial No. 37020

Calibration Gas (PPM)
Type Oxygen Concentration 15 % PPM Cylinder Serial No. 3187H

Comments _____

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
1ST TEST HOLE FOR 36-30156			1007	BH	0	N/A	21
2ND TEST HOLE FOR 36-30156			1042	BH	0		21
3RD TEST HOLE FOR 36-30156			1054	BH	0		21
4TH TEST HOLE FOR 36-30156			1108	BH	0		21
5TH TEST HOLE FOR 36-30156			1120	BH	0		21
6TH TEST HOLE FOR 36-30156			1133	BH	0		21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Kim H. McFadden SSO [illegible]
(Print Name) (Title) (Signature)

Technical Review _____ _____
(Print Name) (Title) (Signature)

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

(Continuation Sheet)

Page 2 of 2

Facility Code: N/A

Logger Code: N/A

CGI Manufacturer: MSA

Serial No:

Log Date: N/A

Field Rep: [illegible]

CGI Model No: [illegible]

Calibration Date/Time: 11-17-94 / 0715

Battery Condition: OK

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
8TH TEST HOLE FOR 36-3036			1144	BH	0	N/A	21
8TH TEST HOLE FOR 36-3036			1200	BH	0		21
8TH TEST HOLE FOR 36-3036			1237	BH	0		21
36-3036			1324	BH	0		21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By: KEN H MCFARLAND SSO
(Print Name) (Title)

[illegible]
(Signature)

Technical Review: _____
(Print Name) (Title)

_____
(Signature)

COMBUSTIBLE GAS INDICATOR/O2 MONITORING DATA FORM

OU 1120 TA 36 SSHASP No. 230 Date 11/18/94
Project Title Field Characterization
Page 1 of 2

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

Facility Code N/A Log Date N/A
Logger Code N/A Field Rep [illegible]
CGI Manufacturer MSA CGI Model No. 261
Serial No. [illegible] Calibration Date/Time 11/18/94/0913 Battery Condition OK
Calibration Gas (% LEL)
Type Propane Concentration 50 %LEL Cylinder Serial No. 37868
Calibration Gas (PPM)
Type Oxygen Concentration 15% PPM Cylinder Serial No. 37868
Comments

POST Calibration Results
CGI N/A % LEL N/A % O_2 N/A

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
1st TEST HOLE FOR 36-3057			1020	BH	0	N/A	21
2nd TEST HOLE FOR 36-3057			1103	BH	0		21
36-3057 (SAME HOLE)			1122	BH	0		21
1st TEST HOLE FOR 36-3052			1343	BH	0		21
2nd TEST HOLE FOR 36-3052			1407	BH	0		21
3rd TEST HOLE FOR 36-3052			1424	BH	0		21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By Ken H. McFadden ESO [illegible]
(Print Name) (Title) (Signature)

Technical Review
(Print Name) (Title) (Signature)

COMBUSTIBLE GAS INDICATOR (CGI) MONITORING DATA

(Continuation Sheet)

Facility Code: N/A

Logger Code: N/A

CGI Manufacturer: MSA

Serial No:

Log Date: N/A

Field Rep: [illegible]

CGI Model No: 261

Calibration Date/Time: 11-18-94 / 0713

Battery Condition: OK

Location ID or Description	Coordinates (FT) North	Coordinates (FT) East	Monitoring Time (HH:MM)	Location Type	% Lower Explosive Limit	PPM	% Oxygen
30-3052			1445	BH	0	N/A	21

Location Types: BH - Borehole SL - Surface Location TP - Test Pit WL - Well

Completed By: Ken H. McFadden SSO (Print Name) (Title)

[illegible] (Signature)

Technical Review: (Print Name) (Title)

(Signature)

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 30 SSHASP No. C&C Date 9/13/94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 9-13-94
Calibration Complete Factory Calibration Model No. ~~PDM-Gas~~ PDM-3 SN 6133
Calibration Time ~~1551-9 May 94~~ Recalibration Time CERTIFIED ON 9-13-94 AT 0800
Comments

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
[illegible]	1340 TO 1425	AMBIENT AIR	EXCAVATION	0.20	[illegible]

Completed By Ken H McFarlane SSO
(Print Name) (Title)

(Signature)

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1230 TA 36 SSHASP No. 026 Date 9/14/94
Project Title Fall Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1230 Date 9-14-94
Calibration Complete Factory Calibration Model No. RAM-3 SN 6123
Calibration Time 9 May 94 Recalibration Time Checked on 9-14-94
Comments

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Site [illegible]	1000 to 1230	Area Air	Excavation	.04	Very little visible [illegible]

Completed By [illegible] (Print Name) [illegible] (Title) [illegible] (Signature)

EMIS Team Form W 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1120 TA 30 SSHASP No. 020 Date 9/27/94
Project Title [illegible]
Page 1 of ___

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1120 Date 9-27-94
Calibration Complete YES Model No. PDM-3 SN-0133
Calibration Time 9/mm/94 Recalibration Time ZEROED AT 0.013 ON 9-27-93
Comments Factory Calibrated

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drilling TEST HOLE #1 AT MW-30 TRENCHES	270 MIN CONTINUOUS	AREA	Drilling	0.15 TWA	Monitor started ~~[illegible]~~ TO DRILL KPM 9-27-94 [illegible]

Completed By KEN M. PETERSEN SIC
(Print Name) (Title)

(Signature)

EWHS Team Form 09 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 036 Date 9 28 94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 9-28-94
Calibration Complete YES Model No. PDM-3 SN [illegible]
Calibration Time 9 NOV 94 (FACTORY) Recalibration Time Zeroed on 9-28-94 at 0900
Comments Measurements made at source (open drill hole location) continuous monitoring. Others monitor at 30' distance from my work drilling.

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill site	1400 TO 1445	Area	Drilling	0.10	2.5 ACTIVE level

Completed By Ken H. McFadden SSO
(Print Name) (Title)

[illegible signature]
(Signature)

ER/HS Team Form 07 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 0006
Project Title Field Investigation
Page 1 of 1

Date 9 29 94

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 9-29-94

Calibration Complete yes Model No. PDM-3 SN 0133

Calibration Time 9 MAY 94 (FACTORY) Recalibration Time Zeroed on 9-29-94 at 0730

Comments Measurements taken at source (drill location). Continuous monitoring conducted 30' distance maintained between workers & rig during drilling

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	1000 TO 1541	Aerosol	Drilling	0.14	2.5 mg/m³ action level

Completed By Ken H. McFarland SSO
(Print Name) (Title)

(Signature)

EXAIS Team Form (4)

Draft

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 9 30 94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 9-30-94
Calibration Complete YES Model No. PDM-3 SN 6133
Calibration Time 9 MAY 94 (FACTORY) Recalibration Time Zeroed on 9-30-94 at 0910
Comments Measurements taken at surface (near drilling location) Continuous monitoring conducted 30' distance maintained between workers & air while drilling.

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill site	1041 TO 1247	AREA	Drilling	0.10	None

Completed By KEN H. MCFARREN SSO
(Print Name) (Title)

K. H. Kelley
(Signature)

ER/HS Team Form 09 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 10 3 94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 10-3-94
Calibration Complete Yes Model No. PDM-3 SN 6153
Calibration Time 9 AM 94 (Factory) Recalibration Time Zero'd on 10-3-94 at 0903
Comments Measurement taken at source (near drill hole). Continuous monitoring conducted 30' distance maintained between workers and drilling Drilling.

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	1014 TO 1450	Area	Drilling	0.10	None

Completed By Ken H. McFadden SSO
(Print Name) (Title)

(Signature)

ER/HS Team Form 09 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 10 6 94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 10-6-94
Calibration Complete YES Model No. PDM-3 SN 0133
Calibration Time 9 MAY 94 (FACTORY) Recalibration Time Zeroed on 10-7-94 at 0705
Comments Reading taken at drilling area (in Drill Hole). Continuous monitoring conducted 30' downwind between the drill rig and the nearest occupied building.

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	1033 TO 1445	AREA	Drilling	10-6-94 0.26 mg/m³	None

Completed By Ken H. McFarren TO
(Print Name) (Title)

(Signature)

ER/HS Team Form W 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 026 Date 10 11 94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 10-11-94
Calibration Complete Yes Model No. DRM-3 SN 6133
Calibration Time 9 AM 94 Recalibration Time Zeroed on 10-11-94 at 0900
Comments Earthquake tremor at 9:00 (near Bell hole). Continuous monitoring collected 30' distance maintained between the workers and drilling while drilling.

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	1000 TO 1333	AREA	Drilling	0.02	None

Completed By Ken H. McFadden (SSO)
(Print Name) (Title)

(Signature)

ERAS Team Form v9 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 036 Date 10 12 94
Project Title Earth Tomography
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 10-12-94
Calibration Complete WES Model No. PDM-3 SN 6133
Calibration Time 4 May 94 (Factory) Recalibration Time Based on 10 1 94 at 0100
Comments Reading taken at source (Low drill hole). Continuous monitoring conducted 30' downwind between workers & Big Dump Building.

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill pad	1011 to 1214	Aer	Drilling	.021	Wind

Completed By KEN H. MIFFOON SSO
(Print Name) (Title)

Ken H. Miffoon
(Signature)

ERAS Team Form 09 1/1/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1120 TA 26 SSHASP No. 026 Date 11 14 94
Project Title Field Decontamination
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1120 Date 11-14-94
Calibration Complete YES Model No. P2A-3 SN 0133
Calibration Time 4 May 94 (Factory) Recalibration Time Zeroed on 11-14-94 at 0900
Comments Measurement taken at surface (over soil hole). Contractors machinery operated 30' distance maintained between workers & rig during drilling

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	1025 TO 1453	Area	Drilling	0.00	General moist from cool Dew

Completed By [illegible] (Print Name) [illegible] (Title) [illegible] (Signature)

ER/HS Team Form 09 11/94

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 036 Date 11-15-94
Project Title Field Investigation
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 11-15-94
Calibration Complete Yes Model No. PDM-3 SN 0133
Calibration Time 0 Nov 94 Recalibration Time Recal on 11-15-94 at 0133
Comments Measurements taken at source (open drill hole). Continuous monitoring conducted 30' distance maintained between workers & rig while drilling.

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mw/m³)	COMMENTS
Drill site	0949 TO 1526	ASM	Drilling	0.00	None

Completed By Ken H. Hefner SSO
(Print Name) (Title)

(Signature)

ERMS Team Form 09

1/1/94

Draft

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 036 Date 11 17 94
Project Title Field Investigations
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 11-17-94
Calibration Complete YES Model No. PDM-3 SN 0133
Calibration Time 9 MAY 94 Recalibration Time Zeroed on 11-17-94 at 0745
Comments Background taken at Source (Cerro Grande Drill Hole). Continuous monitoring conducted 30' downwind between workers and any vehicle dustings.

FIELD MEASUREMENTS					
LOCATION ID OR DESCRIPTION	TIME (HHMM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Rig	0934 TO 1357	AMBIENT	Drilling	0.0	FROST ON WEAR [illegible]
					[illegible]

Completed By Ken H. McFarland ESO
(Print Name) (Title)

[illegible]
(Signature)

ER/IS Team Form 09 1/1/94

Draft

Figure 8-7.

REAL-TIME AEROSOL FIELD MONITORING DATA FORM

OU 1130 TA 36 SSHASP No. 036 Date 11 18 94
Project Title Field Investigations
Page 1 of 1

REAL-TIME AEROSOL FIELD MONITORING DATA

OU 1130 Date 11-18-94
Calibration Complete 0123 Model No. RM-3 SN 0133
Calibration Time 9 May 94 Recalibration Time Tested on 11-18-94 at 0119
Comments Measurements taken at source (near drill hole), continuous monitoring conducted, 30' distance maintained between unit and drill while drilling

FIELD MEASUREMENTS

LOCATION ID OR DESCRIPTION	TIME (HH:MM)	SAMPLE TYPE	ACTIVITY TYPE	CONCENTRATION (mg/m³)	COMMENTS
Drill Site	1013 TO 1015	AERO	DRILLING	0.02	NONE

Completed By Ken H. McFarland SSO
(Print Name) (Title)

(Signature)

ERHS Team Form 49

APPENDIX 5

ATTACHMENT 4

Excavation Permit

EXCAVATION/SOIL DISTURBANCE PERMIT

Work Order or Contract No. 041130

Requestor: LYNN KIDMAN Start Date: 7/27/94

Location of excavation TA-36-48 N.W. SIDE SOIL SAMPLES

1. Johnson Controls Utilities Support Branch
(Ph. No. 665-1449)
Authorization No. 94E-184-36
Issued by GENE V. Date 3/21/94
Staking Required: Yes X No ___ AM
Staking Performed: Date/Time: 9/14/94 1:15 PM

2. Johnson Controls Roads and Grounds Section
(Ph. No. 667-6111)
Authorization No. 3517
Issued by EARL H. Date 4/25/94
Staking Required: Yes ___ No X AM
Staking Performed: Date/Time: ___ PM

3. U. S. WEST Communications, LANL C-4
(Ph. No. 667-6812)
Authorization No. 94E-184-36
Issued by PAT S. Date 4/29/94
Staking Required: Yes X No ___ AM
Staking Performed: Date/Time: 9/14/94 1:15 PM

4. Los Alamos National Laboratory, CST-7
(Ph. No. 667-6904)
Authorization No. CST7-0871
Issued by Dallas Date 4/25/94
Staking Required: Yes ___ No Y AM
Staking Performed: Date/Time: ___ PM

5. Los Alamos National Laboratory, Engineering Division (Ph. No. **)
Authorization No. 94JR0155
Issued by MARSHA Date 4/21/94
Staking Required: Yes ___ No ___ AM
Staking Performed: Date/Time: 9/14/94 1:15 PM

Utilities Located
(For UMES use only)

___ Water
___ Gas
___ Sewer
___ Steam
___ Condensate
___ Primary Elec.
___ Second Elec.
___ Cooling Water
___ Storm Drains
___ RLW
___ Telephone
___ Communications

Remarks:

** Johnson Controls Utilities support Branch shall contact one of the following ENG-5 Plant Engineering Section Offices

Pajarito Road Section Office	667-6158
TA-3 Section Office	667-2115
Jemez Road Section Office	667-6421

JCI EMTD (Engineering) review with respect to 29 CFR 1926, excavation involving JCI crews only, and an ES&H review with respect to LANL AR 1-12 shall be attached to this permit prior to issuing.

The requester has complied with the Excavation Permit procedure:

Issued by [signature] Project Supervisor/Requester

Date: 9/14/94 Telephone: 667-1769 Pager: ___

Form 70-10-001.1 Rev. 01/14/94

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Excavation Review Record

Environment, Safety, and Health (ES&H)

Priority: **Emergency**

INSTRUCTIONS

The listed actions may involve concerns relating to your field(s) of expertise. Please review and return your comments on this sheet as soon as possible. The document will be returned to Utilities Support Branch/Johnson Control, in care of LeRoy Vigil, 665-1449. Thank you for your cooperation.

Date: 03/23/94

Requested By:	Organization	Mail Stop:	Phone:	Fax:
LEROY VIGIL			51449	

Project Title
"ADDENDUM" SOIL SAMPLES

Project Description (if applicable)

TA: 36

Building:

Primary Facility Review Team Contact:

☒ JULIE ESPINOZA, 665-5363

Facility Review Team Technical Contact(s):

Excavation Permit Number: 94E-184-36

Applicable Related Information

Project Identification Number:	
ESH Identification Number:	
Small Job Ticket Number:	
Service Request Number:	
Work Order Number:	
Communication Work Request Number:	
Contract Number:	
Operable Unit Number:	1130

Review for: ☒ Excavation Permit ☐ SWMU

Distribution: Date: 09/21/94

☒ R. GONZALES, EM/ER, M768
☒ G. NEELY, ESH-12, K483
☒ K. MANZ, ESH-8, M887
☒ M. TILLERY, ESH-5 IH, K494

Excavation Permit Status: Date: By:

Review Comments:

☐ Approved ☐ Approved with Comments ☐ Disapproved ☐ Cancelled

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Environment, Safety, and Health (ES&H)

Excavation Review Record
Comments

Excavation Permit Number: 94E-184-36

Reviewed by: R. Gonzales, EM/ER, M768	Date: 09/22/94
Comments: PER NANCY RICHARDSON, APPROVED WITH COMMENTS. THIS PROJECT IS BEING CONDUCTED IN SUPPORT OF ER PLANNED ACTIVITIES FOR OU# 1130. ESTABLISHED ER PROTOCOLS, REGARDING HEALTH, SAFETY AND WASTE MANAGEMENT ISSUES, WILL BE ADHERED TO THROUGHOUT THE PROJECT. ER CONCURS WITH THE PROJECT AS OUTLINED. THIS PROJECT SHOULD BE ALLOWED TO PROCEED WITHOUT FURTHER DELAY.	
Reviewed by: K. Manz, ESH-8, M887	Date: 09/21/94
Comments: OKAY FOR ARCHAEOLOGY.	
Reviewed by: G. Neely, ESH-12, K483	Date: 09/21/94
Comments: CONTACT LARRY PACHECO, ESH-1, 667-7137 IN ADVANCE OF JOB START FOR SPECIFIC REQUIREMENTS, RADIATION WORK PERMIT.	
Reviewed by: M. Tillery, ESH-5 IH, K494	Date: 09/22/94
Comments: SEE ATTACHED COMMENTS FROM CHUCK RICHARDS.	

ESH-5 FACILITY REVIEW RECORD Date: 9-22-94

EXCAVATION PERMIT 94E-184-36
Workcard # 94-15265

HW# 94-591E
TITLE: Addendum Soil Samples.

TA 35 BLDG ID #OU 1130

This project has been reviewed by HS-5 to identify potential Health & Safety Hazards to the employees performing the work and other personnel in the designated area. The health hazards noted have been determined by reviewing the excavation information, inspecting the worksite, and evaluating the SOLID WASTE MANAGEMENT UNIT REPORT, LAUR 93-3400. The recommendations and requirements listed are to provide guidence for the health and safety of the workforce and to assure compliance with LANL, DOE and OSHA Regulations.

LANL Contact: Willet Wehner, ESA-4 Tel: 5-7751
Contractor: ICF-Kaiser Contact: Peter Gram Tel: 661-5207/599-2124

SWMU # 36-001 & 36-004(d)

Hazardous chemicals, agents, materials: Ba, Cr, Zn, Cu, Pb, Be & Hg.

HAZARDOUS OPERATIONS: Trenching & drilling

Administrative Requirements: (X= is required)
Security Clearance__x__ Site Orientation __x__
1910.120 TRAINING___x___ other_Site Specific Health & Safety Plan X

Engineering Controls: *Dust control by wetting*

MONITORING REQUIREMENTS: VOC's. Mercury monitoring recommended for sample handling operations. [1]

Personnel Protective Equipment: *Level D as noted in Attachment #1, Change Order No. 026.04*

This project is Approved. (Note [1])

Signed Charles P. Richards ESH-5
Charles P. Richards
TEL: 667-3133
PAge: 104-8927

Sep 22 11 20 '94

ESH AND EM/ER FACILITY REVIEW RECORD

SUBJECT:

Request From Gene Velasquez Date 3 / 23 / 94

Title Soil Samples

TA 36 BLDG NO: _____

ID NUMBER 1130 LJ SR SJT WO CWR CONT. (OU)

Concerning ESH Review For:

[✓] Excavation Permit# 94E-184-36 [ ] SWMU Review [ ] Disposal of Property

The listed action may involve concerns relating to your field(s) of expertise. Please review and return your comments on this sheet as soon as possible. The document will be returned to Engineering/Johnson Control. Thank you for your cooperation.

Questionnaire # 93-0073

From: ESH Facilities Review (MS K479)

[✓] Julie Espinoza	665-5363	[ ] Adan Ortega	665-5762
[ ] Fred Thomen	699-1687	[ ] Bob Plala	699-1171
[ ] Rick Eddleman	699-1661	[ ] James Arellano	699-1660
[ ] Fidel Maestas	699-1658	[ ] Robert Garza	699-1659
[ ] Nina Gallegos	699-1769		

Distribution:		w/Attachment	Date ____/____94
[X]	ESH-12	K483	G.Neely
[ ]	ESH-5 OS	K403	_____
[X]	ESH-5 IH	K494	M.Tillery
[ ]	CST-7	E518	L.Emality/D.Moss
[X]	ESH-8	M887	K.Mann
[ ]	ESH-8	E518	S.Rae
[ ]	ESH-8	M887	M.Salisbury
[ ]	ESH-8	E518	D.Stavert
[ ]	ESH-8	E518	J.Carmicheal
[X]	EM/ER	M768	R.Gonzales
[ ]	OTHER		_____

ESH-3 Date 4 / 22 / 94 By: Julie

[ ] APPROVED [✓] APPROVED WITH COMMENTS [ ] DISAPPROVED

ESH-1, Terry Vergamini must review/Approve Sampling plan. ESH-1 must be contacted in advance of job start for radiation monitoring services. (Terry Vergamini MS K487). Project is being conducted in support of EM planned activities for OU# 1130. Established ER protocols, regarding health, safety and waste management issues. Access must be on existing roads and utilities. See Attached Comments from ESH-5, Industrial Hygiene.

ESH-5 FACILITY REVIEW RECORD Date: 3-29-94
EXCAVATION PERMIT 94E-184-36
Workcard #94-11354
HW# 94-187

TA 35 BLDG ID #OU 1130
TITLE: SOIL SAMPLES
LANL ESA-4: Gene Gould (G787)' 667-0402
CONTRACTOR: ICF Kaiser REP: Lynn Kidman, 661-5527

This project has been reviewed by HS-6 to identify potential Health & Safety Hazards to the employees performing the work and other personnel in the designated area. The health hazards noted have been determined by reviewing the excavation information, inspecting the worksite, and evaluating the SOLID WASTE MANAGEMENT UNIT REPORT, LAUR 90-3400. The recommendations and requirements listed are to provide guidance for the health and safety of the workforce and to assure compliance with LANL, DOE and OSHA Regulations.

SWMU # 36-002 . general chemical sump, SVOC's, VOC's, Petroleum and non-petroleum oils. This system was apparently constructed to take wastes not acceptable in sanitary waste system.
36-003 (a) (b), U, SVOC's, VOC's, Photography Chemicals, sanitary waste.

Administrative Requirements: (X= is required)
Security Clearance X Site Orientation X 1910.120 TRAINING X

Engineering Controls:

MONITORING: VOC's _____

Personnel Protective Equipment: Minimum Level D with provisions to upgrade based on direct monitoring during activities. These procedures are covered in the HASP for OU 1130, but are also req'd in the Site Specific H&S Plan.

This project APPROVAL is CONTINGENT UPON FINAL APPROVAL OF THE SITE SPECIFIC HEALTH AND SAFETY PLAN BY ESH-5.

Signed Charles P. Richards ESH-5 (667-3133/104-6627)
Charles P. Richards

AMENDMENT TO EXCAVATION PERMIT NO. 94E-184-36

EXCAVATION/SOIL DISTURBANCE INFORMATION

TECH AREA AND STRUCTURE NUMBER: TA-36

PRS 36-001 MDA AA and PRS 36-004(d) burn pits associated with Lower Slobbovia

LOCATION OF THE PROJECT:

PRS 36-001 MDA AA-located west of Building 36-18

PRS 36-004(d) Burn Pits-located between Buildings 36-12 and 36-13

PRIORITY: 1

REASON FOR URGENT, XURGENT OR EMERGENCY:

Drilling to begin 9/21/94

USAGE OF TANK/VALVE/PIPE/VAULT:

N/A

SPECIAL SITE ACCESS REQUIREMENTS:

All excavation will be conducted in potential release sites (PRS).

PROJECT WORK REQUIREMENTS:

PRS 36-001 MDA AA (two to four trenches)-four holes (random locations) will be drilled to a depth of 12 feet or deeper per trench.

PRS 36-004(d) Burn Pits (possibly two pits)-three holes (random locations) will be drilled to a depth of 12 feet or deeper per hole.

P.I. or WORK ORDER No. (Required for Processing):

P.I.-NONE

PROJECT CONTACTS:

Peter Gram, ICF Kaiser (M703), 661-5207 (office), 699-2124 (cellular)
Nancy Ness, ICF Kaiser (M703), 661,5219 (office), 699-1697 (cellular)
Mike Henke, ESA-4, 665-1115 (office), 699-1969 (cellular)

ESH AND EM/ER FACILITY REVIEW RECORD

SUBJECT:

Request From Gene Velasquez Date 3 / 23 94

Title Soil Samples

TA 36 BLDG NO: _____

ID NUMBER 1130 LJ SR SJT WO CWR CONT. (OU)

Concerning ESH Review For:

[✓] Excavation Permit# 94E-184-36 [ ] SWMU Review [ ] Disposal of Property

The listed action may involve concerns relating to your field(s) of expertise. Please review and return your comments on this sheet as soon as possible. The document will be returned to Engineering/Johnson Control. Thank you for your cooperation.

Questionnaire # 93-0073

From: ESH Facilities Review (MS K479)

[✓] Julie Espinoza 665-5363
[ ] Fred Thomen 699-1687
[ ] Rick Eddleman 699-1661
[ ] Fidel Maestas 699-1650
[ ] Nina Gallegos 699-1769
[ ] Adan Ortega 665-5762
[ ] Bob Plale 699-1171
[ ] James Arellano 699-1660
[ ] Robert Garza 699-1659

Distribution: w/Attachment Date ____/____94

[X]	ESH-12	K403	G.Neely
[ ]	ESH-5 OS	K403	_____
[X]	ESH-5 IH	K494	M.Tillery
[ ]	CST-7	E518	L.Emelity/D.Moss
[X]	ESH-8	M887	K.Mans
[ ]	ESH-8	E518	S.Rae
[ ]	ESH-8	M887	M.Salisbury
[ ]	ESH-8	E518	D.Stavert
[ ]	ESH-8	E518	J.Carmicheal
[X]	EM/ER	M768	R.Gonzales
[ ]	OTHER		_____

ESH-3 Date 4 / 22 / 94 By: Julie

[ ] APPROVED [✓] APPROVED WITH COMMENTS [ ] DISAPPROVED

ESH-1, Terry Vergamini must review/Approve sampling plan. ESH-1 must be contacted in advance of job start for radiation monitoring services, (Terry Vergamini MS K487). Project is being conducted in support of EE planned activities for OU# 1130. Established EE protocols, regarding health, safety and waste management issues. Access must be by existing roads and utilities. See Attached Comments from ESH-5, Industrial Hygiene.

ESH-5 FACILITY REVIEW RECORD Date: 3-29-94
EXCAVATION PERMIT 94E-184-36
Workcard #94-11354
HW# 94-187

TA 35 BLDG ID #OU 1130
TITLE: SOIL SAMPLES
LANL ESA-4: Gene Gould (G787)' 667-0402
CONTRACTOR: ICF Kaiser REP: Lynn Kidman, 661-5527

This project has been reviewed by HS-5 to identify potential Health & Safety Hazards to the employees performing the work and other personnel in the designated area. The health hazards noted have been determined by reviewing the excavation information, inspecting the worksite, and evaluating the SOLID WASTE MANAGEMENT UNIT REPORT, LAUR 90-3400. The recommendations and requirements listed are to provide guidance for the health and safety of the workforce and to assure compliance with LANL, DOE and OSHA Regulations.

SWMU # 36-002 , general chemical sump, SVOC's, VOC's, Petroleum and non-petroleum oils. This system was apparently constructed to take wastes not acceptable in sanitary waste system.
36-003 (a) (b), U, SVOC's, VOC's, Photography Chemicals, sanitary waste.

Administrative Requirements: (X= is required)
Security Clearance X Site Orientation X 1910.120 TRAINING X

Engineering Controls:

MONITORING: VOC's _____

Personnel Protective Equipment: Minimum Level D with provisions to upgrade based on direct monitoring during activities. These procedures are covered in the HASP for OU 1130, but are also req'd in the Site Specific H &S Plan.

This project APPROVAL is CONTINGENT UPON FINAL APPROVAL OF THE SITE SPECIFIC HEALTH AND SAFETY PLAN BY ESH-5.

Signed Charles P. Richards ESH-5 (667-3133/104-8827)
Charles P. Richards

EXCAVATION/SOIL DISTURBANCE INFORMATION

TECH AREA AND STRUCTURE NUMBER:

Tech Area: TA-36
PRS 36-002 Sump; PRS 36-003(a) Septic System, and PRS 36-003(b) Septic System

LOCATION OF THE PROJECT:

PRS 36-002 Sump-located approximately 655 feet west of the security checkpoint at the entrance to TA-36.

PRS 36-003(a) Septic System-located 115 feet due east from the northeast corner of TA-36-1.

PRS 36-003(b) Septic System-located approximately 100 feet from the southwest corner of TA-36-55.

PRIORITY: 3

REASON FOR URGENT, XURGENT OR EMERGENCY:

Excavation to begin May 1, 1994

USAGE OF TANK/VALVE/PIPE/VAULT:

N/A

SPECIAL SITE ACCESS REQUIREMENTS:

All excavation will be conducted in potential release sites (PRS).

PROJECT WORK REQUIREMENTS:

PRS 36-002 Sump-the cobble in the sump will be excavated with a backhoe. After excavation, three holes will be drilled within the sump and three holes will be drilled outside the perimeter.

PRS 36-003(a) Septic System-six holes will be hand augered at random locations within the leach field.

PRS 36-003(b) Septic System-two holes will be hand augered within 3 feet of the end of the discharge pipe to a depth of less than 10 feet.

P.I. or WORK ORDER No. (Required for Processing):

P.I.-NONE

PROJECT CONTACTS:

Lynn Kidman, ICF Kaiser (M703), 661-5227
Gene Gould, ESA-4 (G787), 667-0402

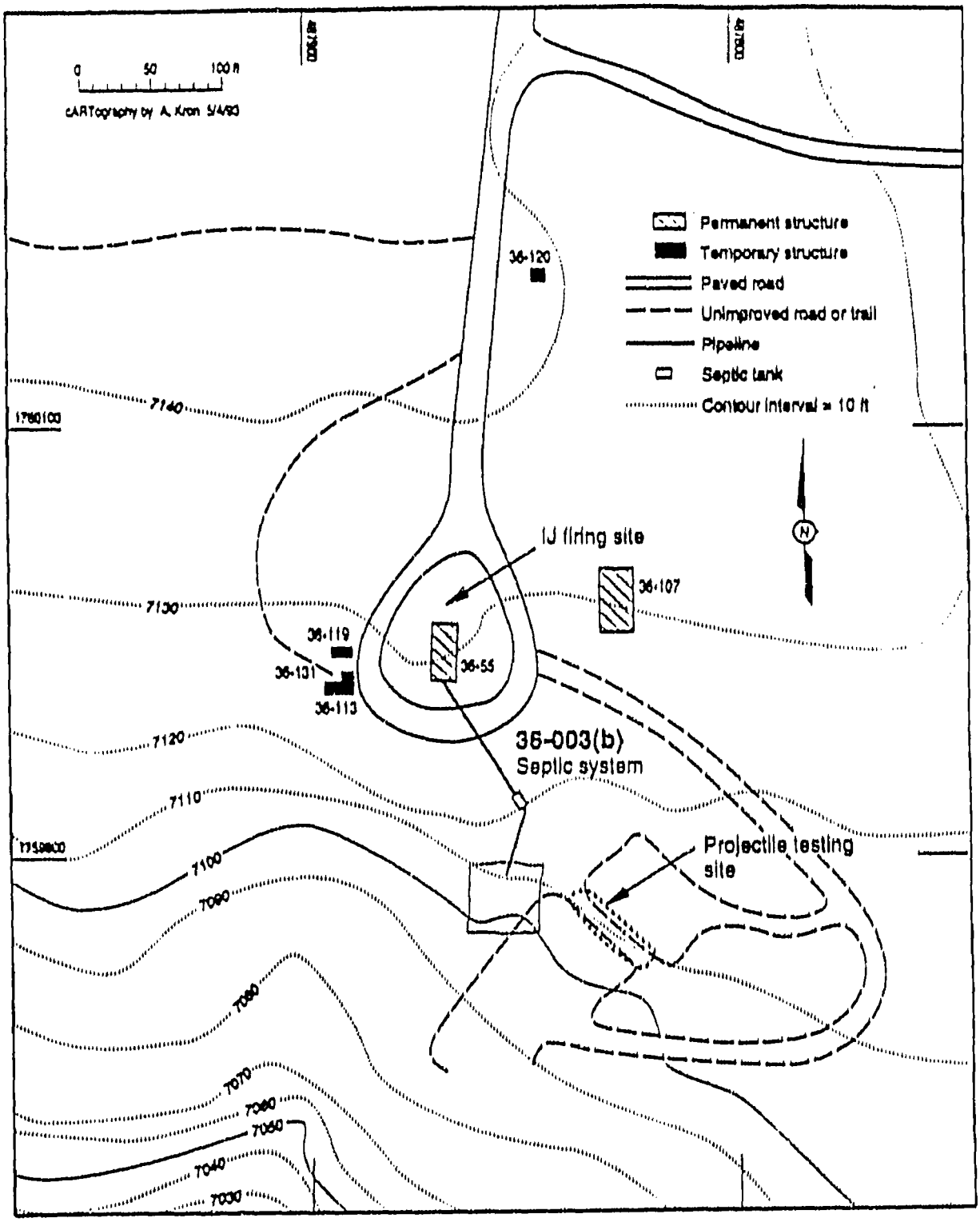


Figure 5-5. Location of septic system PRS 36-003(b).

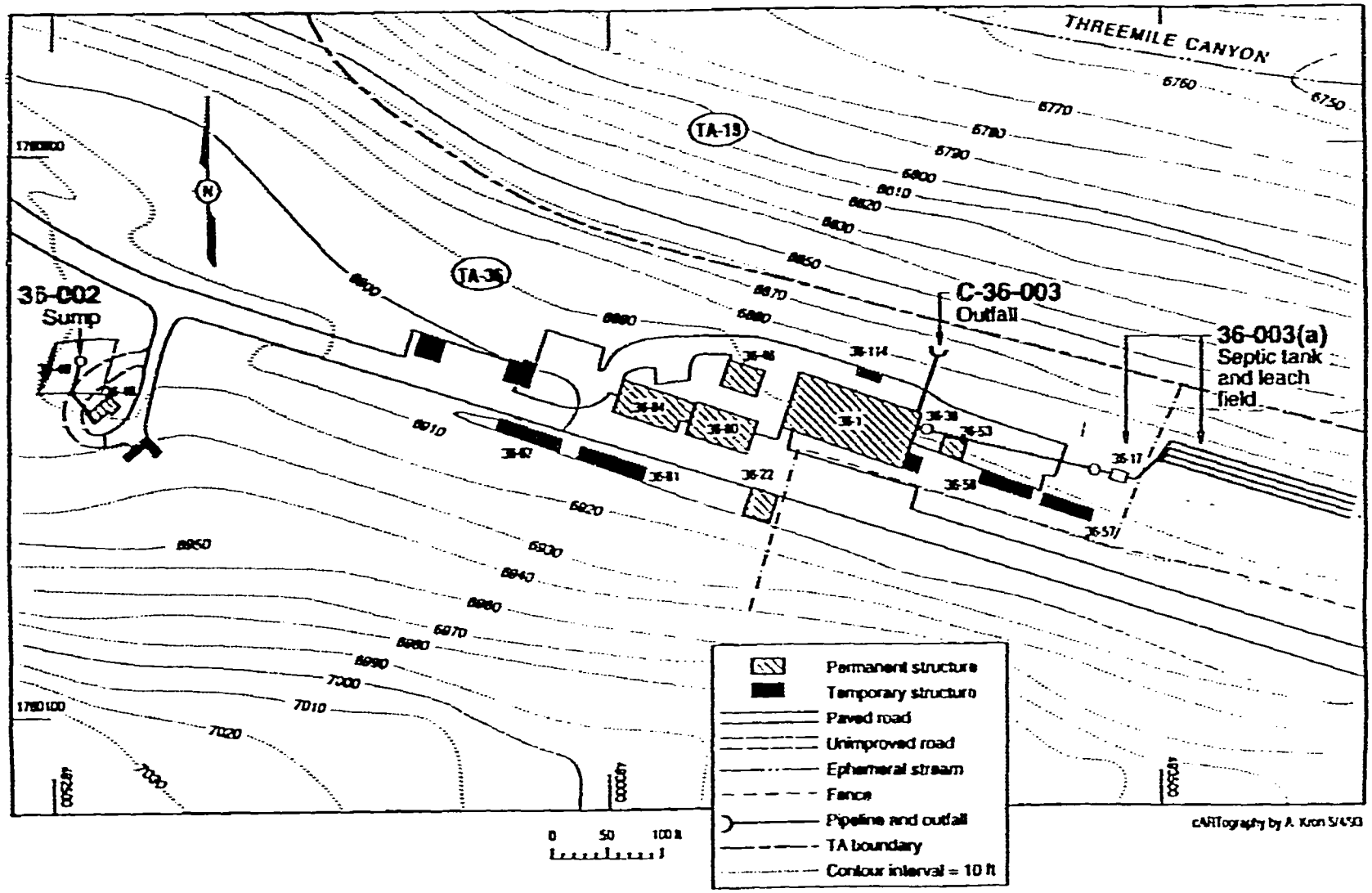


Figure 5-3. Location of PRSs at TA-36 Main Site.

APPENDIX 5

ATTACHMENT 5

Health and Safety Checklists/Daily Safety Inspection Checklists/Drill Rig Inspection Forms/Equipment Inspection Checklists

ATTACHMENT 9-2

HEALTH & SAFETY CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 7-14-94

Project Title Field Investigation

Activities Being Conducted, Equipment Being Used, General Condition and Effectiveness of Decontamination, PPE Being Worn:

Surface Soil Sampling at PMTD Outfall. Decon is appropriate for the type of work being performed. Rubber coveralls, gloves, work boots, safety glasses in accordance with SSHASP for this task.

A key indicator of a well-maintained and safely operated site is the appearance of the work area on a daily basis. Work area appearance and safety is the responsibility of all personnel. Work areas should be straightened on a daily basis before quitting work. Time should be set aside at the end of each work period to remove trash, tools, spare parts, extra materials, rags, plastic, and so forth. Work should be stopped and a general cleanup should be conducted whenever trash, dirt, or other materials are being spread beyond the immediate work area. The Site Safety Officer should complete the check list during a daily health and safety inspection tour of the work area.

This check list is designed so that any "no" responses are indicators of a safety or health deficiency. If any question does not apply, "not applicable" should be written on the line. Not all questions will be applicable to all sites. All "no" responses should be followed up with a written explanation, the corrective action taken, and the date.

Completed by KEN H. McFROWN SSO
(print name) (title)

Ken H. McFrown
(signature)

A. TRAINING

1. Is a Daily Tailgate Safety Meeting held and documented? YES

Comments: _____

2. Are all visitors to the site properly signed in and given site-specific orientation and safety training? YES

Comments: _____

3. Are all persons entering the site informed on the contents of the Health and Safety Plan and required to sign a statement indicating such? YES

Comments: Those people entering the exclusion zone are informed.

4. Have all persons entering the site received the appropriate hazardous waste training and is this training documented? YES

Comments: Those people entering the exclusion zone

5. Have all persons entering the site received a respirator fit test and training? N/A

Comments: Resp. are not required

6. Have all persons entering the site received training (hazard communication) on all hazards that may be encountered? YES

Comments: _____

7. Have all persons entering the site received the required physical examination? YES

Comments: For those required

8. Is the H&S Plan available for on-site inspection and review by employees, etc.? YES

Comments: _____

9. Are emergency reporting an evacuation procedures known by each person on site and documented on the Emergency Contact sheet? YES

Comments: _____

10. Are all persons who enter confined spaces properly trained? N/A

Comments: No confined spaces

11. Is the site-specific organizational structure chart posted at the job site? No

Comments: Its contained in the HASP which is available but not posted

12. Are personnel who work on or near drill rigs instructed in the location and use of the rig's "kill" switch? No

Comments: No drill rig on site

13. Do heavy equipment and crane operators possess appropriate and up-to-date required licenses/certifications/permits? N/A

Comments:

14. Are copies of all training records kept on site? Yes

Comments:

B. INSPECTIONS

1. Are regulated areas established and defined for each work area in which contaminated materials may be present? Yes

Comments:

2. Is hearing protection worn in areas where sound levels are suspected or shown to exceed 85 dBA? N/A

Comments:

3. Are all persons on site using the minimum protective equipment (hard hat, safety glasses with side shields or goggles, steel-toed safety shoes) and appropriate clothing for the anticipated hazards? Yes

Comments: Those people in the sinkhole cave

4. Is there a 20AB multipurpose dry-chemical fire extinguisher on each piece of heavy equipment? N/A

Comments:

5. Are all fire extinguishers inspected monthly? YES

Comments: _____

6. Is the "no smoking" policy enforced" YES

Comments: _____

7. Are approved safety containers used to store fuels? N/A

Comments: No stored fuel on-site.

8. Do all contaminated scrap, waste, debris, and clothing containers have labels? YES

Comments: _____

9. Is the food and beverage consumption prohibition enforced in the regulated area? YES

Comments: _____

10. Is there a method available for employees to wash their faces and hands with soap and water before eating and drinking? YES

Comments: Before eating, smoking is not allowed on-site

11. Area contaminated materials stored in tightly closed containers in well-ventilated areas? YES

Comments: _____

12. Does all heavy equipment have a functioning back-up alarm? N/A

Comments: No heavy equipment

13. Is the "buddy system" in use throughout the site? YES

Comments: _____

14. Is access to the regulated areas controlled so that only authorized personnel are permitted to enter? YES

Comments: _____

15. Is a daily log maintained of persons entering the regulated area? YES

Comments: _____

16. Are all persons required to wear respirators clean shaven before each day's shift? N/A

Comments: No respirators used

17. Are adequate potable liquids provided at the job site? YES

Comments: _____

18. Is periodic air monitoring conducted? YES

Comments: _____

19. Are air-monitoring instruments calibrated daily before use? YES

Comments: _____

20. Are emergency services and equipment available at the site and is equipment in appropriate condition? YES

Comments: FIRST AID KIT, EYE WASH STATION & FIRE EXTINGUISHER IS available

21. Are provisions made for adequate flushing of the skin or eyes in the event of contaminated material exposure? YES

Comments: _____

22. Are dry-chemical ABC fire extinguishers provided at each site? YES

Comments: _____

23. Do all work activities begin after sunrise and end before sunset? YES

Comments: _____

24. Are potable water containers clearly marked as to their contents and not used for any other purpose? YES

Comments: _____

25. Are outlets for nonpotable water clearly marked? YES

Comments: _____

26. If permanent toilet facilities are unavailable, are chemical toilets provided? YES

Comments: _____

27. Do employees shower at the end of their work shift and when leaving the hazardous waste site? N/A

Comments: Showers are not required

28. Are appropriate warning signs placed around open excavations? N/A

Comments: No excavations

29. Are excavations sloped (1 ft to 1 ft) or shored if more than 4 ft deep. N/A

Comments: No excavations

30. Is a standby person available when entry into an excavation is required? N/A

Comments: No excavations

31. Area appropriate access methods, such as ladders, used to enter the excavation? N/A

Comments: No excavations

32. Are equipment and materials stored and handled at all times so as not to endanger personnel? YES

Comments: _____

33. Are crane operators controlling the lift area maintaining a safe perimeter to prevent any site personnel from coming under or within an unsafe distance of a live load? N/A

Comments: No cranes used

34. If personnel are required to work in or near high-traffic areas, are they wearing fluorescent orange and/or reflective clothing or vests? N/A

Comments: No such work being performed

35. Are vehicles not actively used in operations parked so that they do not interfere with work or traffic? Yes

Comments: _____

36. Are cutting and welding operations not allowed within 300 ft of a potential liquid fuel source or a building? N/A

Comments: No such operations being conducted

37. Are supplied air respirators required for employees performing hot work on painted, galvanized, coated, or previously contaminated metal? N/A

Comments: No such operations being performed

38. Are two 10-lb or more ABC multipurpose fire extinguishers available in the immediate vicinity of hot work? N/A

Comments: No hot work being performed

39. Are seat belts used by persons riding in/on vehicles and equipment? YES

Comments: _____

40. Are personnel riding in/on vehicles or equipment in a manner designated for the conveyance of people? YES

Comments: _____

41. Is noncrane heavy equipment used to "pull" (lift) material properly equipped and designed to do so? N/A

Comments: No such operations being performed

42. Is a drilling-equipment safety-inspection report completed by the drilling operator before beginning any site work? N/A

Comments: No drilling on site

43. Is all equipment used to handle or transfer flammable liquids bonded and grounded, spark proof, and explosion proof, as appropriate? N/A

Comments: No such equipment on site

44. Are all fuels stored in approved safety containers? N/A

Comments: No stored fuels on-site

45. Are fuel storage locations marked with the warning signs, "Flammable Liquids" and "No Smoking"? N/A

Comments: No locations on-site

46. Are spark-proof hand tools used when working with flammable/combustible materials or when breaking lines? N/A

Comments: No such materials used

47. Are safety glasses and gloves worn when handling or hooking up compressed-gas cylinders? N/A

Comments: No cylinders used

48. Are compressor hose segments secured using chains and/or locking pins? N/A

Comments: No compressors on-site

49. Are all electrical connections made through a GFCI? Yes

Comments:

50. Are extension cords routed and stored to prevent damage and tripping hazards? Yes

Comments:

51. Does a second person secure or steady a ladder while an employee is ascending and descending? N/A

Comments: No ladders used

52. Is stockpiled soil piled at an angle less than 45 degrees and at least 2 ft from the edge of an excavation? N/A

Comments: No excavations being performed

53. Is the regulated area isolated from the rest of the work site in a manner that minimizes the number of employees exposed to site containers? Yes

Comments:

54. If heat stress is a concern, has a work/rest regimen been established and implemented, including physiological monitoring? YES

Comments: _____

55. If contaminants at the site are unknown, is Level B protection worn? NA

Comments: _____

56. Are suitable quantities of absorbent, appropriate drums and labels complying with DOT, OSHA, and EPA regulations on hand where leaks, spills, or ruptures may occur? NO

Comments: _____

57. Have procedures for all phases of decontamination been developed and implemented? YES

Comments: _____

58. Is the direction of emergency egress away from high-hazard areas? YES

Comments: _____

59. Are means of emergency egress maintained free of obstructions and available for full and instant use? YES

Comments: _____

60. Are work areas kept clean and in good repair, with no unnecessary holes or openings? YES

Comments: _____

61. Are wastes (noncontaminated) kept in a closed, nonleaking sanitary container and removed as often as necessary and appropriate in a manner that would avoid creating a health or safety problem? YES

Comments: _____

62. Are appropriate labels provided on all chemical containers? YES

Comments: _____

63. Are storage areas free of accumulation of materials that could constitute a hazard from tripping, fire, explosion, or pest harborage? Yes

Comments: _____

64. Is vegetation within the site controlled? No

Comments: _____

ATTACHMENT 9-2

HEALTH & SAFETY CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible] Date [illegible]

Project Title [illegible]

Activities Being Conducted, Equipment Being Used, General Condition and Effectiveness of Decontamination, PPE Being Worn:

[illegible]

A key indicator of a well-maintained and safely operated site is the appearance of the work area on a daily basis. Work area appearance and safety is the responsibility of all personnel. Work areas should be straightened on a daily basis before quitting work. Time should be set aside at the end of each work period to remove trash, tools, spare parts, extra materials, rags, plastic, and so forth. Work should be stopped and a general cleanup should be conducted whenever trash, dirt, or other materials are being spread beyond the immediate work area. The Site Safety Officer should complete the check list during a daily health and safety inspection tour of the work area.

This check list is designed so that any "no" responses are indicators of a safety or health deficiency. If any question does not apply, "not applicable" should be written on the line. Not all questions will be applicable to all sites. All "no" responses should be followed up with a written explanation, the corrective action taken, and the date.

Completed by [illegible] [illegible]
(print name) (title)

[illegible]
(signature)

A. TRAINING

1. Is a Daily Tailgate Safety Meeting held and documented? Yes

Comments: _____

2. Are all visitors to the site property signed in and given site-specific orientation and safety training? Yes

Comments: _____

3. Are all persons entering the site informed on the contents of the Health and Safety Plan and required to sign a statement indicating such? Yes

Comments: _____

4. Have all persons entering the site received the appropriate hazardous waste training and is this training documented? Yes

Comments: _____

5. Have all persons entering the site received a respirator fit test and training? No

Comments: Not required

6. Have all persons entering the site received training (hazard communication) on all hazards that may be encountered? Yes

Comments: _____

7. Have all persons entering the site received the required physical examination? Yes

Comments: _____

8. Is the H&S Plan available for on-site inspection and review by employees, etc.? Yes

Comments: _____

9. Are emergency reporting an evacuation procedures known by each person on site and documented on the Emergency Contact sheet? Yes

Comments: _____

10. Are all persons who enter confined spaces properly trained? N/A

Comments: not required in confined spaces entered

11. Is the site-specific organizational structure chart posted at the job site? YES

Comments: In SSHASP

12. Are personnel who work on or near drill rigs instructed in the location and use of the rig's "kill" switch? N/A

Comments: No drill rig used

13. Do heavy equipment and crane operators possess appropriate and up-to-date required licenses/certifications/permits? N/A

Comments: No such equipment used

14. Are copies of all training records kept on site? YES

Comments:

B. INSPECTIONS

1. Are regulated areas established and defined for each work area in which contaminated materials may be present? YES

Comments:

2. Is hearing protection worn in areas where sound levels are suspected or shown to exceed 85 dBA? N/A

Comments: No area exhibiting such levels exist

3. Are all persons on site using the minimum protective equipment (hard hat, safety glasses with side shields or goggles, steel-toed safety shoes) and appropriate clothing for the anticipated hazards? YES

Comments:

4. Is there a 20AB multipurpose dry-chemical fire extinguisher on each piece of heavy equipment? YES

Comments:

5. Are all fire extinguishers inspected monthly? YES

Comments: _____

6. Is the "no smoking" policy enforced" YES

Comments: _____

7. Are approved safety containers used to store fuels? N/A

Comments: No such containers used

8. Do all contaminated scrap, waste, debris, and clothing containers have labels? YES

Comments: _____

9. Is the food and beverage consumption prohibition enforced in the regulated area? YES

Comments: _____

10. Is there a method available for employees to wash their faces and hands with soap and water before eating and drinking? YES

Comments: _____

11. Area contaminated materials stored in tightly closed containers in well-ventilated areas? YES

Comments: _____

12. Does all heavy equipment have a functioning back-up alarm? N/A

Comments: No such equipment used

13. Is the "buddy system" in use throughout the site? YES

Comments: _____

14. Is access to the regulated areas controlled so that only authorized personnel are permitted to enter? YES

Comments: _____

15. Is a daily log maintained of persons entering the regulated area? YES

Comments: _____

16. Are all persons required to wear respirators clean shaven before each day's shift? N/A

Comments: No respirators used

17. Are adequate potable liquids provided at the job site? YES

Comments: _____

18. Is periodic air monitoring conducted? YES

Comments: _____

19. Are air-monitoring instruments calibrated daily before use? YES

Comments: _____

20. Are emergency services and equipment available at the site and is equipment in appropriate condition? YES

Comments: _____

21. Are provisions made for adequate flushing of the skin or eyes in the event of contaminated material exposure? YES

Comments: _____

22. Are dry-chemical ABC fire extinguishers provided at each site? YES

Comments: _____

23. Do all work activities begin after sunrise and end before sunset? YES

Comments: _____

24. Are potable water containers clearly marked as to their contents and not used for any other purpose? YES

Comments: _____

25. Are outlets for nonpotable water clearly marked? YES

Comments: _____

26. If permanent toilet facilities are unavailable, are chemical toilets provided? YES

Comments: _____

27. Do employees shower at the end of their work shift and when leaving the hazardous waste site? N/A

Comments: Not Required

28. Are appropriate warning signs placed around open excavations? N/A

Comments: No open excavations

29. Are excavations sloped (1 ft to 1 ft) or shored if more than 4 ft deep. N/A

Comments: No excavation being performed

30. Is a standby person available when entry into an excavation is required? N/A

Comments: No excavations being performed

31. Area appropriate access methods, such as ladders, used to enter the excavation? N/A

Comments: No excavations being performed

32. Are equipment and materials stored and handled at all times so as not to endanger personnel? YES

Comments: _____

33. Are crane operators controlling the lift area maintaining a safe perimeter to prevent any site personnel from coming under or within an unsafe distance of a live load? N/A

Comments: No crane operations being performed

34. If personnel are required to work in or near high-traffic areas, are they wearing fluorescent orange and/or reflective clothing or vests? N/A

Comments: Not working in or near high-traffic area

35. Are vehicles not actively used in operations parked so that they do not interfere with work or traffic? YES

Comments: _____

36. Are cutting and welding operations not allowed within 300 ft of a potential liquid fuel source or a building? N/A

Comments: No such operation being performed

37. Are supplied air respirators required for employees performing hot work on painted, galvanized, coated, or previously contaminated metal? N/A

Comments: No such operations being performed

38. Are two 10-lb or more ABC multipurpose fire extinguishers available in the immediate vicinity of hot work? N/A

Comments: No such operations being performed

39. Are seat belts used by persons riding in/on vehicles and equipment? YES

Comments: _____

40. Are personnel riding in/on vehicles or equipment in a manner designated for the conveyance of people? YES

Comments: _____

41. Is noncrane heavy equipment used to "pull" (lift) material properly equipped and designed to do so? N/A

Comments: No such operation being performed

42. Is a drilling-equipment safety-inspection report completed by the drilling operator before beginning any site work? N/A

Comments: No Drilling operation being performed

43. Is all equipment used to handle or transfer flammable liquids bonded and grounded, spark proof, and explosion proof, as appropriate? N/A

Comments: No such equipment used

44. Are all fuels stored in approved safety containers? N/A

Comments: No stored fuel on site

45. Are fuel storage locations marked with the warning signs, "Flammable Liquids" and "No Smoking"? N/A

Comments: No stored fuel on site

46. Are spark-proof hand tools used when working with flammable/combustible materials or when breaking lines? N/A

Comments: No such tools needed

47. Are safety glasses and gloves worn when handling or hooking up compressed-gas cylinders? N/A

Comments: No compressed-gas cylinders used

48. Are compressor hose segments secured using chains and/or locking pins? N/A

Comments: No compressors used

49. Are all electrical connections made through a GFCI? Yes

Comments:

50. Are extension cords routed and stored to prevent damage and tripping hazards? Yes

Comments:

51. Does a second person secure or steady a ladder while an employee is ascending and descending? N/A

Comments: No ladders used

52. Is stockpiled soil piled at an angle less than 45 degrees and at least 2 ft from the edge of an excavation? N/A

Comments: No excavation performed

53. Is the regulated area isolated from the rest of the work site in a manner that minimizes the number of employees exposed to site containers? Yes

Comments:

54. If heat stress is a concern, has a work/rest regimen been established and implemented, including physiological monitoring? yes

Comments: _____

55. If contaminants at the site are unknown, is Level B protection worn? n/a

Comments: Level B is not required

56. Are suitable quantities of absorbent, appropriate drums and labels complying with DOT, OSHA, and EPA regulations on hand where leaks, spills, or ruptures may occur? yes

Comments: _____

57. Have procedures for all phases of decontamination been developed and implemented? yes

Comments: _____

58. Is the direction of emergency egress away from high-hazard areas? yes

Comments: _____

59. Are means of emergency egress maintained free of obstructions and available for full and instant use? yes

Comments: _____

60. Are work areas kept clean and in good repair, with no unnecessary holes or openings? yes

Comments: _____

61. Are wastes (noncontaminated) kept in a closed, nonleaking sanitary container and removed as often as necessary and appropriate in a manner that would avoid creating a health or safety problem? yes

Comments: _____

62. Are appropriate labels provided on all chemical containers? yes

Comments: _____

63. Are storage areas free of accumulation of materials that could constitute a hazard from tripping, fire, explosion, or pest harborage? yes

Comments: _____

64. Is vegetation within the site controlled? n/a

Comments: Does not require controlling

ATTACHMENT 9-2

HEALTH & SAFETY CHECKLIST

OU 1130 TA 36 SSHASP No. 026 Date 9-13-94

Project Title Field Investigation

Activities Being Conducted, Equipment Being Used, General Condition and Effectiveness of Decontamination, PPE Being Worn:

Sump excavation to collect soil samples. Backhoe used to excavate gravel and base, shovel used to collect samples at various depths. PPE includes hard hats, safety glasses, ear plugs, cotton coveralls, leather boots, chemical resistant boots or Bootlegs over leather boots, vinyl & nitrile gloves. Dust control in accordance with standard dust control. Excavation was surrounded by cones with 1' buffer area. Set up circular excavation to keep personnel away from edge.

A key indicator of a well-maintained and safely operated site is the appearance of the work area on a daily basis. Work area appearance and safety is the responsibility of all personnel. Work areas should be straightened on a daily basis before quitting work. Time should be set aside at the end of each work period to remove trash, tools, spare parts, extra materials, rags, plastic, and so forth. Work should be stopped and a general cleanup should be conducted whenever trash, dirt, or other materials are being spread beyond the immediate work area. The Site Safety Officer should complete the check list during a daily health and safety inspection tour of the work area.

This check list is designed so that any "no" responses are indicators of a safety or health deficiency. If any question does not apply, "not applicable" should be written on the line. Not all questions will be applicable to all sites. All "no" responses should be followed up with a written explanation, the corrective action taken, and the date.

Completed by Ken H. McFarren SSO
(print name) (title)

K. H. McFarren
(signature)

A. TRAINING

1. Is a Daily Tailgate Safety Meeting held and documented? YES

Comments: _____

2. Are all visitors to the site properly signed in and given site-specific orientation and safety training? YES

Comments: _____

3. Are all persons entering the site informed on the contents of the Health and Safety Plan and required to sign a statement indicating such? YES

Comments: _____

4. Have all persons entering the site received the appropriate hazardous waste training and is this training documented? YES

Comments: _____

5. Have all persons entering the site received a respirator fit test and training? N/A

Comments: No Respirators used

6. Have all persons entering the site received training (hazard communication) on all hazards that may be encountered? YES

Comments: _____

7. Have all persons entering the site received the required physical examination? YES

Comments: _____

8. Is the H&S Plan available for on-site inspection and review by employees, etc.? YES

Comments: _____

9. Are emergency reporting an evacuation procedures known by each person on site and documented on the Emergency Contact sheet? YES

Comments: _____

10. Are all persons who enter confined spaces properly trained? N/A

Comments: Excavation not entered

11. Is the site-specific organizational structure chart posted at the job site? Yes

Comments: To [illegible]

12. Are personnel who work on or near drill rigs instructed in the location and use of the rig's "kill" switch? N/A

Comments: No Drill rig used

13. Do heavy equipment and crane operators possess appropriate and up-to-date required licenses/certifications/permits? N/A

Comments: Not required for Backhoe

14. Are copies of all training records kept on site? Yes

Comments:

B. INSPECTIONS

1. Are regulated areas established and defined for each work area in which contaminated materials may be present? Yes

Comments:

2. Is hearing protection worn in areas where sound levels are suspected or shown to exceed 85 dBA? Yes

Comments:

3. Are all persons on site using the minimum protective equipment (hard hat, safety glasses with side shields or goggles, steel-toed safety shoes) and appropriate clothing for the anticipated hazards? Yes

Comments:

4. Is there a 20AB multipurpose dry-chemical fire extinguisher on each piece of heavy equipment? Yes

Comments:

5. Are all fire extinguishers inspected monthly? YES

Comments: _____

6. Is the "no smoking" policy enforced? YES

Comments: _____

7. Are approved safety containers used to store fuels? NO

Comments: No fuels stored on site.

8. Do all contaminated scrap, waste, debris, and clothing containers have labels? YES

Comments: _____

9. Is the food and beverage consumption prohibition enforced in the regulated area? YES

Comments: _____

10. Is there a method available for employees to wash their faces and hands with soap and water before eating and drinking? YES

Comments: _____

11. Area contaminated materials stored in tightly closed containers in well-ventilated areas? YES

Comments: _____

12. Does all heavy equipment have a functioning back-up alarm? ~~YES~~ NO

Comments: SHUTTER to be used when backing.

13. Is the "buddy system" in use throughout the site? YES

Comments: _____

14. Is access to the regulated areas controlled so that only authorized personnel are permitted to enter? YES

Comments: _____

15. Is a daily log maintained of persons entering the regulated area? Yes

Comments: _____

16. Are all persons required to wear respirators clean shaven before each day's shift? n/a

Comments: Respirators not required

17. Are adequate potable liquids provided at the job site? Yes

Comments: _____

18. Is periodic air monitoring conducted? Yes

Comments: _____

19. Are air-monitoring instruments calibrated daily before use? Yes

Comments: _____

20. Are emergency services and equipment available at the site and is equipment in appropriate condition? Yes

Comments: _____

21. Are provisions made for adequate flushing of the skin or eyes in the event of contaminated material exposure? Yes

Comments: _____

22. Are dry-chemical ABC fire extinguishers provided at each site? Yes

Comments: _____

23. Do all work activities begin after sunrise and end before sunset? Yes

Comments: _____

24. Are potable water containers clearly marked as to their contents and not used for any other purpose? Yes

Comments: _____

25. Are outlets for nonpotable water clearly marked? Yes

Comments: _____

26. If permanent toilet facilities are unavailable, are chemical toilets provided? Yes

Comments: _____

27. Do employees shower at the end of their work shift and when leaving the hazardous waste site? No

Comments: Not required

28. Are appropriate warning signs placed around open excavations? Yes

Comments: _____

29. Are excavations sloped (1 ft to 1 ft) or shored if more than 4 ft deep. No

Comments: Excavation not entered

30. Is a standby person available when entry into an excavation is required? N/A

Comments: Excavation not entered

31. Area appropriate access methods, such as ladders, used to enter the excavation? N/A

Comments: Excavation not entered

32. Are equipment and materials stored and handled at all times so as not to endanger personnel? Yes

Comments: _____

33. Are crane operators controlling the lift area maintaining a safe perimeter to prevent any site personnel from coming under or within an unsafe distance of a live load? N/A

Comments: No crane used

34. If personnel are required to work in or near high-traffic areas, are they wearing fluorescent orange and/or reflective clothing or vests? N/A

Comments: No High traffic Areas

35. Are vehicles not actively used in operations parked so that they do not interfere with work or traffic? Yes

Comments: _____

36. Are cutting and welding operations not allowed within 100 ft of a potential liquid fuel source or a building? N/A

Comments: No Cutting or welding operations

37. Are supplied air respirators required for employees performing hot work on painted, galvanized, coated, or previously contaminated metal? N/A

Comments: No Hot work

38. Are two 10-lb or more ABC multipurpose fire extinguishers available in the immediate vicinity of hot work? N/A

Comments: No Hot work

39. Are seat belts used by persons riding in/on vehicles and equipment? Yes

Comments: _____

40. Are personnel riding in/on vehicles or equipment in a manner designated for the conveyance of people? Yes

Comments: _____

41. Is noncrane heavy equipment used to "pull" (lift) material properly equipped and designed to do so? N/A

Comments: No heavy or lifting equipment

42. Is a drilling-equipment safety-inspection report completed by the drilling operator before beginning any site work? N/A

Comments: No Drilling

43. Is all equipment used to handle or transfer flammable liquids bonded and grounded, spark proof, and explosion proof, as appropriate? N/A

Comments: No flammable liquids

44. Are all fuels stored in approved safety containers? N/A

Comments: No fuels stored on-site

45. Are fuel storage locations marked with the warning signs, "Flammable Liquids" and "No Smoking"? N/A

Comments: No fuels stored on-site

46. Are spark-proof hand tools used when working with flammable/combustible materials or when breaking lines? N/A

Comments: No flammable/combustible materials

47. Are safety glasses and gloves worn when handling or hooking up compressed-gas cylinders? N/A

Comments: No compressed-gas cylinders

48. Are compressor hose segments secured using chains and/or locking pins? N/A

Comments: No hose segments used

49. Are all electrical connections made through a GFCI? Yes

Comments:

50. Are extension cords routed and stored to prevent damage and tripping hazards? Yes

Comments:

51. Does a second person secure or steady a ladder while an employee is ascending and descending? N/A

Comments: No ladder used

52. Is stockpiled soil piled at an angle less than 45 degrees and at least 2 ft from the edge of an excavation? Yes

Comments:

53. Is the regulated area isolated from the rest of the work site in a manner that minimizes the number of employees exposed to site containers? Yes

Comments:

54. If heat stress is a concern, has a work/rest regimen been established and implemented, including physiological monitoring? YES

Comments: _____

55. If contaminants at the site are unknown, is Level B protection worn? N/A

Comments: Level D required

56. Are suitable quantities of absorbent, appropriate drums and labels complying with DOT, OSHA, and EPA regulations on hand where leaks, spills, or ruptures may occur? NO

Comments: _____

57. Have procedures for all phases of decontamination been developed and implemented? YES

Comments: SSHASP

58. Is the direction of emergency egress away from high-hazard areas? YES

Comments: _____

59. Are means of emergency egress maintained free of obstructions and available for full and instant use? YES

Comments: _____

60. Are work areas kept clean and in good repair, with no unnecessary holes or openings? YES

Comments: _____

61. Are wastes (noncontaminated) kept in a closed, nonleaking sanitary container and removed as often as necessary and appropriate in a manner that would avoid creating a health or safety problem? YES

Comments: _____

62. Are appropriate labels provided on all chemical containers? YES

Comments: _____

53. Are storage areas free of accumulation of materials that could constitute a hazard from tripping, fire, explosion, or pest harborage? Yes

Comments: _____

54. Is vegetation within the site controlled? N/A

Comments: No required

ATTACHMENT 9-2

HEALTH & SAFETY CHECKLIST

OU 1130 TA 36 SSHASP No. 026 Date 10-11-94

Project Title Field Investigation

Activities Being Conducted, Equipment Being Used, General Condition and Effectiveness of Decontamination, PPE Being Worn:

Drilling at [illegible] locations to collect soil samples at various depths. Drill rig and sampling equipment used. PPE includes hard hat, safety glasses, ear plugs, cotton coveralls (nitrile, vinyl gloves) Steel toed rubber boots. Hot [illegible] were worn. Decontamination being conducted in accordance with SSHASP and waste mgt. plan. Due to the high explosive concern, the drill rig is operated remotely ie 30' away from rig. In addition a wood blast shield is set up between the workers & rig whenever drilling occurs, all personnel stand behind the blast shield.

A key indicator of a well-maintained and safely operated site is the appearance of the work area on a daily basis. Work area appearance and safety is the responsibility of all personnel. Work areas should be straightened on a daily basis before quitting work. Time should be set aside at the end of each work period to remove trash, tools, spare parts, extra materials, rags, plastic, and so forth. Work should be stopped and a general cleanup should be conducted whenever trash, dirt, or other materials are being spread beyond the immediate work area. The Site Safety Officer should complete the check list during a daily health and safety inspection tour of the work area.

This check list is designed so that any "no" responses are indicators of a safety or health deficiency. If any question does not apply, "not applicable" should be written on the line. Not all questions will be applicable to all sites. All "no" responses should be followed up with a written explanation, the corrective action taken, and the date.

Completed by Ken H. McFarlane SSO
(print name) (title)

K. H. McFarlane
(signature)

A. TRAINING

1. Is a Daily Tailgate Safety Meeting held and documented? YES

Comments: _____

2. Are all visitors to the site properly signed in and given site-specific orientation and safety training? YES

Comments: _____

3. Are all persons entering the site informed on the contents of the Health and Safety Plan and required to sign a statement indicating such? YES

Comments: _____

4. Have all persons entering the site received the appropriate hazardous waste training and is this training documented? YES

Comments: _____

5. Have all persons entering the site received a respirator fit test and training? N/A

Comments: Respirators not required

6. Have all persons entering the site received training (hazard communication) on all hazards that may be encountered? YES

Comments: _____

7. Have all persons entering the site received the required physical examination? YES

Comments: _____

8. Is the H&S Plan available for on-site inspection and review by employees, etc.? YES

Comments: _____

9. Are emergency reporting an evacuation procedures known by each person on site and documented on the Emergency Contact sheet? YES

Comments: _____

10. Are all persons who enter confined spaces properly trained? N/A

Comments: No Confined Spaces

11. Is the site-specific organizational structure chart posted at the job site? Yes

Comments: IN SSHASP

12. Are personnel who work on or near drill rigs instructed in the location and use of the rig's "kill" switch? Yes

Comments:

13. Do heavy equipment and crane operators possess appropriate and up-to-date required licenses/certifications/permits? N/A

Comments: No Heavy Equipment or Cranes used

14. Are copies of all training records kept on site? Yes

Comments:

B. INSPECTIONS

1. Are regulated areas established and defined for each work area in which contaminated materials may be present? Yes

Comments:

2. Is hearing protection worn in areas where sound levels are suspected or shown to exceed 85 dBA? Yes

Comments:

3. Are all persons on site using the minimum protective equipment (hard hat, safety glasses with side shields or goggles, steel-toed safety shoes) and appropriate clothing for the anticipated hazards? Yes

Comments:

4. Is there a 20AB multipurpose dry-chemical fire extinguisher on each piece of heavy equipment? Yes

Comments:

5. Are all fire extinguishers inspected monthly? YES

Comments: _____

6. Is the "no smoking" policy enforced? YES

Comments: _____

7. Are approved safety containers used to store fuels? YES

Comments: _____

8. Do all contaminated scrap, waste, debris, and clothing containers have labels? YES

Comments: _____

9. Is the food and beverage consumption prohibition enforced in the regulated area? YES

Comments: _____

10. Is there a method available for employees to wash their faces and hands with soap and water before eating and drinking? YES

Comments: _____

11. Area contaminated materials stored in tightly closed containers in well-ventilated areas? YES

Comments: _____

12. Does all heavy equipment have a functioning back-up alarm? N/A

Comments: No heavy Equipment used

13. Is the "buddy system" in use throughout the site? YES

Comments: _____

14. Is access to the regulated areas controlled so that only authorized personnel are permitted to enter? YES

Comments: _____

15. Is a daily log maintained of persons entering the regulated area? Yes

Comments: _____

16. Are all persons required to wear respirators clean shaven before each day's shift? n/a

Comments: Respirators not required

17. Are adequate potable liquids provided at the job site? Yes

Comments: _____

18. Is periodic air monitoring conducted? Yes

Comments: _____

19. Are air-monitoring instruments calibrated daily before use? Yes

Comments: _____

20. Are emergency services and equipment available at the site and is equipment in appropriate condition? Yes

Comments: _____

21. Are provisions made for adequate flushing of the skin or eyes in the event of contaminated material exposure? Yes

Comments: _____

22. Are dry-chemical ABC fire extinguishers provided at each site? Yes

Comments: _____

23. Do all work activities begin after sunrise and end before sunset? Yes

Comments: _____

24. Are potable water containers clearly marked as to their contents and not used for any other purpose? Yes

Comments: _____

25. Are outlets for nonpotable water clearly marked? N/A

Comments: No outlets available

26. If permanent toilet facilities are unavailable, are chemical toilets provided? Yes

Comments:

27. Do employees shower at the end of their work shift and when leaving the hazardous waste site? No

Comments: Showers Not Required

28. Are appropriate warning signs placed around open excavations? N/A

Comments: No Excavations

29. Are excavations sloped (1 ft to 1 ft) or shored if more than 4 ft deep. N/A

Comments: No Excavations

30. Is a standby person available when entry into an excavation is required? N/A

Comments: No Excavations

31. Area appropriate access methods, such as ladders, used to enter the excavation? N/A

Comments: No Excavations

32. Are equipment and materials stored and handled at all times so as not to endanger personnel? Yes

Comments:

33. Are crane operators controlling the lift area maintaining a safe perimeter to prevent any site personnel from coming under or within an unsafe distance of a live load? N/A

Comments: No Cranes Used

34. If personnel are required to work in or near high-traffic areas, are they wearing fluorescent orange and/or reflective clothing or vests? N/A

Comments: No high traffic areas

35. Are vehicles not actively used in operations parked so that they do not interfere with work or traffic? YES

Comments: _____

36. Are cutting and welding operations not allowed within 300 ft of a potential liquid fuel source or a building? N/A

Comments: No Cutting or welding operations

37. Are supplied air respirators required for employees performing hot work on painted, galvanized, coated, or previously contaminated metal? N/A

Comments: No Hot work

38. Are two 10-lb or more ABC multipurpose fire extinguishers available in the immediate vicinity of hot work? N/A

Comments: No Hot work

39. Are seat belts used by persons riding in/on vehicles and equipment? YES

Comments: _____

40. Are personnel riding in/on vehicles or equipment in a manner designated for the conveyance of people? YES

Comments: _____

41. Is noncrane heavy equipment used to "pull" (lift) material properly equipped and designed to do so? N/A

Comments: No pulling activities

42. Is a drilling-equipment safety-inspection report completed by the drilling operator before beginning any site work? YES

Comments: SSO performs inspection

43. Is all equipment used to handle or transfer flammable liquids bonded and grounded, spark proof, and explosion proof, as appropriate? N/A

Comments: No flammable liquids handle/transferred. Plastic funnel used to fill Drill rig & steam cleaner.

44. Are all fuels stored in approved safety containers? Yes

Comments: _____

45. Are fuel storage locations marked with the warning signs, "Flammable Liquids" and "No Smoking"? Yes

Comments: Cans marked

46. Are spark-proof hand tools used when working with flammable/combustible materials or when breaking lines? N/A

Comments: _____

47. Are safety glasses and gloves worn when handling or hooking up compressed-gas cylinders? N/A

Comments: No Compressed cylinders

48. Are compressor hose segments secured using chains and/or locking pins? N/A

Comments: One segment used.

49. Are all electrical connections made through a GFCI? Yes

Comments: _____

50. Are extension cords routed and stored to prevent damage and tripping hazards? Yes

Comments: _____

51. Does a second person secure or steady a ladder while an employee is ascending and descending? Yes

Comments: _____

52. Is stockpiled soil piled at an angle less than 45 degrees and at least 2 ft from the edge of an excavation? N/A

Comments: No Excavation

53. Is the regulated area isolated from the rest of the work site in a manner that minimizes the number of employees exposed to site containers? Yes

Comments: _____

54. If heat stress is a concern, has a work/rest regimen been established and implemented, including physiological monitoring? N/A

Comments: No problem

55. If contaminants at the site are unknown, is Level B protection worn? N/A

Comments: Level D required

56. Are suitable quantities of absorbent, appropriate drums and labels complying with DOT, OSHA, and EPA regulations on hand where leaks, spills, or ruptures may occur? No

Comments:

57. Have procedures for all phases of decontamination been developed and implemented? YES

Comments:

58. Is the direction of emergency egress away from high-hazard areas? YES

Comments:

59. Are means of emergency egress maintained free of obstructions and available for full and instant use? YES

Comments:

60. Are work areas kept clean and in good repair, with no unnecessary holes or openings? YES

Comments:

61. Are wastes (noncontaminated) kept in a closed, nonleaking sanitary container and removed as often as necessary and appropriate in a manner that would avoid creating a health or safety problem? YES

Comments:

62. Are appropriate labels provided on all chemical containers? YES

Comments:

63. Are storage areas free of accumulation of materials that could constitute a hazard from tripping, fire, explosion, or pest harborage? Yes

Comments: _____

64. Is vegetation within the site controlled? Yes

Comments: Not Required

ATTACHMENT 9-2

HEALTH & SAFETY CHECKLIST

OU: 1130 TA: 36 SSHASP No. 026 Date: 11-14-94

Project Title: Field Investigation

Activities Being Conducted, Equipment Being Used, General Condition and Effectiveness of Decontamination, PPE Being Worn:

Drilling at Lochfield to collect soil samples at various depths. Drilling soil sampling equipment, hard hats, safety glasses, cotton coveralls, inner latex & rubber glove, chemical resistant boots or rubber boots. Power tools used in accordance with SSHASP and client HSP. 30' minimum separation between workers & rig while drilling. Workers stand behind a blast shield at the derrick.

A key indicator of a well-maintained and safely operated site is the appearance of the work area on a daily basis. Work area appearance and safety is the responsibility of all personnel. Work areas should be straightened on a daily basis before quitting work. Time should be set aside at the end of each work period to remove trash, tools, spare parts, extra materials, rags, plastic, and so forth. Work should be stopped and a general cleanup should be conducted whenever trash, dirt, or other materials are being spread beyond the immediate work area. The Site Safety Officer should complete the check list during a daily health and safety inspection tour of the work area.

This check list is designed so that any "no" responses are indicators of a safety or health deficiency. If any question does not apply, "not applicable" should be written on the line. Not all questions will be applicable to all sites. All "no" responses should be followed up with a written explanation, the corrective action taken, and the date.

Completed by: Ken H. McFarlane SSO
(print name) (title)

(signature)

A. TRAINING

1. Is a Daily Tailgate Safety Meeting held and documented? Yes

Comments: _____

2. Are all visitors to the site properly signed in and given site-specific orientation and safety training? Yes

Comments: _____

3. Are all persons entering the site informed on the contents of the Health and Safety Plan and required to sign a statement indicating such? Yes

Comments: _____

4. Have all persons entering the site received the appropriate hazardous waste training and is this training documented? Yes

Comments: _____

5. Have all persons entering the site received a respirator fit test and training? N/A

Comments: Respirators not required

6. Have all persons entering the site received training (hazard communication) on all hazards that may be encountered? Yes

Comments: _____

7. Have all persons entering the site received the required physical examination? Yes

Comments: _____

8. Is the H&S Plan available for on-site inspection and review by employees, etc.? Yes

Comments: _____

9. Are emergency reporting an evacuation procedures known by each person on site and documented on the Emergency Contact sheet? Yes

Comments: _____

10. Are all persons who enter confined spaces properly trained? N/A

Comments: No Confined Spaces

11. Is the site-specific organizational structure chart posted at the job site? Yes

Comments: No Signage

12. Are personnel who work on or near drill rigs instructed in the location and use of the rig's "kill" switch? Yes

Comments:

13. Do heavy equipment and crane operators possess appropriate and up-to-date required licenses/certifications/permits? N/A

Comments: No Heavy Equipment or cranes used

14. Are copies of all training records kept on site? Yes

Comments:

B. INSPECTIONS

1. Are regulated areas established and defined for each work area in which contaminated materials may be present? Yes

Comments:

2. Is hearing protection worn in areas where sound levels are suspected or shown to exceed 85 dBA? Yes

Comments:

3. Are all persons on site using the minimum protective equipment (hard hat, safety glasses with side shields or goggles, steel-toed safety shoes) and appropriate clothing for the anticipated hazards? Yes

Comments:

4. Is there a 20AB multipurpose dry-chemical fire extinguisher on each piece of heavy equipment? Yes

Comments:

5. Are all fire extinguishers inspected monthly? Yes

Comments: _____

6. Is the "no smoking" policy enforced? Yes

Comments: _____

7. Are approved safety containers used to store fuels? Yes

Comments: _____

8. Do all contaminated scrap, waste, debris, and clothing containers have labels? Yes

Comments: _____

9. Is the food and beverage consumption prohibition enforced in the regulated area? Yes

Comments: _____

10. Is there a method available for employees to wash their faces and hands with soap and water before eating and drinking? Yes

Comments: _____

11. Area contaminated materials stored in tightly closed containers in well-ventilated areas? Yes

Comments: _____

12. Does all heavy equipment have a functioning back-up alarm? N/A

Comments: No heavy equipment used

13. Is the "buddy system" in use throughout the site? Yes

Comments: _____

14. Is access to the regulated areas controlled so that only authorized personnel are permitted to enter? Yes

Comments: _____

15. Is a daily log maintained of persons entering the regulated area? Yes

Comments: _____

16. Are all persons required to wear respirators clean shaven before each day's shift? N/A

Comments: Respirators Not Required

17. Are adequate potable liquids provided at the job site? Yes

Comments: _____

18. Is periodic air monitoring conducted? Yes

Comments: _____

19. Are air-monitoring instruments calibrated daily before use? Yes

Comments: _____

20. Are emergency services and equipment available at the site and is equipment in appropriate condition? Yes

Comments: _____

21. Are provisions made for adequate flushing of the skin or eyes in the event of contaminated material exposure? Yes

Comments: _____

22. Are dry-chemical ABC fire extinguishers provided at each site? Yes

Comments: _____

23. Do all work activities begin after sunrise and end before sunset? Yes

Comments: _____

24. Are potable water containers clearly marked as to their contents and not used for any other purpose? Yes

Comments: _____

23. Are outlets for nonpotable water clearly marked? N/A

Comments: No water

24. If permanent toilet facilities are unavailable, are chemical toilets provided? Yes

Comments:

25. Do employees shower at the end of their work shift and when leaving the hazardous waste site? No

Comments: Showers not required

26. Are appropriate warning signs placed around open excavations? N/A

Comments: No excavations

29. Are excavations sloped (1 ft to 1 ft) or shored if more than 4 ft deep. N/A

Comments: No Excavations

30. Is a standby person available when entry into an excavation is required? N/A

Comments: No Excavation

31. Area appropriate access methods, such as ladders, used to enter the excavation? N/A

Comments: No Excavation

32. Are equipment and materials stored and handled at all times so as not to endanger personnel? Yes

Comments:

33. Are crane operators controlling the lift area maintaining a safe perimeter to prevent any site personnel from coming under or within an unsafe distance of a live load? N/A

Comments: No Cranes Used

34. If personnel are required to work in or near high-traffic areas, are they wearing fluorescent orange and/or reflective clothing or vests? N/A

Comments: No high traffic Areas

35. Are vehicles not actively used in operations parked so that they do not interfere with work or traffic? Yes

Comments: _____

36. Are cutting and welding operations not allowed within 300 ft of a potential liquid fuel source or a building? N/A

Comments: No such operations

37. Are supplied air respirators required for employees performing hot work on painted, galvanized, coated, or previously contaminated metal? N/A

Comments: No hot work

38. Are two 10-lb or more ABC multipurpose fire extinguishers available in the immediate vicinity of hot work? N/A

Comments: No hot work

39. Are seat belts used by persons riding in/on vehicles and equipment? Yes

Comments: _____

40. Are personnel riding in/on vehicles or equipment in a manner designated for the conveyance of people? Yes

Comments: _____

41. Is noncrane heavy equipment used to "pull" (lift) material properly equipped and designed to do so? N/A

Comments: No such operations

42. Is a drilling-equipment safety-inspection report completed by the drilling operator before beginning any site work? Yes

Comments: By HS SSO

43. Is all equipment used to handle or transfer flammable liquids bonded and grounded, spark proof, and explosion proof, as appropriate? N/A

Comments: _____

44. Are all fuels stored in approved safety containers? Yes

Comments: _____

45. Are fuel storage locations marked with the warning signs, "Flammable Liquids" and "No Smoking"? N/A

Comments: No fuel location

46. Are spark-proof hand tools used when working with flammable/combustible materials or when breaking lines? N/A

Comments: _____

47. Are safety glasses and gloves worn when handling or hooking up compressed-gas cylinders? N/A

Comments: No compressed gas cylinders

48. Are compressor hose segments secured using chains and/or locking pins? N/A

Comments: Only 1 segment used

49. Are all electrical connections made through a GFCI? Yes

Comments: _____

50. Are extension cords routed and stored to prevent damage and tripping hazards? Yes

Comments: _____

51. Does a second person secure or steady a ladder while an employee is ascending and descending? Yes

Comments: _____

52. Is stockpiled soil piled at an angle less than 45 degrees and at least 2 ft from the edge of an excavation? N/A

Comments: No excavations

53. Is the regulated area isolated from the rest of the work site in a manner that minimizes the number of employees exposed to site containers? Yes

Comments: _____

54. If heat stress is a concern, has a work/rest regimen been established and implemented, including physiological monitoring? N/A

Comments: NO A CONCERN

55. If contaminants at the site are unknown, is Level B protection worn? N/A

Comments: LEVEL D required

56. Are suitable quantities of absorbent, appropriate drums and labels complying with DOT, OSHA, and EPA regulations on hand where leaks, spills, or ruptures may occur? NO

Comments:

57. Have procedures for all phases of decontamination been developed and implemented? YES

Comments:

58. Is the direction of emergency egress away from high-hazard areas? YES

Comments:

59. Are means of emergency egress maintained free of obstructions and available for full and instant use? YES

Comments:

60. Are work areas kept clean and in good repair, with no unnecessary holes or openings? YES

Comments:

61. Are wastes (noncontaminated) kept in a closed, nonleaking sanitary container and removed as often as necessary and appropriate in a manner that would avoid creating a health or safety problem? YES

Comments:

62. Are appropriate labels provided on all chemical containers? YES

Comments:

63. Are storage areas free of accumulation of materials that could constitute a hazard from tripping, fire, explosion, or pest harborage? Yes

Comments: _____

64. Is vegetation within the site controlled? Yes

Comments: Now required

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1120 TA 30 SSHASP No. 026 Date 7/21/94
Project Title Field Investigation

SITE CONTROL

YES Site map posted on site (IN HASP ON SUPPORT ZONE TABLE)
YES Site work zones identified
YES Use of a buddy system
YES Site communication (cellular phone and DX-11 radio)
YES Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

YES Site hazards posted (ON THE DAILY SAFETY MEETING FORM)
YES PPE properly selected
YES Is there adequate PPE on site?
YES Employees properly fitted for PPE
YES Do employees know how to don and doff PPE?
YES PPE properly used
YES PPE maintenance and storage
YES PPE decontamination
YES Limitations on equipment, O&M of equipment, equipment properly used
YES Decontamination and personal hygiene procedures followed

SANITATION

YES Toilet facilities available (outside sanitary)
YES Hand and face washing available
YES Potable water provided and labeled safe for drinking
YES Non-potable water labeled not safe for drinking or washing

MONITORING

YES Air monitoring conducted (HNU and Rad meters)
YES Results of previous monitoring maintained on site (1st day of monitoring)

ILLUMINATION

YES Is additional lighting provided when needed?

EMERGENCY RESPONSE

YES Site security and control
YES Evacuation routes and procedures posted
YES Emergency medical treatment and first aid procedures posted (emergency routes, phone # and information sheet)

Completed by KEN H. McFADDEN SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1132 TA 36 SSHASP No. 006 Date 7/21/94
Project Title Field Investigation

SITE CONTROL

Yes Site map posted on site
Yes Site work zones identified
Yes Use of a buddy system
Yes Site communication
Yes Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

Yes Site hazards posted
Yes PPE properly selected
Yes Is there adequate PPE on site?
Yes Employees properly fitted for PPE
Yes Do employees know how to don and doff PPE?
Yes PPE properly used
Yes PPE maintenance and storage
Yes PPE decontamination
Yes Limitations on equipment, O&M of equipment, equipment properly used
Yes Decontamination and personal hygiene procedures followed

SANITATION

Yes Toilet facilities available
Yes Hand and face washing available
Yes Potable water provided and labeled safe for drinking
Yes Non-potable water labeled not safe for drinking or washing

MONITORING

Yes Air monitoring conducted
Yes Results of previous monitoring maintained on site

ILLUMINATION

Yes Is additional lighting provided when needed?

EMERGENCY RESPONSE

Yes Site security and control
Yes Evacuation routes and procedures posted
Yes Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFarren SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1100 TA 36 SSHASP No. 006 Date 7/25/94
Project Title Field Investigation

✓ = yes

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H. McFARLAND SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1132 TA 36 SSHASP No. 026 Date 7/28/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H. McFARREN SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 3 SSHASP No. 026 Date 8/3/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H. McFADDEN SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1150 TA 36 SSHASP No. 026 Date 8/4/94
Project Title Field Investigation

✓ = Items inspected and found to be satisfactory

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFarren SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1120 TA 36 SSHASP No. 026 Date 8/5/94
Project Title Field Investigation

✓ = Items inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFadden SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 026 Date 8/8/94
Project Title Field Investigation

SITE CONTROL

Yes Site map posted on site
Yes Site work zones identified
Yes Use of a buddy system
Yes Site communication
Yes Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

Yes Site hazards posted
Yes PPE properly selected
Yes Is there adequate PPE on site?
Yes Employees properly fitted for PPE
Yes Do employees know how to don and doff PPE?
Yes PPE properly used
Yes PPE maintenance and storage
Yes PPE decontamination
Yes Limitations on equipment, O&M of equipment, equipment properly used
Yes Decontamination and personal hygiene procedures followed

SANITATION

Yes Toilet facilities available
Yes Hand and face washing available
Yes Potable water provided and labeled safe for drinking
Yes Non-potable water labeled not safe for drinking or washing

MONITORING

Yes Air monitoring conducted
Yes Results of previous monitoring maintained on site

ILLUMINATION

Yes Is additional lighting provided when needed?

EMERGENCY RESPONSE

Yes Site security and control
Yes Evacuation routes and procedures posted
Yes Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFadden SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 006 Date 8/11/94
Project Title Soil Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFadden SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1100 TA 36 SSHASP No. 006 Date 8/12/94
Project Title Field Investigation

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted (SSHASP)
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

___ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] [illegible]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 130 TA 36 SSHASP No. 026 Date 5/16/94
Project Title Field investigation

✓: Item inspected and found to be sufficient

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted (Tailgate Safety Meeting Form)
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment. O&M of equipment. equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available (located at lower Stockpile)
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
NA Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Robert E. Stack SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible] Date [illegible]
Project Title [illegible]

✓ = Item inspected and found to be satisfactory

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication (cellular phones)
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted (on tailgate safety meeting roster)
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- N/A Toilet facilities available (closest one is [illegible] set up this week)
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

No personal monitoring has been conducted in this [illegible] due to results from other [illegible] discussed in the tailgate safety meeting

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] [illegible]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1120 TA 36 SSHASP No. 626 Date 9/13/94
Project Title [illegible] INVESTIGATION

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN M. [illegible] SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1120 TA 36 SSHASP No. 036 Date 9/14/96
Project Title Field Investigation

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. Nisfmen SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible] Date [illegible]
Project Title [illegible]

✓ = Item inspected and found to be satisfactory

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] SSO [illegible]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 130 TA 36 SSHASP No. 000 Date 9/22/94
Project Title Field Investigation

✓ = Item Inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment. O&M of equipment. equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 126 TA 30 SSHASP No. 126 Date 9/12/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H McGannon SSO
(Print Name) (Title)

K. H. McGannon
(Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 9/27/94
Project Title Field Investigations

✓= Item Inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McGaven SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 9/23/96
Project Title Field Investigation

✓: Item inspected and found to be satisfactory.

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available at building 1, vicinity is busy secured
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] [illegible]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. [illegible] Date 9/29/9[illegible]
Project Title Field Investigation

✓ = Item Inspected and found to be sufficient

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by [illegible] H. McFadden SSO [illegible]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 30 SSHASP No. 026 Date 9/30/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McGarvey SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 0036 Date 10/3/94
Project Title Field Investigation

✓ = Item Inspected and found to be sufficient

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment, O&M of equipment, equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H McGraven SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 020 Date 10/6/94
Project Title Field Investigation

✓ = Item Inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFarland SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 000 Date 10/11/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H. McFARLAND SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 11/12/94
Project Title Field Investigation

✓ = Item Inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H McGarry GEO
(Print Name) (Title)

Ken H. McGarry
(Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 11/14/94
Project Title Field Investigation

✓ = Item inspected and found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment. O&M of equipment. equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by KEN H. MCFAYDEN SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 11/15/94
Project Title Field Investigation

✓ = Item inspected and found to be sufficient

SITE CONTROL

- ✓ Site map posted on site
- ✓ Site work zones identified
- ✓ Use of a buddy system
- ✓ Site communication
- ✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

- ✓ Site hazards posted
- ✓ PPE properly selected
- ✓ Is there adequate PPE on site?
- ✓ Employees properly fitted for PPE
- ✓ Do employees know how to don and doff PPE?
- ✓ PPE properly used
- ✓ PPE maintenance and storage
- ✓ PPE decontamination
- ✓ Limitations on equipment. O&M of equipment. equipment properly used
- ✓ Decontamination and personal hygiene procedures followed

SANITATION

- ✓ Toilet facilities available
- ✓ Hand and face washing available
- ✓ Potable water provided and labeled safe for drinking
- ✓ Non-potable water labeled not safe for drinking or washing

MONITORING

- ✓ Air monitoring conducted
- ✓ Results of previous monitoring maintained on site

ILLUMINATION

- ✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

- ✓ Site security and control
- ✓ Evacuation routes and procedures posted
- ✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H McFadden SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 076 Date 11/17/94
Project Title Field Investigation

✓= Item Inspected and found to be in Adherence.

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McFadden SSO Ken H. McFadden
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 026 Date 11/19/94
Project Title Field Investigation

✓ = Item inspected and found to be sufficient

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment. O&M of equipment. equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. Watson SSO [signature]
(Print Name) (Title) (Signature)

ATTACHMENT 9-1

DAILY SAFETY INSPECTION CHECKLIST

OU 1130 TA 36 SSHASP No. 036 Date 11/21/94
Project Title Field Investigation

✓ = Item Inspected and Found to be satisfactory

SITE CONTROL

✓ Site map posted on site
✓ Site work zones identified
✓ Use of a buddy system
✓ Site communication
✓ Is the site secure from unauthorized entry?

ENGINEERING CONTROL, WORK PRACTICES, AND PPE

✓ Site hazards posted
✓ PPE properly selected
✓ Is there adequate PPE on site?
✓ Employees properly fitted for PPE
✓ Do employees know how to don and doff PPE?
✓ PPE properly used
✓ PPE maintenance and storage
✓ PPE decontamination
✓ Limitations on equipment, O&M of equipment, equipment properly used
✓ Decontamination and personal hygiene procedures followed

SANITATION

✓ Toilet facilities available
✓ Hand and face washing available
✓ Potable water provided and labeled safe for drinking
✓ Non-potable water labeled not safe for drinking or washing

MONITORING

✓ Air monitoring conducted
✓ Results of previous monitoring maintained on site

ILLUMINATION

✓ Is additional lighting provided when needed?

EMERGENCY RESPONSE

✓ Site security and control
✓ Evacuation routes and procedures posted
✓ Emergency medical treatment and first aid procedures posted

Completed by Ken H. McGarrah SSO
(Print Name) (Title)

K. H. McGarrah
(Signature)

DRILL RIG INSPECTION FORM

OU 1130 TA 3 SSHASP No. 026 0955 DATE 9/12/94

[illegible] 9-12-94

~~CAB~~ Trailer mounted Drill Rig

COMMENTS

- ✓ Fire Extinguisher (10ABC) Inspected and Charged
- ✓ Fuel tanks and cap properly grounded
- ✓/N Lights working
- ✓/N Window glass & Mirrors free of cracks
- N/A Gauges all functional
- ✓/N Seat & belts in working order
- ✓/N Cab kept neat and clean

ENGINE

- ✓ Engine operates smoothly
- ✓ Lubrication done regularly
- ✓ No fluids leaking from rig

DRIVE TRAIN

- ✓ Tires in good condition & No loose lug nuts
- ✓/N Brakes in working order
- ✓/N Back up alarm functional

CONTROLS

- ✓ All emergency switches working
- ✓ Pressure gauges functioning
- ✓ Safety relief working on air tank
- N/A Weight indicator/Hydraulic pressure working
- ✓ All Hoses and hose covers in good condition
- ✓ All drill controls working no leaks noted

DRILLING EQUIPMENT

- ✓ Tools in working order
- ✓ Jacks in working order
- ✓/N Solid Footing for rig and jacks
- ✓ All equipment guards in place
- ✓/N Guards on sheaves to prevent line displacement
- ✓/N Wire line guards and brakes in good condition
- ✓ Head Drive Chains & Teeth in good condition
- N/A Cables in good condition
- N/A Hooks all have safety latches
- ✓ Structure/Welds visually OK
- ✓ Augers & Auger/Rig pins in good condition
- ✓/N Cat head smooth & free of grooves
- ✓/N Rope guides on all manual cat heads
- ✓/N Crown block bolted/welded to mast
- ✓/N Mast manufacturer & load capacity available
- ✓ Bolts and nuts tight
- ✓ Locking device on mast pivot points
- ✓/N Guy lines in place
- ✓/N Lifeline mountings/Lifeline in good repair
- ✓ Generators on rig grounded
- ✓ Has rig been deconned

Completed By Ken H. McFarland SSO
(Print Name) (Title)

[illegible]
(Signature)

Rev. 6/20/94

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible]
Project Title [illegible]

Date 9/22/92

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worm spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition (Down hole)	Worn [illegible] Drill Pipe
NA	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By KEV H. McFADDEN SSO
(Print Name) (Title)

[illegible]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible] Date [illegible]
Project Title [illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By [illegible] [illegible]
(Print Name) (Title)

[illegible]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1120 TA 36 SSHASP No. 036 Date 9/20/94
Project Title Field Investigation

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken H. McFarlan SSO
(Print Name) (Title)

Ken H. McFarlan
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1231 TA 36 SSHASP No. 036 Date 9/30/94
Project Title Field Investigation

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken H. McFadden SSO
(Print Name) (Title)

[illegible] (Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1130 TA 30 SSHASP No. 030 Date 11 1 94
Project Title [illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free of cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken H. McFadden SSO
(Print Name) (Title)

[illegible]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA [illegible], SSHASP No. [illegible] Date [illegible]
Project Title [illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By [illegible] [illegible]
(Print Name) (Title)

[illegible]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1180 TA 36 SSHASP No. 026 Date ___ ___ ___
Project Title Field Investigation

CAB		COMMENTS
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	

ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	

DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	

CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	

DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken H McFadden SSO
(Print Name) (Title)

[signature]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1081 TA 36 SSHASP No. 0076 Date 11-12-94
Project Title Field Investigation

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken H. McFadden SSO
(Print Name) (Title)

Ken H. McFadden
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA 36 SSHASP No. [illegible]
Project Title Field [illegible]

Date 11/14/94
[illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By [illegible] [illegible]
(Print Name) (Title)

[illegible]
(Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible] Date 11/15/94
Project Title [illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By [illegible] (Print Name) [illegible] (Title) [illegible] (Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU 1130 TA 30 SSHASP No. 026 Date 11-22-99
Project Title Field Investigation

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free or cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By Ken M McGinnis SSO
(Print Name) (Title)

[illegible] (Signature)

ATTACHMENT 9-5

DAILY DRILL RIG INSPECTION CHECKLIST

OU [illegible] TA [illegible] SSHASP No. [illegible]
Project Title [illegible]

Date [illegible]

		COMMENTS
CAB		
OK	Fire Extinguisher (20ABC)	
OK	F/E Inspected and Charged	
N/A	Lights	
N/A	Mirrors	
N/A	Gauges all functional	
N/A	Seat & belts in working order	
N/A	Cab kept neat & clean	
N/A	Window glass free of cracks	
ENGINE		
OK	Engine operation	
OK	Lubrication done regularly	
OK	No fluids leaking from rig	
DRIVE TRAIN		
OK	Tires in good condition	
OK	No loose lug nuts	
N/A	Brakes in working order	
N/A	Back-up alarm functional	
CONTROLS		
OK	All emergency switches working	
OK	Pressure gauges functioning	
OK	Safety relief working	
N/A	Weight indicator working (req'd)	
OK	All hoses in good condition	
OK	All drill controls working	
DRILLING EQUIPMENT		
OK	Tools in working order	
OK	Jacks in working order	
OK	Solid footing for rig and jacks	
OK	All equipment guards in place	
N/A	Guards on sheaves to prevent line displacement	
N/A	Ropes in good condition (no cuts, worn spots, burns, etc)	
N/A	Cables in good condition	
N/A	Hooks all have safety latches	
OK	Augers in good condition	
OK	Auger pins in good condition	
N/A	Cat head smooth & free of grooves	
N/A	Anti-fouling devices installed on all manual cat heads	
N/A	Crown block bolted/welded to mast	
N/A	Mast has manufacturer and load capacity on it	
OK	Bolts and nuts tight	
OK	Locking device on mast pivot points	
N/A	Guy lines in place	

Completed By [illegible] [illegible]
(Print Name) (Title)

[illegible]
(Signature)

EXHIBIT 1

EQUIPMENT INSPECTION CHECKLIST
(EXCLUDING CRANES)

Item	S*	U**	N/A	Comments
Backup Alarm		✓		Will use spotter when backing up
Visible Leaks		✓		Poly sheeting to be placed under the [illegible] to capture [illegible]
Fire Extinguisher	✓			
Seat Belt	✓			
Controls Identified	✓			
Roll-Over Protection	✓			
Obstructed View	✓			
Tire Condition	✓			
Platform Condition	✓			
Wiring	✓			
Glass	✓			

* Satisfactory
** Unsatisfactory

Type of Equipment: CAT BULLDOZER
Contractor: JCT
Construction Engineer: N/A
Date: 9-13-94 12:46 pm
Keith Pebbles

EXHIBIT 1

EQUIPMENT INSPECTION CHECKLIST
(EXCLUDING CRANES)

Item	S*	U**	N/A	Comments
Backup Alarm		✓		SPOTTER will be used when BACKING UP
Visible Leaks		✓		Poly-sheeting placed under BREAKE TO CAPTURE LEAKS
Fire Extinguisher	✓			
Seat Belt	✓			
Controls Identified	✓			
Roll-Over Protection	✓			
Obstructed View	✓			
Tire Condition	✓			
Platform Condition	✓			
Wiring	✓			
Glass	✓			

* Satisfactory
** Unsatisfactory

Type of Equipment: CASE BACKHOE
Contractor: JCF
Construction Engineer: N/A
Date: 9-19-94 0730

KEY N MEANS and ABOVE USE

APPENDIX 5

ATTACHMENT 6

Health and Safety Field Log

LOS ALAMOS NATIONAL LABORATORY

ENVIRONMENTAL RESTORATION

FIELD LOG BOOK NO. 114

O.U. 1130 has received the authority from the R.P.F. (Renee Archuleta) to transfer LANL E.R. Field Log Book No 114 to account book S 295, with pre-numbered pages.

July 21, 1994 MICHAEL HENKE

Michael Henke

HEALTH AND SAFETY LOG BOOK · FIELD INVESTIGATION

OPERABLE UNIT: 1130

Technical Area 36 & 18

Field Team leader: MIKE HENKE

Site Safety Officer (Investigator):

KEN H. McFADDEN Ken H. McFadden KHM

7-14-94 (THURSDAY) TA-36 [illegible] SSO

(0720) CGI/O_2 CALIBRATION AT KAISER: 50% LEL - METHANE, 0% O_2 - NITROGEN

(0730) HNU CALIBRATION AT KAISER: 56 PPM AT SPAN 10.50

(1130) Conducted TAILGATE SAFETY MEETING

(1148) HNU Readings AT AAB 1915
BKG = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1157) HNU Readings AT SAMPLE # AAB 1914
BKG = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1200) HNU Readings AT SAMPLE # AAB 1913
BKG = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1216) HNU Readings AT SAMPLE # AAB 1911
BKG = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1218) HNU Readings ~~AT SAMPLE #~~ 7-14-94 INSIDE OF OUTFALL PIPE
BKG = 0.2 PPM
Reading = 0.2 PPM

7-14-94 (CONT.) TA-36 Ken H. Nichols (CSO)

(1224) HNU Readings AT AA13 1912

BKG = 0.2 PPM

Pier = 0.2 PPM

During = 0.2 PPM

(1300) CG/O_2 monitoring INSIDE of SEPTIC TANK. Probe was extended down INTO the TANK. TANK LID DOES NOT SEAL TIGHT ALLOWING FOR some ventilation.
KHN 7-14-94

LEL Reading = 0%, NO Needle Deflection

O_2 Reading = 21%, NO Needle Deflection

Ken H. Nichols

7-21-94 (THURSDAY) TA-~~78~~ 56 RHM 7-21-94 Ken H. Mitchell 550

(0715) CGI/O_2 CALIBRATION AT KAISER: 50% LEL - METHANE, 0% O_2 - NITROGEN

(0722) HNU CALIBRATION AT KAISER: 56 PPM AT 10.50 SPAN

(1105) Conducted tail GATE SAFETY MEETING

(1220) Initial Monitoring of SEPTIC TANK HEAD SPACE.
CGI/O_2 - 0% LEL / 21% O_2

HNU - BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1221) HNU Reading of First Draw of sample AAB1873
BKG = 0.2 PPM
Reading = 0.2 PPM

(1239) HNU Reading of 2nd Draw of SAMPLE AAB 1874
BKG = 0.2 PPM
reading = 0.2 PPM
(NOTE) CGI/O_2 monitor is showing 0% LEL & 21% O_2

(1247) HNU & CGI/O_2 Reading while drawing sample # AAB 1875
HNU: BACKGROUND = 0.2 PPM - Reading = 0.2 PPM

CGI/O_2: 0% LEL, 21% O_2

(1249) HNU & CGI/O_2 Readings while Drawing sample # AAB 1876
HNU: BACKGROUND: 0.2 PPM - Reading: 0.2 PPM

CGI/O_2 0% LEL, 21% O_2

7-21-94 (CONT) TA-48 36 KMM 7-21-94

(1252) HNU Reading while drawing Sample # AAB KMM 7-21-94 1876
2PPM SPIKE, Reading did NOT stabilize
ABOVE BACKGROUND. This sample is a Sludge
Sample

(1312) HNU ; CGI/O_2 readings while drawing sample # AAB KMM 7-21-94 1876
HNU = 0.4 PPM (Spike) BKG = 0.2 PPM
0.2 PPM Breathing zone
CGI/O_2 = 0% LEL, 21% O_2

(1315) HNU ; CGI/O_2 Readings WHILE DRAWING SAMPLE # AAB KMM 7-21-94 1877
HNU = 0.2 PPM (Background) / 0.2 PPM Reading
CGI/O_2 = 0% LEL, 21% O_2

NOTE: RAINING lightly, will suspend work if it starts to
RAIN harder. Lightning can be seen in the DISTANCE
but at this time is NOT a threat

(1319) RAIN HAS STOPPED. No lightning observed.

(1325) HNU ; CGI/O_2 Readings while Drawing sample # AAB KMM 7-21-94 1878
HNU = 0.2 PPM (Background) / 0.2 PPM (reading)
CGI = 0% LEL / 21% O_2

7-25-94 (MONDAY) TA-36 [illegible]

(0722) HNU CALIBRATION AT KAISER: 50 PPM AT 10.50 SPAN

(0000) SET UP WORK ZONE FOR WATER SAMPLING AT PHOTO OUT FALL

(0030) CONDUCTED TAIL GATE SAFETY MEETING.

(1045) HNU Reading INSIDE of PHOTO OUTFALL.
Background = 0.2 PPM
READING = 0.2 PPM.

(1113) HNU Reading INSIDE of PHOTO OUTFALL.
Background = 0.2 PPM
Reading = 0.2 PPM

(1135) Exited WORK AREA.

(1153) STARTED TEAR DOWN of WORK AREA. No more sampling to be conducted today.

[illegible]

7-28-94 (THURSDAY) TA-36 Ken H. Nickelson

(0800) HNU Calibration at Kaiser: 56 PPM at 10.30 SMAN

(1115) Conducted Tail Gate Safety Meeting.

(1205) Entered

(1214) HNU Readings for Sample # AAB 1852 & 1853 (Duplicate)
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1240) HNU Readings for Sample # AAB 1854
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1257) HNU Readings for Sample # AAB 1855
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1315) HNU Readings For Sample # AAB 1856
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1331) HNU Readings FOR SAMPLE # AAB 1857
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

7-28-94 (CONT.) TA-36 [illegible]

(1334) Rain falling, HNU impacted by high humidity. Surface Soil sampling crew to wait out the rain in the crew. Rad Survey crew to continue, lightning is not a concern at this time.

(1410) Rain has subsided. Surface soil sampling crew to continue sampling.

(1418) HNU Readings for Sample # AAB 1858
Background: 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1435) HNU Readings for Sample # AAB 1859
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1449) HNU Readings for Sample # AAB 1860
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

[illegible]

8-3-94 (WEDNESDAY) TA-36 Kim H. McKee

(0820) HNU CALIBRATED AT RANGE: 56 PPM AT 1000 SPAN. KHM 8-3-94

(1025) Entered the work area to observe RAD Survey crew. Activities being conducted in accordance w/ HS SSHASP.

KHM 8-3-94

(1044) HNU Reading for SAMPLE # AAB 1834 & 1835 (duplicate)

BACKGROUND = 0.2 PPM

PRIOR = 0.2 PPM

DURING = 0.2 PPM

(1106) HNU Readings FOR SAMPLE # AAB 1836

BACKGROUND = 0.2 PPM

PRIOR = 0.2 PPM

DURING = 0.2 PPM

(1121) HNU Readings FOR SAMPLE # AAB 1837

BACKGROUND = 0.2 PPM

PRIOR = 0.2 PPM

DURING = 0.2 PPM

(1135) HNU Readings FOR SAMPLE # AAB 1838

BACKGROUND = 0.2 PPM

PRIOR = 0.2 PPM

DURING = 0.2 PPM

(1148) HNU Readings FOR SAMPLE # AAB 1839

BACKGROUND = 0.2 PPM

PRIOR = 0.2 PPM

DURING = 0.2 PPM

8-3-94 (CONTINUED) TA-36 Steve H. McFadden

(1200) HNU Readings FOR SAMPLE # AAB 1840

BACKGROUND = 0.2 PPM

Prior = 0.2 PPM

During = 0.2 PPM

(1213) HNU Readings FOR SAMPLE # AAB 1841

BACKGROUND = 0.2 PPM

Prior = 0.2 PPM

During = 0.2 PPM

(1227) HNU Readings FOR Sample # AAB 1842

BACKGROUND = 0.2 PPM

Prior = 0.2 PPM

During = 0.2 PPM

Steve H. McFadden

8-4-94 (THURSDAY) TA-36 [illegible]

(0720) HNU Calibration at Kaiser 5.6 ppm at 10.50 SAMU

(1000) Conducted Tail Gate Safety Meeting.

(1020) Entered work area to conduct surface soil sampling at the "Boneyard" PRS 36-005.

(1037) HNU Readings for Sample # AAB 1861; 1862 (Duplicate) ZAM 8-4-94

Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1058) HNU Readings for Sample # AAB 1863

Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1113) HNU Readings for Sample # AAB 1864

Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1132) HNU Readings for Sample # AAB 1865

Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1146) HNU Readings for Sample # AAB 1866

Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

Ken H. Zeller 11

8-4-94 (CONTINUED) TA-36

(1201) HNU Readings AT SAMPLE # AAB 1867
BACKGROUND = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1215) HNU Readings AT Sample # AAB 1868
BACKGROUND = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1229) HNU Readings AT Sample # AAB 1869
BACKGROUND = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1240) Exited work area following Decon for LUNCH.

(1340) Entered work area TO CONTINUE surface soil Sampling.

(1348) HNU Readings for Sample # AAB 1843
BACKGROUND = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1413) HNU Readings For Sample # AAB 1870 and 1871
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

8-4-94 (cont) TA-36 Ken H. Tschiller

(1428) HNU Readings AT SAMPLE # HAB 1872

Background = 0.2 PPM

Prior = 0.2 PPM

During = 0.2 PPM

Ken H. Tschiller

8-5-94 (Friday) TA-36 Ken H. Hilder

(0932) HNU Calibration at Kaiser: 56 ppm at 10.50 span

(0940) CGI calibration at site: 50% LEL & 15% O_2 using a calibration gas made up of .75% Pentane, with 15% O_2

(0950) Initial Reading of the septic tank internal atmosphere
0.2 ppm (HNU) Background = 0.2 ppm
0% LEL } (CGI)
21% O_2 }

(1018) Conducted Tail Gate Safety Meeting.

(1100) Septic tank monitoring while obtaining water samples
0.2 ppm (HNU) 0.2 ppm Background
0% LEL } (CGI)
21% O_2 }

NOTE: CGI sampling tube is inserted into the septic tank for continual monitoring.

(1117) Setic tank monitoring results while obtaining water samples
0.2 ppm (HNU) 0.2 ppm Background
0% LEL } (CGI)
21% O_2 }

(1123) Septic tank monitoring results while obtaining water samples
0.2 ppm (HNU) Background = 0.2 ppm
0% LEL } (CGI)
21% O_2 }

8-5-94 (CONT) TA-36 [signature]

(1130) Septic tank monitoring results while collecting sludge samples

0.2 ppm (HNU) Background = 0.2 ppm

0% LEL } (CGI)
21% O_2 }

(1141) Septic tank monitoring results while collecting sludge samples

0.2 ppm (HNU) Background = 0.2 ppm

0% LEL } (CGI)
21% O_2 }

(1152) Septic tank monitoring results while collecting sludge sample

0.2 ppm (HNU) Background = 0.2 ppm

0% LEL } (CGI)
21% O_2 }

[signature]

8-8-94 (MONDAY) TA-36 [illegible]

(0730) HNU Calibration at Kaiser: 36 ppm at 10:50 AM.

(1000) Work area set up and sample location identification at IJ Firing site.

(1045) Conducted Tail Gate safety meeting.

(1102) Entered the work area to retrieve surface soil sampling

(1111) HNU Readings for sample # AAB 1885 and 1886
Background = 0.1 ppm
Prior = 0.1 ppm
During = 0.1 ppm

(1130) HNU Readings for Sample # AAB 1887
Background = 0.1 ppm
Prior = 0.1 ppm
During = 0.1 ppm

(1141) HNU Readings for Sample # AAB 1888
Background = 0.1 ppm
Prior = 0.1 ppm
During = 0.1 ppm

(1152) HNU Readings for Sample # AAB 1889
Background = 0.1 ppm
Prior = 0.1 ppm
During = 0.1 ppm

(1200) Broke down work area and left the site for the day.

[illegible]

10

8-11-94 (THURSDAY) TA-36 [illegible]

(0800) HNU Calibration at Kaiser: 56 ppm at 10.50 span

(0915) Set up work area at MOE Magazine area.

(1000) Conducted Tail Gate safety meeting.

(1017) Entered work area to hike down to the sample locations.

(1041) Arrived at the 1st sample location

(1050) HNU Readings for sample # AAB 1812
Background: [illegible]
Prior = 0.2 ppm
During = 0.2 ppm

(1104) HNU Readings for sample # AAB 1813
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1123) HNU Readings for sample # AAB 1814
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1138) HNU Readings for sample # AAB 1815
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

[illegible]

8-12-94 (Friday) TA-3L [signature]

(0725) HNU Calibration at Kaiser: 56 PPM at 10.50 PPM

(0945) Set up of work zones in Pennillo Canyon.

(1036) Conducted tail gate safety meeting.

(1048) Entered work area to start surface soil sampling.

(1054) HNU readings for sample # AAB 1820 KMA 8-12-94
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1108) HNU Readings for Sample # AAB 1819
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1121) HNU Readings for Sample # AAB 1818
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1133) HNU readings for Sample # s AAB 1817 (Duplicate) ; 1816
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1142) Completed sampling and headed back for the CLZ

[signature]

8-16-94 (Tuesday) TA-36 Ken H. McMillan

(0718) HNU Calibration at Kaiser 56 ppm at 10.50 eV

(1030) Conducted Tail Gate safety meeting

(1045) Entered work area to collect 4 surface soil samples in lower Pothillo Canyon

(1052) HNU Readings for sample # AAB 1942
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1112) HNU Readings for Sample # AAB 1941
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1126) HNU Readings for sample # AAB 1940
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1140) HNU Readings for sample # AAB 1939
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm

(1230) Tear down of work zone & CRZ

Ken H. McMillan

Ken H. Tichelle

8-22-94 (monday) TA-36

(0730) HNU Calibration at Kaiser: 56 ppm at 10.24 span

(0815) Headed out for water canyon to collect surface soil samples

(0930) Set up work zones on road leading up water canyon

(1030) Conducted tail gate safety meeting

(1047) Entered work zone to collect surface soil samples.

(1100) HNU Readings for AAB 1821

Background = 0.2 ppm

Prior = 0.2 ppm

During = 0.2 ppm

(1118) HNU Readings for Sample # AAB 1822

Background = 0.2 ppm

Prior = 0.2 ppm

During = 0.2 ppm.

(1141) HNU Readings for Sample # AAB 1823

Background = 0.2 ppm

Prior = 0.2 ppm

During = 0.2 ppm

(1200) HNU Readings for Sample # AAB 1824

Background = 0.2 ppm

Prior = 0.2 ppm

During = 0.2 ppm

Ken H. Tichelle

9-12-94 (MONDAY) TA-36 Ken H. Nichols

(0955) George Marino (ESH-5) AND I INSPECTED the Drill RIG TO BE USED ON OU-1130 at the Drill YARD. The Drill rig appeared to be in safe operating condition and is ready for use on our site. See Drill rig INSPECTION FORM for specific ITEMS INSPECTED.

Ken H. Nichols

9-13-94 (TUESDAY) TA-36 Ken N. Mesheller

(0835) HNU CALIBRATION AT KAISER: 58 PPM AT 9.80 SPAN

(0900) Completed required training for Ambrose so that he could operate the BACK HOE for todays activity.

(1120) Arrived on-site at the sump location

(1130) CGI/O_2 monitor calibration: 50 % LEL / 0% O_2 calibration check ok.

(1135) HNU & CGI/O_2 reading in the sump after removing lid: HNU = 0.2 PPM CGI/O_2 = 0% LEL/21% O_2

(1145) Set up the work area & CRZ and got equipment ready for excavation of the sump.

(1246) Inspected the BACKHOE other than a small leak & no back up alarm. The BACKHOE is ready for use. a piece of poly will be placed under the BACKHOE to capture any leaks and a spotter will be used to help back up the rig.

(1250) Conducted Tail Gate safety meeting.

(1300) Entered work zone to begin excavation of the sump.

(1320) HNU reading of the 1st load of soil brought out of the sump 0.2 PPM which is the same as background.

(1400) The BACKHOE was able to lift the corrugated culvert from the sump.

NOTE: Dust levels (airborne) are being kept to a minimum due mostly to Ambrose's water suppression machine we have been using

9-13-94 (CONT) TA-36 Ken A. Fickle

From a high horizon.

(1023) HNU & CGI/O2 Readings for SAMPLE # AAA 1801

HNU
- Background = 0.0 PPM
- Prior = 0.0 PPM
- During = 0.0 PPM

CGI/O_2 - 0% LEL / 21% O_2

(1030) Crew is covering the hole and stockpiled soils for the night. The excavation will be covered with aluminum plywood as a means of preventing some one from inadvertently falling into the hole. Plastic and/or tarps will be used to cover the excavation and stockpiled soil to keep rain off and to minimize airborne releases from wind blown soils.

NOTE: Noise monitoring was conducted in the work area 80dB or greater reading were measured in the exclusion zone. All workers inside the EZ were wearing ear plugs when the backhoe was operating.

9-14-94 (WEDNESDAY) TA-36 [illegible]

(0632) ZEROED MINI RAM AT KAISER

(0640) CGI/O_2 METER CALIBRATION CHECK AT KAISER: 50% LEL ; 0% O_2 RESPECTIVELY

(0643) HNU CALIBRATION CHECK AT KAISER: 58 PPM AT 9.80 SPAN

(0840) SIGNED IN AT GUARD GATE for TA-36

(0845) SIGNED IN AT TA-36 ADMIN BLDG

(0900) Arrived at SUMP SITE.

(0915) UNCOVERED SUMP and found it to be DRY

(0930) Performed DAILY INSPECTION of the BACK HOE. Condition did NOT change from yesterday.

(0942) CONDUCTED TAIL GATE SAFETY MEETING.

(1000) Entered WORK AREA to CONTINUE SUMP EXCAVATION AND SAMPLING

(1009) STARTED MINI RAM for airborne DUST MONITORING

(1010) STARTED EXCAVATION

(1014) BACKHOE extracted material from the sump that we are going to sample. As per normal operating practices established for this TASK, the BACK HOE BUCKET WAS GROUNDED prior to sampling. This SAFE practice is required whenever an individual is within the swing radius of the BACK HOE BUCKET.

9-14-94 (cont) TA-36 [signature]

(1019) HNU & CGI/O_2 readings for sample # AAB 1802

HNU: Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

CGI/O_2: LEL = 0%
O_2 = 21%

(1039) HNU & CGI/O_2 readings for samples AAB 1803 and 1804 (duplicate)

HNU: Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

CGI/O_2: LEL = 0% / O_2 = 21%

(1151) HNU & CGI/O_2 Readings for sample # AAB 1805

HNU: Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

CGI/O_2: LEL = 0% / O_2 = 21%

(1210) HNU & CGI/O_2 Readings for sample # AAB 1806

HNU: Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

CGI/O_2: LEL: 0% / O_2 = 21%

(1215) Crew is covering the excavation and stockpiled soils the same way as yesterday. Jeff Bingham to clean backhoe

9-14-94 (CONT) TA-36 Ken H. Holder

wearing the PPE as specified in the SSHSP

(1230) STOPPED the minuram monitor DUST LEVEL were .24 mg/m³ which is under our action level of 2.5 mg/m³.

(1330) Crew has exited the work area following Decon. The EZ barrier will be modified to allow for decon of the corrugated culvert and inlet pipe removal from the sump Both items will be swiped and smeared for rad prior to Decon.

(1500) Area is being secured following final Decon and equipment release, area surrounding the sump and stockpiled soil to be flagged off. Photos of how we secured the area were TAKEN.

(1530) Left the site for the day, sump will not be backfilled until sample results are obtained, approx. 2 weeks.

Ken H. Holder

9-20-94 (TUESDAY) TA-36 [illegible]

(0750) HNU Calibration at Kaiser: 58 ppm at 9.80 span

(1000) Set up work area at upper Potrillo canyon to place sampling equipment down stream from our previous sample locations.

(1023) Conducted tailgate safety meeting.

(1034) Entered work area to place sampling equipment

(1052) HNU Readings at 36-3090. Location where UAEE sampling equipment was placed
Background = 0.2 ppm
Reading = 0.2 ppm

NOTE: Sampling equipment included placing 3 2 liter poly bottles with a mesh lid in the ground. The bottles are aligned perpendicular to the flow of water.

(1104) HNU Readings at 36-3091 - location where 2nd sampling equipment was placed.
Background = 0.2 ppm
Reading = 0.2 ppm

(1118) HNU Readings at 36-3092 - location where 3rd sampling equipment was placed.
Background = 0.2 ppm / Reading = 0.2 ppm.

(1130) HNU Readings at 36-3093 - location of lower sampling equipment placement. Background = 0.2 ppm / Reading = 0.2 ppm

9-20-94 (CONT) TA-36 Ken H. Zeller

(1300) HNU Readings for 36-3119 - LOCATION where upper sampling equipment was placed in lower Potrillo CANYON
Background = 0.2 PPM / Reading = 0.2 PPM

(1310) HNU Readings for 36-3120 - LOCATION where 2nd sampling equipment was placed. Background = 0.2 PPM / Reading = 0.2 PPM

(1320) HNU Readings for 36-3121 - LOCATION where 3rd sampling equipment was placed in lower Potrillo canyon
Background = 0.2 PPM
Reading = 0.2 PPM

(1332) HNU Readings for 36-3122 - LOCATION where 4th sampling equipment was placed in lower Potrillo canyon
Background = 0.2 PPM
Reading = 0.2 PPM

(1350) Crew has arrived in Cre. Only the shovel, hammer and tubs used in the E.Z. need decontamination.

(1430) Crew tears down work area and is proceeding to take waste to storage location.

Ken H. Zeller

9-21-94 (WEDNESDAY) TA-36 [signature]

(0728) HNU Calibration at KMSEC 58 PPM out 9.80 span

(0950) Conducted Tail Gate Safety Meeting.

(1006) Entered work area to place sampling equipment in Fence Canyon

(1023) HNU Readings at first sample equipment placement locations (36-3086) upper most location
Background = 0.2 PPM Reading = 0.2 PPM

(1034) HNU Readings at 2nd sample equipment placement location 36-3087. Background = 0.2 PPM / Reading = 0.2 PPM

(1102) HNU Readings at 3rd sample equipment placement Location 36-3088
Background = 0.2 PPM / Reading = 0.2 PPM

(1122) HNU Readings at 4th sample equipment placement location 36-3089 lowest most location
Background = 0.2 PPM
Reading = 0.2 PPM

(1130) Crew hiking out of canyon to decon and tear down work area.

[signature]

9.22-94 (THURSDAY) TA-36 [signature]

(0715) HNU Calibration at Kaiser: 53 PPM at 7.88 SHW

(1100) Set up work zone in Water Canyon

(1115) Conducted Tail Gate Safety Meeting

(1135) Entered work area to place sampling equipment in Water Canyon

(1140) HNU Readings for 36-3082 Sample Equipment placement location upper most location
Background = 0.2 PPM / Reading = 0.2 PPM

(1153) HNU Readings for 36-3083 - Sample Equipment placement location
BACKGROUND : 0.2PPM / Reading: 0.2 PPM

(1205) HNU Readings for 36-3084 - Sample Equipment placement location
Background = 0.2 PPM
Reading = 0.2 PPM

(1217) HNU Readings for 36-3085 - Sample Equipment placement location: Lowest local.
Background: 0.2 PPM
Reading = 0.2 PPM

(1230) Crew decontaminating in area. Following personnel & equipment decon, the site will be torn down and the crew will leave the site for the day.

[signature]

4-26-94 (MONDAY) TA-36 Alex N. Aldridge

Set up Drill rig and work cones at MDA AA Trenches. Utility locators showed up to complete excavation permit. No drilling today only preparation work. If shot schedule allows us access, will start drilling tomorrow.

Alex N. Aldridge

9-27-94 (TUESDAY) TA-36

(0701) Calibrated Gilian Pump # 14851

(0705) Calibrated Gilian Pump # 14852

(0710) HNU calibration check: 58 PPM at 7.58 SPAN

(0713) Zeroed mini ram

(0900) Arrived at the MDA AA site and finished set up work.

(1011) Deconned drill rod prior to drilling first hole.

(1015) Conducted Drill Rig Inspection

(1045) Conducted Tail Gate Safety Meeting

(1104) Started Personnel Sampling Pumps on Jeff Bugham and Peter ~~Grimm~~ KHM 9-27-94 Grimm: Jeff Pump # 14852 sample # 36-01/Peter Pump # 14851 sample # x

(1110) Started mini ram attached to the drill rig.

(1122) Started vibrating 1st hole.

(1125) HNU monitoring at 2' depth (Test Hole # 1)
Background = 0.2 PPM
Inside Drill Pipe = 0.2 PPM

(1230) Exited work area following decon for lunch.

(1234) Shut off both personal pumps

9-27-94 (CONT) T9-36 [illegible]

(1326) STARTED BOTH PERSONAL PUMPS

(1330) Entered work area to continue work. Vibratory Rod dri.out was as good as expected. Crew to switch out to auger head.

(1424) Started to auger drill down first hole.

(1440) HNU Readings of cuttings from #4 hole at 0' to 3' depth
Background = 0.2 ppm
Reading = 0.2 ppm

(1515) Exit work area following decon.

(1528) STOPPED PERSONAL PUMPS

(1540) STOPPED MINI RAM 0.15 mg/m³ TWA

(1541) Secured site for the night.

[illegible]

9-28-94 (WEDNESDAY) TA-36 Ken N. Nibbe

(0719) Zeroed MINI RAM

(0722) HNU Calibration at Raised: 58 PPM at 7.84 span

(0937) CONDUCTED TAILGATE SAFETY MEETING

(1043) Turned on MINI RAM

(1041) Started drilling in same hole as yesterday. TODAY were going to use the solid stem auger to see if the Drill rig will dig past the confining layer encountered yesterday.

(1043) HNU Readings of cuttings from a depth of 2.5' (TEST HOLE #1)
BACKGROUND: 0.2 PPM
Reading = 0.2 PPM

(1102) HNU readings of cuttings from a depth of 3-3.5'
BACKGROUND = 0.2 PPM
Reading = 0.2 PPM

(1110) Debris came out of cuttings, HNU readings of Debris
BACKGROUND = 0.2 PPM HOLE WAS FROM 3.5-6' DEPTH
Reading = 0.2 PPM

(1120) HNU Readings of cuttings from 6-8'
BACKGROUND = 0.2 PPM
Reading = 0.2 PPM

9-28-94 (CONT) TA-18 [illegible]

(1129) HNU Readings at top of drill rod at a depth of 8-10'
no cuttings coming from the hole.
Background = 0.2 ppm
Reading = 0.2 ppm

(1135) HNU readings of cuttings at depth of 10-12'
Background = 0.2 ppm / Reading = 0.2 ppm

(1140) HNU reading = of cuttings at 12-15'
Background = 0.2 ppm
Reading = 0.2 ppm

(1205) HNU Readings for sample # HAB 2009 ~~10 to 12'~~ KZM 9-28-94 12' TO 15'
Background = 0.2 ppm
Prior = 0.2 ppm
During = 0.2 ppm
BZ = 0.2 ppm

(1215) Decon for lunch

(1310) Back to work tripping drill rod

(1350) HNU reading down hole after tripping last rod. ~~10' to 12'~~ KZM 9-28-94 12' TO 15'
Background = 0.2 ppm
Reading = 1 ppm

(1400) Moved rig to new drill location will continue drilling tomorrow

(1445) Stopped min ram TWA = .10 mg/m³ Crew to leave the site for the day following decon.
[illegible]

9-29-94 (THURSDAY) TA-36 [signature]

(0727) HNU calibrated at KAISER: 58 PPM at 7.6 SPAN

(0728) Gilian Pump # 14851 Pre calibration at KAISER
3.665 lpm
3.658 lpm
3.644 lpm

(0729) Gilian Pump # 14852 Pre calibration at KAISER
3.608 lpm
3.599 lpm
3.583 lpm

(0732) Zeroed MINIRAM

(0909) Conducted Tail Gate Safety Meeting

(1000) STARTED MINIRAM attached to Drill Rig

(1004) STARTED Personal Pump # 14852, sample # 36-03 on Bert Trujillo in BZ.

(1011) STARTED Personal Pump # 14851, sample # 36-04 on myself in BZ.

(1013) STARTED Drilling hole # 36-3125

(1020) HNU Reading inside of hollow stem ~~auger~~ drill pipe & split spoon at Depth 0-3' KMM 9-29-94
Background = 0.2 ppm / Reading = 0.2 ppm

(1045) HNU Reading at gravel surface between gravel and ~~auger~~ drill pipe KMM 9-29-94 at depth 3'-3'3"
Background = 0.2 ppm
Reading = 0.2 ppm

9-29-94 (CONT) TA-36 [signature]

(1130) HNU readings of core at depth of 3'0"-3'3" ZHM 9-29-94
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1200) HNU Readings Down drill pipe at a depth of 3'3" TO 3'9" ZHM 9-29-94
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1256) STOPPED BOTH Personal PUMPS

(1300) Exited OCC FOR LUNCH

(1345) STARTED BOTH PERSONAL PUMPS & ENTERED WORK area to Continue Drilling hole # 36-3125 with a hollow stem auger instead of the hollow stem drill pipe used this MORNING.

(1350) STARTED Drilling

(1408) HNU Readings in Hole at 3'9" TO 4' DEPTH ZHM 9-29-94
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1421) HNU monitoring of cuttings from 4'0.5" depth (36-3125)
Reading = 0.2 PPM / BACKGROUND = 0.2 PPM
~~(1445) SHUT OFF MINI RAM = 0.10 mg/m³ TWA~~ ZHM 9-29-94

(1500) Crew TO Decon and leave the site for the DAY.
(1530) STOPPED PERSONAL PUMPS
(1541) SHUT OFF MINI RAM = 0.14 mg/m³ TWA.

(1621) PUMP ADT CALIBRATIONS: See CAL FORM [signature]

9-30-94 (FRIDAY) TA-36 [illegible]

(0710) Zeroed MINI RAM

(0745) HNU field check at KAISER: 50 PPM at 7.24 SPAN

(0837) Conducted TAIL GATE SAFETY MEETING

(1000) Entered work area to continue drilling in HOLE 36-3125

(1030) HNU Reading of cuttings at 7' DEPTH (5'-7' HOLE # 36-3125)
Background = 0.2 PPM
Reading = 0.2 PPM

(1041) STARTED MINI RAM

(1100) HNU Readings of SPLIT SPOON and material in HNU
DEPTH at 5' TO 7' (36-3125)
Background: 0.2 PPM / Reading = 0.2 PPM

(1111) HNU Readings for MAB 1952
Background = 0.2 PPM
Prior = 0.2 PPM
During = 0.2 PPM

(1245) Crew to break for lunch. Crew to decon and move rig after lunch. No additional Drilling or sampling to be performed today.

(1247) STOPPED MINI RAM: TWA = 0.10 mg/m³

[illegible]

10-3-94 (MONDAY) TA-36 [illegible]

(0700) Turned Min. RAM

(0710) Personal Pump # 1852 Air calibration at Kaiser:
3.714 lpm
3.717 lpm
3.706 lpm

(0712) HNU calibration check at Kaiser 53 PPM at 226 ppm

(0942) Conducted TAIL GATE SAFETY MEETING

(1000) Entered work area to continue drilling hole # 36-3125

(1010) HNU Reading of hole # 36-3125 after removing poly covering,
Background = 0.2 PPM
Reading = 0.2 PPM

(1014) STARTED MIN. RAM located on Drill Rig above hole # 36-3125.

(1015) Crew changing out rotary head for vibratory head. Ear plugs required.

(1120) Began vibratory Drilling

(1125) HNU Reading of hole at 7' ~~[illegible]~~ 10-3-94 10' (36-3125)
Background = 0.2 PPM
Reading = 0.2 PPM

Ken H. McFadden

10-3-94 (CONT) TA-36

(1139) HNU Readings for Sample # AHB 1953 7.8' TO 10' DEPTH
KHM 10-3-94
Background = 0.2 PPM
Outside of SPLIT SPOON = 0.2 PPM
Inside of " " = 0.2 PPM
While Homogenizing sample = 0.2 PPM
While filling sample containers = 0.2 PPM

(1212) HNU reading of hole 10'-12' depth (36-3125)
Background = 0.2 PPM
Reading = 0.2 PPM

(1245) LUNCH

(1305) Back to work

(1334) Started drilling with vibratory head, to collect sample at Depth of 14'

(1407) HNU Readings for sample # AHB 1954 12' TO 14'
Background = 0.2 PPM
Outside of SPLIT SPOON = 0.2 PPM
Inside of SPLIT SPOON = 0.2 PPM
While homogenizing sample = 0.2 PPM
While filling sample containers = 0.2 PPM

(1433) HNU Readings down hole # 36-3125 at 19' deep (14'-19')
Background = 0.2 PPM
Reading = 0.2 PPM

(1456) HNU Readings down hole # 36-3125 at 22' deep (19' TO 22')
Background = 0.2 PPM / Reading = 0.2 PPM

10-3-94 (CONT) TA-36 [signature]

(1444) - READINGS DOWN HOLE #36-3125 AT 26' DEPTH (22:26)
BACKGROUND = 0.0 MRM
READINGS = 0.2 MRM

(1450) CREW TO WINDOW HOLE, TUFF WAS EXCAVATED. UNAB GO DEEPER due to lack of auger. Final sample from hole was to collected at TUFF interface. STORED NUMBER = 0.10 mg/m³ TWA.

(1545) CREW SAFE AS FOLLOWING DRILL.

(1550) CREW LEAVES SITE FOR THE DAY

[signature]

10-5-94 (WEDNESDAY) TA-36 Ken H. Nichols

(0915) ARRIVE AT THE DIDA-AA SITE

(0918) CONDUCTED TAILGATE SAFETY MEETING PRIOR TO THE CREW ENTERING THE WELL CAGE TO DECONTAMINATE RIG AND PERFORM SOME MINOR MAINTENANCE ACTIVITIES. NO SAMPLING TO BE CONDUCTED TODAY.

(1140) I LEFT THE SITE FOR THE DAY. THE CREW WILL RETURN TO FINISH UP MAINTENANCE & CLEAN UP ACTIVITIES.

Ken H. Nichols

10-6-94 (THURSDAY) TA-36 [illegible]

(0700) HNU Calibration check OK RUNNER: 50 PPM AT 7.16 [illegible]

(1000) Conducted TAILGATE SAFETY MEETING

(1020) Entered work zone to START drilling hole # 36-3126
Drill rig could not be STARTED

(1050) Got Drill rig STARTED

(1053) STARTED [illegible] RAM

(1101) STARTED Drilling hole # 36-3126

(1103) HNU Reading of hole / cuttings 0.2' depth (36-3126)
BACKGROUND: 0.2 PPM
Reading = 0.2 PPM

(1135) HNU Reading inside of Drill pipe 2'-3' depth (36-3126)
RAA 10-6-94
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1152) HNU Reading inside of Drill pipe 3'-4' depth (36-3126)
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1207) HNU Readings of material within split spoon 3'-4' depth (36-3126)
BACKGROUND = 0.2 PPM
Reading = 0.2 PPM

(1215) HNU Readings of samples MB 1950's AND 1951 (SMW7)
BACKGROUND = 0.2 PPM (3'-4' depth) (36-3126)

10-6-94 (CONT) 7M-36

Prior = 0.2 PPM

During Homogenizing = 0.2 PPM

(1230) HNU Readings Down Hole # 36-3126 at 6' Depth (6'to 8')

Background = 0.2 PPM

Reading = 0.2 PPM

(1418) HNU Readings down Drill Pipe at 8' Depth (6'to 8') (36-3126)

Background = 0.2 PPM

Reading = 0.2 PPM

(1423) HNU Readings of split spoon at 8' Depth (6'to 8') (36-3126)

Background = 0.2 PPM

Reading = 0.2 PPM

(1430) Material in spoon not sampled, since the hole is still in the trench.

(1445) Stopped Mini Ram: 0.26 mg/m³ TWA.

(1455) Crew enters CRZ for Decontaminating.

(1510) Crew leaves the site for the Day.

10-11-94 (TUESDAY) TH-36 [illegible]

(0752) HNU Calibration check at Kaiser: 58 ppm at 6.88 span

(0917) Conducted tail gate safety meeting.

(0945) Entered work area to continue drilling hole # 36-3126.

(0950) Noise survey of drill rig at idle 84 dB was exceeded only near the engine

(1000) Started drilling with vibratory hammer; noise survey behind blast shield did not exceed 84 dBa. Range (70.75 dBa)

(1004) Stopped drilling due to hitting impress.

(1005) HNU reading of hole #36-3126 at 8 1/2' depth (8'-8 1/2')
Background = 0.2 ppm
Reading = 0.21 ppm

(1006) Started mini cam attached to drill rig near hole

(1008) Restarted drilling after adding weight to the drill rig

(1015) Stopped drilling due to hitting impress. Team to trip drill pipe, clean out split spoon and restart.

(1016) HNU reading of hole # 36-3126 at 8 1/2' split spoon
Background = 0.21 ppm
Reading = 0.21 ppm

10-11-94 (cont) TH-36 Kevin H. Nichols

(1035) Completed drilling to 10', will be tripping pipe and collecting sample.

(1036) HNU Reading of hole # 36-3126 at 10' depth (8½' to 10')
Background = 0.2 ppm
Prior = 0.2 ppm

(1100) HNU Readings of split spoon (36-3126) (8½ to 10')
Background = 0.2 ppm
Reading = 0.2 ppm

(1104) HNU Reading of sample # HAB 1956 (8½ to 10') (36-3126)
Background = 0.2 ppm
Reading = 0.2 ppm

(1127) HNU Reading of Hole # 36-3126 at 12' depth (10' to 12')
Background = 0.2 ppm
Reading = 0.2 ppm

(1134) HNU Reading of split spoon at 12' depth (10'-12') (36-3126)
Background = 0.2 ppm
Reading = 0.2 ppm

(1200) HNU Readings while collecting sample # HAB 1956 (8½ to 10') ~~(10' to 12')~~ 10-11-94 (36-3126)
Background = 0.2 ppm
Prior = 0.2 ppm
Homogenizing = 0.2 ppm
Collecting into jars = 0.2 ppm

10-11-94 (CONT) TM-36 [signature] KHM 10-11-94

(1236) H Reading of hole # 36-3126 at 22' depth (12' to 22')
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1257) HNU reading of SPLITSPOON sample at 12'-22' (36-3126) KHM 10-11-94
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1307) HNU readings while collecting sample #
AAB 1957 (12' TO 22') 36-3126
BACKGROUND = 0.2 PPM
while homog. = 0.2 PPM
while placing INTO JAR = 0.2 PPM

(1333) STOPPED MINI RAM, TWA = .02 mg/m³.

(1400) Crew enters work area to DECON. No additional drilling or sampling today. Following DECON, crew TO relocate RIG AND ZONES.

(1550) Crew exits work area following DECON and leaves the site FOR THE DAY.

[signature]

10-12-94 (WEDNESDAY) TA-36 Tom Mitchell

(0840) HNU Calibration check at Range 38 PPM at 0.88 span

(0858) Conducted TAC Gate Safety Meeting

(1011) 10-12-94 Started Mini-RAM attached to back side of Deere rig.

(1030) HNU Readings of Hole # 36-3127 at 8' depth Reading taken after augers were tripped from the hole. (0' to 8')
Background = 0.2 PPM
Reading = 0.2 PPM

(1109) HNU Reading of Hole # 36-3127 at 9' depth Reading taken inside of Drill Pipe. (8' to 9')
Background = 0.2 PPM
Reading = 0.2 PPM

(1209) HNU Reading of Hole # 36-3127 at 17' depth Reading taken down hole after tripping drill pipe. (9' to 17')
Background = 0.2 PPM
Reading = 0.2 PPM

(1211) HNU Reading of Sampler material from 12-17' depth
Background = 0.2 PPM
Reading = 0.2 PPM

NOTE: Trash Debris was not found, therefore, hole will be abandoned.

(1229) Turned off Mini-RAM TWA .01 mg/m³. No additional Drilling or Sampling to occur today

10-12-94 (CONT.) TA-36

(1230) Crew to decontaminate equipment following end dumping, tear down site and remove equipment from site in preparation of drilling at TA-15 E-F firing site.

(1300) Crew starts one hydraulic drill for lunch.

(1340) Crew starts to tear down site in preparation for move.

(1500) Equipment moved to the access control parking lot, crew leaves for the day.

10-13-94 (THURSDAY) TA-15 [illegible] 40

(0744) Zeroed mini-ram

(0746) HNU Calibration check at Kaiser 58 ppm at 0.72 span

(0900) Arrived at Firing Site E-F location. John Taylor to perform RAD survey of the area in order to establish appropriate zones.

(1000) Conducted Tool Box Safety meeting prior to setting up work zones.

(1100) Started drilling on first drill site location. Higher than expected RAD readings in the vicinity of the drilling location may require a RWP. EWM to contact ESH-1 for final decision.

(1200) LUNCH

(1230) Waiting for EWM to get a verbal from ESH-1 to proceed with drilling without a signed-off RWP.

(1430) ESH-1 will be unable to issue a RWP today but will have it ready by tomorrow.

(1500) Crew secured site for the night and left the site. No monitoring conducted.

[illegible]

10-14-94 (FRIDAY) TA-15 / TA-36 Kevin N. Fields

Rain will prevent us from going into the field today.

ORGANIZED PAPER WORK and held a meeting with Guy Flynn, Mike Hance, Pete Green, Terry Morland and Rebecca Garnett. Straightened out training requirements and decided to make Mike Hance as its stand he has all required training. I'll write a change order specifying the changes.

Mike N. Fields

10-18-94 (Tuesday) TH-15 [signature]

(0705) HNU calibration check at ambient 50 PPM at 0.50 PPM

(0910) Conducted Tail Gate Safety Meeting

(1000) HNU Readings of Hole # 15-2248 Background = 0.2 PPM
Down Hole = 0.2 PPM
Split Spoon = 0.2 PPM
Soil Inside of Sample = 0.2 PPM

(1025) HNU Reading of Sample # ~~AHU~~ 2 removed from hole # 15-2248 [signature] 10-18-94
Background = 0.2 PPM
Bowl = 0.2 PPM
Sampling = 0.2 PPM

(1045) Crew to relocate rig at 2nd drilling site.

(1100) Drill rig stuck in mud, crew attempting to free rig.

(1200) Crew to set up rig at 2nd location between the mounds and have lunch.

note. Drill rig was set up in wrong location crew to move rig to new location and then stop for the day. No additional drilling was performed today. Only 1 sample was collected.

[signature]

Ken H. Kistler

10-19-99 (CONT) 7A-15

(0950) Switching to battery drilling

(1010) STARTED DRILLING WITH BATTERY HEBO & AUGERS. NO GAS MONITORING WAS CONDUCTED. ONCE AGAIN BEHIND THE BLAST SHED READING WERE WELL BELOW THE ~~ACTION~~ LEVEL OF 50 ppm. (BETWEEN ~~05:72~~ 05:72 ppm & 11-19-99 ~~TEAM~~ 10-19-99) MAX OF 79 WAS MEASURED WHEN WIND HAD WAS FIRST STARTED, BUT ONLY LASTED A FEW SECONDS

(1025) HNU READING OF CUTTINGS AT 2' FROM HOLE # 15-2246
BACKGROUND: 0.2 PPM
READING = 0.2 PPM

(1033) HNU READING OF CUTTINGS AT 3' FROM HOLE # 15-2246
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1059) STARTED DRILLING HOLE # 15-2246 W/ BATTERY HEBO.

(1110) HNU READINGS OF OF SPLIT SPOON FROM HOLE # 15-2246 AT 4½'
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1130) HNU READINGS OF SAMPLE MATERIAL FROM HOLE # 15-2246
BACKGROUND = 0.2 PPM
READING = 0.2 PPM

(1220) STARTED DRILLING HOLE # 2247

(1230) HNU READINGS OF HOLE # 15-2247
BACKGROUND = 0.2 PPM
DOWN HOLE = 0.2 PPM
SPLIT SPOON MATERIAL READ AT 0.2 PPM

10-19-94 (CONT) TM-15 [illegible]

(1250) HNU Reading of Hole # 15-2247 at 15"
DEPTH
BACKGROUND = 0.0 PPM
READING = 0.0 PPM

(1337) HNU Reading of Hole # 15-2247 at 0"
BACKGROUND = 0.0 PPM
Reading = 0.0 PPM

(1345) Turned off MINI RAM TWA = 01 mg/m³

(1400) Crew to Decon and leave with cones

[illegible]

10/24/94 Bob Stark SSO.

Arrived 700 AM

Calibrated Instruments.

07:50 HNU Calibration at Kaisen office
58 ppm at 7.6 span

07:35 Gilian Pump #14851 Pre Calibration.
3.665 lpm
3.659 lpm
3.676 lpm.

07:40 Gilian Pump #14852
3.608 lpm
3.595 lpm
3.583 lpm

10:35 Arrived on Site
10:45 Conducted Tailgate Meeting
11:49 Mini Ram 26 minute. .04 TWA
HNU 0 ppm

13:10 Broke Hydraulic Line Spill about a qt. Clean it up off Rig.

13:45 Started up again. Cloud Cover Now Increasing.
Mini Ram .03 TWA 159 minutes.
HNU 0

15:45 Mini Ram .03 TWA 259 minutes
HNU 0

15:30 Shut Down Site For Day.

16:30 Returned To ICF office.

Robert Stand

10-21-94 (FRIDAY) TA-15 Ken H. McFalder

(0720) HNU Calibration check at Kaiser: 58 ppm at 6.30 span

(0723) Zeroed Mini RAM

(0742) Pump # 14652 pre-calibration: 3.549 Lpm, 3.426 Lpm, 3.409 Lpm } No personal air samples collected today.

(0743) Pump # 14651 pre-calibration: 3.694 Lpm, 3.663 Lpm, 3.529 Lpm } No personal air samples collected today.

(0848) Conducted tailgate safety meeting prior to entering the E-F drilling site EZ to drill. Crew to move rig to 4th location and collect samples.

(0917) Noise monitor calibration check

(1002) Started Mini RAM

(1020) Started noise monitoring on myself

(1027) Started drilling hole # 15-2244

(1035) HNU reading @ hole # 15-2249 at 2 1/2' depth
Background: 0.2 ppm
Reading: 0.2 ppm

(1045) Stopped noise monitor, did regarded monitoring results. Drill rig has broke down. Crew to attempt repairs

(1100) Crew to have been started two RAM, 0 dust reading. Crew to Repair rig, no additional drilling or sampling today.

58

10-26-94 (WEDNESDAY) TA-15 [illegible]

(0729) 1-100 Calibration check OLT ICM1512

(0732) Pump per calibration: Pumps 14852 and 14851

(0745) Zeroed mini ram

(0940) Conducted tail gate safety meeting prior to entering the cave to repair drill rig

(1030) Drill rig repair complete

(1055) Started mini ram located on back end of drill rig near entry location

(1045) Started Drilling Hole 15-224N

(1098) Hnu reading of Hole # 15-224N at 2.5' depth
Background = 0.2 ppm
Rinse ball hole = 0.2 ppm
Cuttings = 0.2 ppm

(1104) Hnu readings of spoon removed from 15-224N at 2.5' Depth.
Background = 0.2 ppm
Outside & ends of spoon = 0.2 ppm
Material inside of spoon = 0.2 ppm

(1125) Hnu readings of Hole # 15-224N @ 5.0' depth
Background = 0.2 ppm
Hole = 0.2 ppm
Spoon = 0.2 ppm

10-26-94 (cont) TD-15 Steve H. Zeibelle

MATERIAL INSIDE SPOON = 0.2 PPM

(1133) Tearing down Drill rig, completed sampling at TH13 cocab.

(1135) STOPPED MINIRAM TWA = .00 mg/m³

(1230) Crew Exited work area following Decon for lunch.

(1330) Back to the site. Crew to attempt to drive the rig up the mound to collect (2) samples

(1415) STARTED to move drill rig up the mound.

(1423) Drill rig is in position to drill Hole # 15-2245 on the SOUTH MOUND

(1515) STARTED Drilling.

(1545) HNU Reading of Hole # 15-2245 at 1' depth.
Background: 0.2 PPM
Cuttings = 0.2 PPM

(1550) Crew to Decon and leave the site for the DAY

Steve H. Zeibelle

10-27-94 (THURSDAY) TA-15 [illegible]
(0101) Ran the calibrations on KAISER

(0101) Ran Calibration check on KAISER: 58 RPM on EDR RAM

(0105) Checked mud RAM

(0100) Conducted Tool Gate SAFETY MEETING PRIOR TO ENTERING the work area to continue drilling on hole # 15-2245.

(0230) STARTED MAIN RAM located on SOUTH end of the drill RIG NEAR the hole.

(1005) Ran Reading of cuttings from Hole # 15-2245 at 7½' depth
Background = 0.2 mm
Reading = 0.2 mm

(1250) Crew taking lunch

(1300) Ran Readings of Hole # 15-2245 at 9½' depth
Background = 0.2 mm
Room hole = 0.2 mm
Outside of screen = 0.2 mm
material inside of screen = 0.2 mm

(1400) Ran Readings of hole # 15-2245 at 11' depth
Background = 0.2 mm
Cuttings = 0.2 mm

10-27-94 (COUT) TA-15

(1525) STOPPED MPA RAM TWA = 0.10 mg/m³

Crew to decon and leave the site for the day

62

10-29-94 (Friday) TD-15 [illegible]

(0724) [illegible] at [illegible] at [illegible]

(0727) Pick up [illegible]

(0734) Tool [illegible]

(0700) Conducted TAIL GATE SAFETY MEETING prior to [illegible] the work [illegible] to drill hole # 15-2045.

(0805) STARTED MIXING [illegible] which is [illegible] out of [illegible] near hole.

(0820) started tripping [illegible] from the hole [illegible] to change to vibratory [illegible] drill pipe to [illegible].

(0945) The bearings of hole # 15-2045 at 15' depth are [illegible]
Terminal drill [illegible]
Terminal = 0.0 mm
Bearing = 0.0 mm (Cylinder [illegible])
Compass = 0.0 mm

(0955) The bearings [illegible] hole # 15-2045 at 15 1/2' depth
Bearing = 0.0 mm
Run drill pipe = 0.0 mm

(1031) The bearings of hole # 15-2045 at 14 1/2' depth
Bearing = 0.0 mm
Run drill pipe = 0.0 mm

10-28-94 (WT) TA-15

(1051) Pulled spoon from hole # 15-2291. HNU reading of spoon and material inside spoon.

Background = 0.2 ppm

Spoon = 0.2 ppm

Material [illegible] = [illegible]

(1220) Lunch

(1317) Started drilling hole # 15-2291 and hole on south mound

(1320) HNU reading of hole # 15-2291 at 2½ foot depth

Background = 0.2 ppm

Cuttings = 0 ppm

hole = 0.0 ppm

(1324) HNU reading of hole # 15-2291 at 4½ ft depth

Background = 0.0 ppm

Cuttings = 0 ppm

(1430) HNU reading of hole # 15-2291 at 7'10" depth 10-28-94

Background = 0.2 ppm

Down hole = 0.2 ppm

Spoon = 0.2 ppm

Internal [illegible] of spoon = 0.2 ppm

(1445) Stopped min. dam - Total: 0.10 mg/m³

Crew to decon and leave the site for the day.

10-1-94 ([illegible]) TM-15 [illegible]

(0703) HNU Calibration check at center: 58 ppm at 8.94 [illegible]

(0707) Pump recalibration at center

(0715) Mini Ram zeroed

(0810) Arrived at the E-F Firing site

(0820) Conducted Tail Gate Safety meeting prior to [illegible] the lower area to continue drilling hole # 15-2091.

(0914) Started mini-ram located on [illegible] of drilling near hole.

(0950) Radial at 10', [illegible] angle to change the operator head, drill pipe [illegible] to collect and sample from hole # 15-2091.

(0955) HNU Reading of hole # 15-2091 at 10' depth
Breakout: 0.0 ppm
Below hole: 0.0 ppm
Cuttings = 0.0 ppm

(1000) HNU Reading of hole # 15-2091 at 10'5" depth
Breakout: 0.0 ppm
Down Hole = 0.0 ppm

(1005) HNU Reading of spoil removed from hole # 15-2091 at 10'5" depth.
Breakout: 0 ppm

10-31-94 (CONT.) TH-15

OUTSIDE OF SPOON = 0.0 PPM

INSIDE OF SPOON = 0.0 PPM

(1200) LUNCH

(1400) STARTED DRILLING HOLE # IS-2204, FIRST HOLE ON SOUTH MOUND

(1413) HNu READINGS OF HOLE # IS-2204 AT 3½' DEPTH.

BREATHING = 0.0 PPM

DRILL HOLE = 0.0 PPM

CUTTINGS = 0.0 PPM

(1440) HNu READINGS OF HOLE # IS-2204 AT 8' DEPTH

BREATHING = 0.0 PPM

DRILL HOLE = 0.0 PPM

CUTTINGS = 0.0 PPM

(1534) STOPPED MINI RAM TVOC = 0.03 MG/M³

(1530) EXITED THE WORK AREA FOR THE DAY.

11-1-94 (TUESDAY) TP-15 [illegible]

(0722) HNU Calibration check out, [illegible] at 9.0 [illegible]

(0727) Zeroed HNU [illegible]

(0730) Pump pre calibration

(0850) Conducted Tail Gate Safety meeting prior to entering the work area to continue drilling, sampling at hole # 15-2244.

(0914) Started [illegible] located on side of drill rig near hole.

(0915) Started drilling Dry, spoon for first sample on hole # 15-2244

(0920) HNU reading of hole # 15-2244 at 9' depth
Background = 0.0 ppm
Down hole = 0.0 ppm

(0940) HNU reading of spoon retrieval from hole # 15-2244 at 9' depth
Background = 0.0 ppm
Outside of spoon = ~~[illegible]~~ 0.0 ppm
Material inside of spoon = 0.0 ppm

(1031) HNU Reading of hole # 15-2244 at 13½' depth
Background = 0.0 ppm
Down hole = 0.0 ppm
Cuttings = 0.0 ppm

11-1-94 (cont) TA-15

Changed over to vibratory hammer and pump to collect 2nd sample from hole @ 15-20'

(1120) Have readings of hole @ 15-20'? at 14' elevation

Background = 0.0 ppm

Down Hole = 0.2 ppm

Outside of spoon = 0.2 ppm

Inside of spoon = 0.0 ppm

(1150) Set up on final drill location

(1157) Stopped mini cam. Time = .21 mg/m³

NOTE: A shot across the street from our site will prevent us from working this afternoon

11-2-94 (Wednesday) TA-15 [illegible]

(0657) HNU Calibration check at Kaiser: see form at 9:04 sam

(0701) Personal Pump Pre calibrations at Kaiser: see cal. form

(0705) Zeroed mini ram

(0842) Conducted Tail Gate Safety meeting prior to entering the work area to drill & sample hole # 15-2290

(0851) Started pump # 14855 personal pump in Petro Tanks Breathing zone. Sample # 1501

(0922) Started pump # 14851 personal pump in Kaiser installation breathing zone. Sample # 1502

(0930) Started mini ram located on the back end of drill rig near hole.

(0931) Started Drilling hole # 15-2290

(0943) Hnu readings of hole # 15-2290 at 3' depth
Background = 0.2 ppm
Down hole = 0.2 ppm
Cuttings = 0.2 ppm

(1000) Hnu readings of hole # 15-2290 at 4½' depth
Background = 0.2 ppm
Down hole = 0.2 ppm

11-2-94 (CONT) TA-15 [illegible]

(1050) HNU Readings of Hole # 15-2240 at 9 1/2' depth
BACKGROUND = 0.2 PPM
OUTSIDE of SPOON = 0.2 PPM
material inside of SPOON = 0.2 PPM

(1146) HNU Readings of hole # 15-2240 at 15 1/2' depth
BACKGROUND = 0.2 PPM
DOWN HOLE = 0.2 PPM
CUTTINGS = 0.2 PPM

(1156) HNU Readings of hole # 15-2240 at 17' depth
BACKGROUND = 0.2 PPM
CUTTINGS = 0.2 PPM

(1258) Decided to take LUNCH CREW COULD NOT TRIP AUGERS.

(1259) STOPPED PUMP # 14851

(1244) STOPPED MINI RAM TWA .11 MG/M³

(1245) STOPPED PUMP # 14855

(1300) LUNCH

(1350) BACK ON-SITE.

(1405) Restarted PUMP # 14855 ON Peter GRAM

(1411) Restarted PUMP # 14851 ON RAM METHOD

(11-24-94) (CONT) TA-15 [illegible]

(1415) Crew attempting to unstick augers from hole # 15-2090. [illegible] 11-2-94

(1592) [illegible] 1502

(1573) [illegible] 1501

(1600) Crew has attempted several methods to free augers. twisting the augers out by hand appears to be the only solution. Crew moved drill rig off of hole to make room for twisting augers.

(1700) Crew still working on freeing augers, starting to get tired out colder. Crew to remove shaded safety glasses for better visibility.

(1730) Crew to start personal decon. Augers have been freed. Crew taking place in darkness. Head lights of support vehicles have been turned on to provide some lighting.

(1800) Crew to leave the site for the day. Crew to collect last sample at this site tomorrow

(1830) Pump post calibrations at bauer. See cal. form.

(1900) Left bauer for the day.

[illegible]

11-3-94 (THURSDAY) TA-15 [illegible]

(0736) HNU Calibration Check at Kaiser: 58 PPM at 8.70 SPPM

(0741) Zeroed MINI RAM

(0822) Conducted Tailgate safety meeting

(0930) Entered the work area to sample hole # 15-2290. Intermittent Rain is falling. Sample will be collected if HNU gives reliable results.

(1201) HNU readings of hole # 15-2290 at 16 1/2' depth
Background = 0.2 PPM
Down Hole = 0.2 PPM

(1223) HNU Readings of specimen removed from hole # 15-2290 at 16 1/2' depth
Background = 0.2 PPM
Outside of spoon = 0.2 PPM
Inside = 0.2 PPM

(1230) HNU Reading of material inside of spoon from hole # 15-2290 as material is being prepared for sampling.
Background = 0.2 PPM
Prior to sampling = 0.2 PPM
During sampling = 0.2 PPM
Breathing Zone = 0.2 PPM

(1300) Crew to drive drill rig off of mound, secure area, Down (Gravel) and leave the site for the day. Crew to decon equipment tomorrow.

[illegible]

72

11-7-94 (MONDAY) TA-15 [illegible]

(0725) HAD CALIBRATION CHECK OUT ROUTINE · STARTED OUT R.O.G. SERVE

(0900) COMPLETED TAIL GATE SURVEY MEETING PRIOR TO MOVING THE WALL CONE TO DECON EQUIPMENT.

(1200) CREW TAKING LUNCH FOLLOWING DECON

(1250) Crew returning wall cone to swipe equipment for release. Decon is completed (signed) that and readings are below Releasible limits. ~~[illegible]~~ [illegible] 11-7-94

~~(1400) [illegible]~~

(1330) RAD TECH performing smears and direct reading of equipment for Release. A few areas not meeting the release criteria to be Deconed.

(1500) Equipment Release complete, crew to Decon and leave the site. Crew to decon crz and Depart from the site. Tomorrow. Rob STAUB (130) to cover for me tomorrow.

[illegible]

11-8-94 (Tuesday) TA-15 Bob [illegible].

(7:00) Arrived ICF office.
(8:00) Calibrated HNU 58ppm at 8:00 5pm.
(8:40) Left For Site.
(9:00) Arrived at Site.
(9:15) Conducted Tailgate Safety Meeting.

9:25 Monitor Decon From outside The C.Z. watched operation with Marking Ti note as problem.

11:30 Most of Equipment loaded and The Steam cleaner is being Setup For Use. All The PPE is in place and Looks Good.
Rad Tech Finished The Drill Rig and Truck.

12:00 The Mat is Decon and Steam cleaner was cleanned out with all water collected.

12:00 Departed Site. Went To Sea Van and placed all contaminated Water in Barrel. Removed The Waste Material From Truck. Noted very Little Mixed Waste.

1:00 Started Raining as The Trailers were moved outside of The gate.

1:30 left For office (ICF)
2:30 left For MK Office.

11-9-94 (Wednesday) TA-36

(1230) Arrived at TA-18 to pick up key for Leach Field

(1300) Moved Drilling, steam cleaner & Portable toilet to the Leach Field location. Leveled Rig at first drill hole location, established and flagged off exclusion & contaminated Operation Zones.

(1515) Crew leaves the site for the day. Will start drilling tomorrow. Bob stays (me) to cover for me tomorrow.

11-14-94 (MONDAY) TM-36 [illegible]

(0726) HNU CALIBRATION CHECK AT NOISE SYSTEM AT [illegible]

(0727) [illegible] CALIBRATIONS

(0729) ZEROED MINI RAM

(1000) CONDUCTED TAIL GATE SAFETY MEETING AND TO INFORM WORK CREW TO START DRILLING AT THE DRAIN HOLE TES-36-0094 (a)

(1010) NOISE METER CALIBRATION CHECK: 110DB

(1025) STARTED MINI RAM LOCATED AT THE BASE OF THE DRILL RIG NEAR THE HOLE.

(1034) STARTED DRILLING 1ST HOLE AT DRAIN FIELD ID # 36-3052. (1ST TEST HOLE FOR 36-3052)

(1038) HNU READING AT HOLE # 36-3052 AT 22" DEPTH.
BREATHING = 0.2 PPM (1ST TEST HOLE FOR 36-3052)
DOWN HOLE = 1.8 PPM
BZ = 0.2 PPM
DISTANCE OF SPOIL = 0.2 PPM
MATERIAL INSIDE OF SPOIL = 0.2 PPM. THE MATERIAL INSIDE OF SPOIL WILL NOT TAKEN OUT THE REQUIRED DEPTH MATERIAL WILL BE PLACED BACK INTO THE HOLE WHEN COMPLETED. CREW PUTTING SPOIL BACK TOGETHER TO DRILL DEEPER.

(1040) STARTED DRILLING, REFUSAL AT 22", DECIDED TO ABANDON HOLE. WILL SET UP AT NEW LOCATION

11-14-94 (cont) TA-36 [illegible]

(1130) Moved to new location same rd as the last unsuccessful hole and started drilling

(1140) Has readings of hole #36-3052 at 2 1/2' depth
Background = 0.2 mrem/h (2nd test hole for 36-3052)
Down hole = 0.2 mrem
Outside of split spoon = 0.2 mrem
Inside of spoon = 0.2 mrem

(1200) Crew took lunch.

(1257) Crew members were done. Move to new location since the 2nd hole had refused at 2 1/2' depth.

(1301) Started drilling at 3rd location sound level monitoring at 74.9 dBA: Behind blast shield 30' from rig

(1316) Has readings from 3rd hole at 3' 8" depth.
Background = 0.2 mrem/h (3rd test hole for 36-3052)
Down hole = 0.2 mrem/h
Outside spoon = 0.2 mrem/h
Inside spoon = 0.2 mrem/h

(1328) Has readings from 4th hole at 3' 3" depth
Background = 0.2 mrem/h
Down hole = 0.2 mrem/h (4th test hole for 36-3052)
Outside split spoon = 0.2 mrem
Inside of spoon = 0.2 mrem

11-14-94 (cont.) JA-3c [illegible]

(1400) Pre Readings for samples taken 1407, 1413 and 1415
Background = 0.2 mrem
Homogenizing = 0.2 mrem

Location IV for this sample is (38.0-38.5)
Tube depth = 0-42"

(1413) Completed sampling. Have moved the rig to the next location. Will open spoons and clean up the area to be ready for drilling. First things at the next location. 3 samples collected today, [illegible] to [illegible]

(1414) Started the mini CAM TWA = .100 mg/m³

(1500) Crew to return and resume the scope for [illegible]
Sample prep and analysis only [illegible]

[signature]

73

11-15-91 (TUESDAY) TH 36

(0732) Zeroed MINI RAM

(0737) Ran calibration check at raised sign at 0.49 [illegible]

(0738) Recal pump the calibration check

(0803) Noise meter calibration check 110 dB

(0814) Conducted Tail GATE safety meeting

(0830) Entered work area to continue drilling in leach field. Will attempt to drill 3 holes today. Today's weather is clear and cold, slight breeze ground appears moist as the frost melts which will help in reducing airborne dust.

(0900) Started MINI RAM located on back end of drill rig near hole.

(1000) Started drilling

(1003) Ran reading above hole at 27" depth
Background = 0.0 mrem
Down hole = 0.0 mrem (TEST HOLE FOR 36-3054 THA [illegible] FOR 36-3054 THA [illegible] WAS TRENCH CHECK TO RELOCATE)
Spoil = 0.0 mrem
Material inside of spoil = 0 mrem

(1005) Ran reading of 2nd hole at 31" depth
Background = 0.0 mrem (2nd TEST HOLE FOR 36-3054)
Down hole = 0.0 mrem
Spoil = 0.0 mrem
Entire spoil = 0.0 mrem

1145-94 (CONT) TA-36 R. R. Ribble

(1040) Have readings of 3rd test hole at 37"
Background = 0.2 ppm
Down hole = 0.2 ppm
Spoon = 0.2 ppm
Material inside of spoon = 0.2 ppm
This hole will be sampled because is site boundary

(1200) Lunch

(1200) Resumed drilling again to continue drilling

(1255) Have readings of 1st test hole for location
Locale 36-3055. 42" depth
Background 0.2 ppm
Down hole = 0.2 ppm
Spoon = 0.2 ppm
Material inside of spoon = 0.2 ppm
Trace not found in this hole

(1305) Have readings of 2nd test hole for location
Locale 36-3055 30" dept
Background = 0.2 ppm
Down hole = 0.2 ppm
Spoon = 0.2 ppm
Material inside of spoon = 0.2 ppm
Trace not found.

(1345) Have reading of 3rd test hole for location locale
36-3055 42" depth
Background = 0.2 ppm
Down hole = 0.2 ppm

11-15-94 (cont.)

SPOON = 0.2 PPM
Material inside of spoon = 0.2 PPM
Touch not found. Move to next
test hole

(1425) Hole reading of test hole #4 for locate
30-3055 at 38" depth
Background = 0.2 PPM
Down hole = 0.2 PPM
Spoon = 0.2 PPM
Material inside spoon = 0.2 PPM

(1425) Hole reading of test hole #5 for locate
30-3055 at 38" depth
Background = 0.2 PPM
Down hole = 0.2 PPM
Spoon = 0.2 PPM
Material inside spoon = 0.2 PPM

(1445) Hole reading of test hole #6 for locate
30-3055 at 40"
Background = 0.2 PPM
Down hole = 2 PPM (discontinued)
Spoon = 0.2 PPM
Material inside of spoon = 0.2 PPM
Breathing zone = 0.2 PPM
This was determined to be in the trench
Therefore this is locate 30-3055

11-15-94 (CONT)

(1524) STEPPED MINI CAM TOOK 2 GIGI MG/M3

(1526) Crew enters lab for debriefing

(1600) Crew secures the site for the day

11-17-94 (THURSDAY) [illegible]

(0715) CALIBRATION [illegible] CARBON DIOXIDE [illegible] METHANE
15% O_2, 50% CEL

(0740) [illegible] CALIBRATION [illegible] [illegible]

(0745) ZEROED [illegible]

(0748) PERIODIC [illegible] RE CALIBRATION

(0755) [illegible] METER CALIBRATION [illegible]

(0800) CHECKED TAP WATER DEPTH [illegible]
[illegible] 3 HOLE
[illegible] TO SWING LEFT TO ON.

NOTE: SIGNIFICANT [illegible]
[illegible] OF THE [illegible]

(0820) [illegible] TO [illegible]
[illegible] 4TH TRENCH.

(0830) STARTED [illegible] LOCATED ON THE [illegible] OF THE DRILL
RIG OVER THE HOLE.

(1017) [illegible] CO_2/O_2 READINGS FOR 1ST TEST HOLE OF 30 [illegible]
BACKGROUND = 0.0 PPM
DOWN HOLE = 0.0 PPM
SEAL = 0 PPM
MAXIMUM TIME OF READING = 0 PPM
CO_2/O_2 = [illegible] (DOWN HOLE)
TRENCH NOT [illegible]

} AND (3' DEPTH)

[illegible]

[illegible] (Below Hole)

[illegible]

[illegible]

[illegible] (3 [illegible])

Background = [illegible]

Below Hole = [illegible]

Spoil = [illegible]

[illegible]

[illegible] Below Hole = [illegible]

[illegible] (3 [illegible])

Background = [illegible]

Below Hole = [illegible]

Spoil = [illegible]

~~[illegible]~~ [illegible]

[illegible]

[illegible] = [illegible] (Below Hole)

Did not locate [illegible]

[illegible]

Background = [illegible]

Below Hole = [illegible]

Spoil = [illegible]

[illegible]

[illegible] = [illegible] (Below Hole)

11-17-94 (LIST) 7M-3C [illegible]

(1116) [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
DO NOT WRITE [illegible]

(1132) [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
[illegible]

(1142) [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
DO NOT WRITE [illegible]

11-17-94 (CONT) TA-36

(1200) [illegible] readings of [illegible] taken for
.36 [illegible] CAT (5th Dimension)
Background = [illegible] mrem
Down hole = [illegible] mrem
Spoil = [illegible] mrem
Material in bucket = [illegible] mrem

CGT/O2 = [illegible] ppm O_2
Final check shot will [illegible] shortly after.

(1231) [illegible] readings of test hole [illegible] for [illegible]
CAT 5th dimension
Background = [illegible] mrem
Down hole = [illegible] mrem
Spoil = [illegible] mrem
Material in bucket = [illegible] mrem

CGT/O2 = [illegible] ppm O_2
Final check will [illegible] here, [illegible]

(1264) [illegible] readings of hole [illegible] CAT [illegible]
Background = [illegible] mrem
Down hole = [illegible] mrem
Spoil = [illegible] mrem
Material in bucket = [illegible] mrem

CGT/O2 = [illegible] ppm O_2

(1350) [illegible] TWA [illegible] mg/m³

(1400) Personnel to begin and leave the site for the day

11-19-94 (Friday) TP-36 [illegible]

(0713) CGE/O_2 meter calibration at Kaiser 15% O_2, 50% LEL

(0718) Checked mini ram

(0722) Noise meter calibration. 110 dB

(0725) HNU calibration check at Kaiser. Started at 8.38 ppm

(0728) Personal Pump #14935 Pre calibration at Kaiser

3.173 lpm
3.131 lpm
3.117 lpm

(0729) Personal Pump #14857 Pre calibration at Kaiser

3.624 lpm
3.603 lpm
3.589 lpm

(0930) Completed TPL Gate safety meeting

(0950) Entered work area to continue drilling in the Mock Field. 2 holes remain

(1013) Started mini ram located at Bucket of Oil/Rag near the hole

(1015) Started Drilling

[illegible] (cont) T-30 [illegible]

[illegible] Hole, [illegible] Leading [illegible] Test Hole for the Test.

Temperature = [illegible] 5' depth

Down Hole = [illegible]

Sigma = [illegible]

Natural Gamma Source = [illegible]

CCl/O_2 = [illegible] CCl, [illegible] O_2 (Down Hole)

Don't [illegible]

(1100) [illegible] CCl/O_2 readings for the Test Hole [illegible]

[illegible] 5' depth

Temperature = [illegible]

Down Hole = [illegible]

Sigma = [illegible]

Natural Gamma = [illegible]

CCl/O_2 = [illegible] CCl, [illegible] O_2 (Down Hole)

(1120) [illegible] CCl/O_2 readings for the Test Hole [illegible]

[illegible] 5' depth, [illegible] down [illegible] Hole [illegible] [illegible]

of [illegible] Hole Material

Temperature = [illegible]

Down Hole = [illegible] (Scintillometer) / B2 = [illegible]

Sigma = [illegible]

Natural Gamma = [illegible] (B2/[illegible])

CCl/O_2 = [illegible] CCl, [illegible] O_2

Samples [illegible] [illegible] [illegible] collected from this Hole.

(1200) Moving Drill Rig to Next Location

(1230) Lunch

11-18-94

(CONT) TH-36

(1307) [illegible] the drill test hole. [illegible] collect [illegible] surface soil samples at the [illegible].

(1315) STARTED DRILLING BELOW [illegible] CONCRETE FLOOR [illegible]

(1342) HNu & CGI/O2 READINGS FOR THE TEST HOLE TO FIND 30-305° (2½' DEPTH)

BACKGROUND = 0.2 PPM

DOWN HOLE = 0.0 PPM

SPOIL = 0.0 PPM

MATERIAL IN SPOON = 0.0 PPM

CGI/O2 = 0% GAS, 21% O2

TRACE NOT FOUND.

(1407) HNu & CGI/O2 READINGS FOR THE TEST HOLE TO FIND 30-305° (2'10" DEPTH)

BACKGROUND = 0.2 PPM

DOWN HOLE = 0.0 PPM

SPOIL = 0.0 PPM

MATERIAL IN SPOON = 0.0 PPM

CGI/O2 = 0% GAS, 21% O2 (DOWN HOLE)

TRACE NOT FOUND.

(1424) HNu & CGI/O2 READINGS FOR THE TEST HOLE TO FIND 30-305° (3' DEPTH)

BACKGROUND = 0.2 PPM

DOWN HOLE = 0.2 PPM

SPOIL = 0.2 PPM

MATERIAL IN SPOON = 0.0 PPM

[illegible] (cont) TM-36 [illegible]

CO_2/O_2 = 0% LEL, 21% O_2 (Downhole)

TRACH UNIT CONTROL

(1445) [illegible] RECEIVING FOR 4TH TEST HOLE TO FIND SO [illegible] (30' DEPTH)

[illegible] = 0.0 PPM

[illegible] = 0.0 PPM

[illegible] = 0.0 PPM

[illegible] = 0.0 PPM

CO_2/O_2 = 0% LEL, 21% O_2 (Downhole)

COLLECTED TRACH SAMPLES 1312, 1314 WILL BE COLLECTED FROM this hole.

(1515) STARTED MINI DAM. TOTAL .02 mg/m³

(1540) [illegible] [illegible] following [illegible]

(1550) [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

11-21-91 (1600-0700) [illegible]

(0930) [illegible] Calibration check of [illegible]

(0945) Conducted [illegible] Safety Meeting

(1010) Checked [illegible] to collect [illegible] Samples, [illegible] & [illegible] Site

(1035) [illegible] & [illegible] of Sample # [illegible] 1916
Background [illegible]
Nitrate [illegible]
Density [illegible]

[illegible] Direct [illegible]
Below [illegible] (1027)

(1039) [illegible] & [illegible] for Sample # [illegible] 1917
Background [illegible]
Rad [illegible]
Density [illegible]

Rad. Direct 94 cpm (1035)
Below 99 cpm (1039)

(1045) Crew [illegible] equipment

(1300) Rad Team completing his last survey. Crew decides to have the site to allow the Rad Tech to analyze his surveys. Crew to [illegible] the site and remove equipment. Tech [illegible] that the surveys [illegible] levels.

(1330) Crew leaves the site for the day. [illegible]

11-30-94 (Wednesday) TM-36

(0900) [illegible] check out water [illegible]

(0935) Conducted tail gate safety meeting

(1000) Entered [illegible] to collect water samples from [illegible] sample compound.

(1001) Came across the [illegible] (SS-3121) all three bottles were found lying on the ground. It appears that something dug up the bottles. Broken pieces of the bottles [illegible] No water to collect. No [illegible] taken

(1020) Found 2nd [illegible] (SS-3122) in the same condition as (SS-3121) No water collected. No [illegible]

(1021) Found 3rd sample location (SS-3119) Bottles were found in place with some water inside. Used to remove bottles and primarily use the water for a sample. Bottles were cleaned with water removed or kept off. No [illegible] taken.

(1023) Found 4th sample location (SS-3120) Bottles were found in same condition as the first 2 locations. No water collected. No [illegible] taken.

(1048) Arrived at MOE magazine. Used gathering equipment to collect water samples from [illegible] compound

(1054) Entered [illegible]

11-30-94 (cont) TP-36

(1100) Found the 1st sample bottle [illegible] (illegible) Bottles [illegible] found

(1103) Find Second location [illegible], Bottles [illegible] in place & bottle found down stream [illegible] samples collected.

(1115) Found 3rd location [illegible], Bottles [illegible] found, [illegible] samples taken

(1118) Found 4TH location [illegible], Bottles [illegible] found [illegible] samples taken

(1134) The last of 12 bottles found

(1200) Entel [illegible] crew to [illegible] the water chamber

(1344) Finished out the water chamber [illegible]

(1350) Finished out the only water chamber [illegible] left. Chambers were filled to the top with sediment [illegible] sample collected [illegible]

(1412) Crew exited the [illegible]

12-1-94 (THURSDAY) TA-54

(1030) Arrived at IJ Firing Site

(1045) Completed the core sampling work to returning sediment samples to various HSU

(1051) Crew returning water & soil samples to the HSU at IJ Firing site

(1100) Left IJ Firing site in route to Bldg 48 to segregate waste and start decontaminating.

(1132) Nancy Crow, Bart Trujillo Entered house and to return samples. Mike Herne and John Taylor and myself are with Nancy and Bart to take samples. Jeff Bayhem and Pete [illegible] returned out DUE HS to Crew

(1140) Crew enters Bldg 48.

(1147) Crew is returning samples to the INDIAN TRENCH SITE.

(1200) Crew returning samples to the Potrillo Canyon location

(1221) Arrived back at BLDG 48.

(1230) I leave the site for the day.

12-2-94 (Friday) TAI-36 [illegible]

(0955) Conducted TAI crew safety meeting.

(1000) Crew returning samples (5 of 5 bottles) to the [illegible] facilities. [illegible] 12-2-94

(1010) Crew completes activity and is enroute to Field Camp.

(1115) Arrived out inside bldg. Crew to return samples to the Field Camp sample location.

(1150) Crew completes activity enroute to Bldg 48 to begin and collect sample

(1200) Collected water sample from water tower.

(1200) Completed sampling. Crew to begin sample consolidation

(1230) Crew finishes with [illegible] safety and leaves for the day

(1300) Checked out at access control

(1330) Returned to [illegible] to prepare samples for delivery to CST-3.

[illegible]

Appendix 6

APPENDIX 6

RADIATION MONITORING SUMMARY REPORT

OPERABLE UNIT (OU) 1130, TECHNICAL AREA (TA) 36
RADIATION MONITORING SUMMARY REPORT
FOR THE 1994 FIELD SAMPLING ACTIVITIES

1.0 Summary

Radiation monitoring, for the 1994 field sampling activities, was conducted by Health Physics Technicians (HPT's) supplied by Environmental Dimensions, Inc. (EDI) of Albuquerque, New Mexico. The radiation monitoring program for the sampling activities was designed to protect the health and safety of field team members and consisted of radiation screening of sample locations and soil samples, radiation frisking of personnel prior to exiting controlled areas, and radiation surveys of equipment and material for release.

2.0 Radiation Screening

Radiation screening was conducted by the HPT to access the radiological hazards for the task being performed. This monitoring consisted of an initial screening (direct reading) of the surface soil at the sample location prior to sampling and a second screening (bowl reading) of the homogenized soil prior to placing the material in sample containers.

Results of both screenings were recorded on the field sample log for each sample and in the HPT field log book. A copy of the HPT field log book is presented in Attachment 1.

Results of the radiation screening for all sample locations and samples were less than the set action levels of 5000 cpm beta-gamma and 500 cpm alpha.

3.0 Radiation Frisking

Radiation frisking was conducted by the HPT to detect personnel contamination. At a minimum, the gloves, boots, soiled areas of personal protective equipment (PPE), and exposed areas (i.e. face and neck) of all workers in the exclusion zone (EZ) were frisked prior to entering the contamination reduction zone

(CRZ). Where wet personal decontamination (decon) was required, (i.e. during drilling and excavation activities) the HPT smeared the gloves and boots prior to decon as an initial means of determining the proper storage, handling and labeling of decon water.

Following personnel decon and doffing of PPE, the HPT frisked the hands, boots and face of all workers prior to exiting the CRZ and directed them to wash their hands and face at the washing facility.

A Control Area Access Register Form was filled out and maintained by the HPT on a daily basis. Time of entry and exit for each worker was recorded as well as the radiation frisking results. Copies of the Control Area Access Register Forms are presented in Attachment 2.

Results of the radiation frisking indicate that no personnel contamination was detected.

4.0 Radiation Surveys

Radiation surveys were conducted by the HPT to ensure that equipment released from the site met the requirements for conditional or unconditional release. Equipment and materials used for soil sample collection in the EZ (e.g. drill rig, steam cleaner, augers, spoons, bowls, sample containers), were surveyed for radiation prior to conditional or unconditional release from the site. In order to ensure that equipment or materials used for the sampling activities did not introduce radioactive contamination to the site or when equipment release survey results could not be obtained, the HPT performed an incoming radiation survey. This incoming survey also provided reliability and consistency for the release surveys. All vehicles (e.g. support truck and Ryder truck), and heavy equipment (e.g. drill rig and steam cleaner) were surveyed before and after use on the site.

An Equipment and Materials Release form was filled out and maintained by the HPT for each survey performed. The date of the survey, person performing the survey, facility and item surveyed, direct and smear survey results and

instruments used were recorded. Copies of the Equipment and Material Release Forms are presented in Attachment 3.

Results of the radiation surveys for all equipment and materials surveyed were less than the set levels for conditional and unconditional release.

5.0 Instrumentation

A Ludlum 2221 with a pancake probe (Ludlum 44-9) was used to perform the radiation screening.

A Ludlum 2221 with a pancake probe (Ludlum 44-9) and, where alpha radiation was a concern, a Ludlum 139 with a 43-32 probe were used to perform the radiation frisking.

A Ludlum 2221 with a 44-9 probe (for direct readings) and a 43-10 probe (for counting smears for removable Alpha) were used to perform the radiation surveys.

All radiation instruments were supplied and calibrated by the Los Alamos National Laboratory. Daily instrument source checks and control charts for source and background counts were performed and prepared by the HPT. Copies of the Operational Check Data Sheets and Source/Background Control Charts are presented in Attachment 4.

6.0 Plans, Requirements and Procedures

The following plans, requirements, and procedures were reviewed and followed by the HPT during the 1994 field sampling activities:

- Site-Specific Health and Safety Plan for OU 1130, TA 36, Field Investigation, Plan #026, Draft # 3, May 13, 1994.
- Radiation Protection Program, LANL-AR-3-1, effective date 11-30-90.
- Shipment of Radioactive Materials, LANL-AR-3-5, effective date 01-18-91.
- Radiation Exposure Control, LANL-AR-3-7, effective date 01-11-91.

- Measurements of Gamma-ray Fields Using a Sodium Iodide Detector, LANL-ER-SOP-06.23, effective date 05-19-93.
- Fidler Instrument Systems LANL-ER-SOP-10.04, effective date 05-05-94.
- Releasing Equipment and Items, ESH-1-07-01, effective date 05-09-94.
- Documenting Equipment and Item Removal, LP107-04.0, effective date 02-01-94.

APPENDIX 6

ATTACHMENT 1

Radiation Monitoring Field Log

LOS ALAMOS NATIONAL LABORATORY

ENVIRONMENTAL RESTORATION

FIELD LOG BOOK NO. 116

3375

O.U. 1130 has received the authority from the R.P.F. (Renee Archuleta) to transfer LANL E.R. Field Log Book Nº 116 to account book S295, with pre numbered pages.
July 21, 1994. MICHAEL HENKE

Michael Henke

John Taylor
EDI
ER Field Log Book
#116

[illegible]

[illegible] & [illegible] Source check instruments
[illegible] [illegible] go to [illegible] photo outfall
[illegible]
[illegible] [illegible] & sign in DX-11
0940 Get proper badges
0900 Set-up E-2 & Support Zones
0940 Mitigate Safety Meeting in Selma for office prep of Support Zone and Computer Set-up
1030 Sign Mitigate Safety Sheet
1100 Mitigate Safety Meeting
1130 Enter Zone Readings Areas follows
in Counts per minute 5 44-9 & Bell-Gamma

Sample #	Direct	Bowl	Time
1915-AAB SC-118	129 cpm	109 cpm	11:48
AAB-1914 SC-117	118 "	81 "	11:57
AAB-1913 SC-116	97 "	115 "	12:06
AAB-1911 SC-115	124 "	95 "	12:16
AAB-1912	113 "	88 "	12:24

1300 Scan personnel out of area Swipe Gloves and plastic & BKG
1310 Start to tear-down of Support Zone

7-21-94

0730 [illegible]

0900 Discuss [illegible]

1030 Enter Control Zone

1040 Signin at [illegible] get [illegible] to site

1100 Set-up EZ & Support Zone

1200 Take Sub-Meeting

1215 Enter Zone to Begin Sampling of Tank 30-17 Septic Tank near Bldg 40 No Rad is Expected to be Found

12:21 First Sample Taken total of Six Bottles To be Filled = 1873 82 cpm Taken in the Inside Tank

12:28 Second Sample Taken 6 more Bottles 66 cpm [illegible] Reading in our BKG

12:35 Third Reading Taken "Dope" 6 Bottles 7[illegible]

12:44 First Sluge Sample Taken 62 cpm Six bottles are to be Taken No Rad found Far

13:05 Second Sample 73 cpm 6 more Bottles

13:21 Third Sample is Taken 67 cpm Six Bottles are to be Taken

14:00 Peters & Bingham Doing De-Con of used Equipment All Smears were Accepted at Below Actions Levels All Wipe Readings were Duly Recorded on Equipment Material Release Form

14:45 Exit Area Scan Gloves & Personnel

1500 Exit Gate Head Home

[illegible]

0900 MEETING FOR REGIONAL DRUG ACTIVITY
TRAVEL TO 130
0920 SAMPLE [illegible] GATE
0940 STAND-UP AT DRILL
1000 SECOND CONTROL ZONE PREPARE FOR SAMPLING OF PHOTO-OUTFALL WATER SAMPLES
1030 SECOND COMPLETE SAMPLING FOR DELIVERY OF EQUIPMENT TO CHECK PH OF WATER SAMPLES
1045 TERMINATE EARLY MEETING
1100 COME IN TO SAMPLE

1135 EXIT AREA
1200 LUNCH
1230 TAKE DOWN ZONE
1300 BACK TO BASE
1500 PREPARE WORK SHEET FOR THE DAY AHEAD

7-29-94

0750 MEETING AT BASE REGIONAL DRUG ACTIVITY
0930 MEETING AT CONTROL GATE SIGN IN
0100 ROAD IS BLOCKED OFF FOR DRILL
1030 SIGN-ON AT DRILL
1045 SECOND ZONE AT BOULEVARD
1100 BEGIN SPICE CHECK OF EQUIPMENT
1150 LUNCH
1205 CHECK ZONES TO PREPARE SOIL SAMPLES

	Direct	Bound	Time
ABB - #1953	112 cpm	96 cpm	[illegible]
ABB - #1954	98 cpm	96 cpm	1:08[illegible]
ABB - #1955	131 cpm	[illegible]	[illegible]
ABB - 1856	110 cpm	103 cpm	13:16
ABB - 1857	111 cpm	[illegible] cpm	[illegible]

3:50 Exit [illegible] [illegible] Steam

[illegible] Entire Zone [illegible]

	Direct	Bound	
[illegible]B - 1858	103 cpm	107	14:[illegible]
[illegible]B - 1859	139 cpm	98	14:25
[illegible]D - 1860	13[illegible]	97	14:49

[illegible]55 Exit Area Scan Crew

[illegible] [illegible] Equipment
[illegible] Take down Zone
[illegible] Exit [illegible]
[illegible] Leave for the day

[illegible] Exit [illegible] [illegible] Zone [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1015 [illegible] Blood stock tone

[illegible]

1030 [illegible] Soil Sample

Readings as follows All counts in minutes

[illegible]

		[illegible]	[illegible]	[illegible]
MPC-1	[illegible]	[illegible]	[illegible]	1050
S-91-1	[illegible]	[illegible]	105	1050
S-92-2	[illegible]	[illegible]	100	1105
S-93-3	[illegible]	[illegible]	95	
S-94-4	[illegible]	[illegible]	[illegible]	
S-95-5	[illegible]	110	107	
S-96-6	[illegible]	[illegible]	[illegible]	
S-97-7	[illegible]	[illegible]	[illegible]	
S-99-8	[illegible]	[illegible]	[illegible]	

1300 [illegible] Scan [illegible] personnel

1400 [illegible]

1500 [illegible] Scan of Camel Cafe

1530 [illegible]

[illegible]

1942 [illegible] [illegible] [illegible] 1052

[illegible]

0700 [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
0900 [illegible] [illegible]
0930 [illegible]
1000 [illegible]
1020 [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible]

Locale #	Sample #	Direct	Bent	Time
36-3042	AHB-1861	101 cpm	113 cpm	1037
	" -1862	101 "	113 "	1037
36-3043	" -1863	126 "	114 "	1058
36-3044	" -1864	108	101 "	1113
36-3045	" -1865	93	87 "	1132
36-3046	" -1866	134 "	119 "	1146
36-3047	" -1867	97	107 "	1201
36-3048	" -1868	115	89 "	1215
36-3049	" -1869	112	103 "	1229
	"		"	

1340	Direct	Bent	Time
AHB 1843	121 cpm	142	1349
36-3050 - AHB 1870	130	118	1413
[illegible] 1871	130	115	1413
36-3051 1872	140	164	1428

1439 [illegible] BONE [illegible]
1445 [illegible] [illegible] [illegible] [illegible]
[illegible]

7-[illegible]-94

[illegible] Samples [illegible] Collected
Sediment

1555 Decon Complete Cold Exit

1200 Set On The Dump [illegible]

8-5-94

0730 Arrive @ Kaiser
0900 Arrive @ Site Sign-in
0930 Sign-in DX-11
0940 Set-up Zone
1000 Tailgate Safety-Meeting
1055 Enter Zone TA-36 PRS-003B Sluge Sampling of Septic Tank

	Direct	Time
AAB 1879	67	1100
1880	65	1114
1881	78	1120
1882	72	1128
1883	70	1140
1884	N/A	

1210 Sampling Complete Decon and Smears

1410 Exit DX-11 Sign-out

1430 Exit TA-18 Command Post

1445 Leave Site Albq

1744 ~~10:00am~~ ~~11:00am~~ 1652

8-7-94 [illegible]

0700 Arrive @ Center Office Check Instruments

0730 Review Daily Activities

0930 Exit Raiser Head to TA-36
Sign-in at Gate Head to Dx-11

0900 Sign-in DX-11

0915 Arrive at Firing Site I.J go out grounds to set-up "CR2" must stay on asphalt road due to slightly elevated readings on dirt due to rain run-off of soil embankment 125 cpm to 150 cpm on road

0940 Go to cutoff to review sample locations
Set-up probe path to locations

1045 Site set-up complete. Initiate survey readings from recorded readings
Total of five samples to be taken @ cutoff of septic-tank no. 10 [illegible] of septic-tank three direct readings on opposite page 5-5-94

1100 Ensure ER to begin sampling
Direct readings in counts per minute as follows

Location #	Direct	Dual	Time
HAB 1995	[illegible] cpm	[illegible]	11:11
HAB 1996 Duplicate	203 cpm	168 cpm	11:11
HAB 1997-36-3105	170 cpm	168 cpm	11:30
HAB 1998-36-3106	158 cpm	328 cpm	11:41

[illegible]

	Start	Stop	Time
3-31-01-MA-999	1630 pm	154 pm	11:52

1205 Finish Sampling of Out-Fall Head Back to CRZ

1310 Send Remaining Items out of CRZ Take Lunch Test & PAD

1330 Turn-Around & Begin Complete Ready-to Lend-up Pulse-Line

1400 Continue Lend-up of Line

1500 Send Crew Head to DX-11 for Sign-out

8-10-94

0730 Arrive @ Airbase Begin Daily Activities Training at EOC

0900 Head to Test Hole Firing Site

0950 Arrive at Hole Site, Head Down Canyon Locate Sample Locales

1000 Start Mining Locating Locales

1200 Lunch

1230 Get Back to Work

2100 Review SOP Procedures Review

4:30 End Mining

[illegible]

10

3-11-94

0730 Arrive @ Kaiser Review Days Act.
0900 Sign-in DX-11 Head to Moe Area
0715 Set-up CRZ and Communications
1000 Tailgate Safety Meeting
1017 Crew Enters Area
1045 Arrive @ Locale 1812 Shed 30 min

	Direct	Bowl	Time	
AHO-1812	113 cpm	115 cpm	1050	36-
AHJ-1813	137 cpm	108 cpm	11:04	36-
AJB-1814	123 cpm	80 cpm	11:25	36-
AHB 1815	125 cpm	129 cpm	11:38	36-

1150 Head Back to CRZ
1200 De-con of Sample's Spare personnel
1310 Start Take Down of Zone
1330 Sign-out DX-11
1430 Leave Kaiser for Day

GWS

9-12-94

0700 Arrive ICF-KA Review Days Activity

0900 Sign-in DX-11 Head to Sample Area
1030 Tailgate Meeting
1045 Enter Sample Area Direct Readings on 4 Mows

8-15-94

Sample Readings in Counts per Minute

	Direct	Bow	Time	
955				
38 AHB1820	104 cpm	105 cpm	1055	
10 AHB 1819	85 cpm	98 cpm	1108	
19 AHB 1815	115 cpm	132 cpm	1121	
78 AHB 1817	126 cpm	117 cpm	1133	Duplicate
78 DUPE AHB 1816	120 cpm	117 cpm	1138	

205 Crew exits Scan gloves, personnel & equipment NDA (Alpha)

10 De-con in progress Mutty Mess

55 Scan Re-con Nelson

0 Sign-out

00 Arrive @ Kaiser

0 Exit Kaiser Head for the old Homestead

JWS

8-16-94

0 Arrive @ Kaiser Review days activity

0 Source check Instruments

0 Exit Kaiser Head to TA-36

0 Sign-in DX-11

Arrive Site

Tailgate Safety Meeting

Outer Zone Readings as follows

	Direct	Bow	Time
1939			
1940	274	272 cpm	1190
1941	191 cpm	194 cpm	1126
1942	112 cpm	118 cpm	1132
	106 cpm	117 cpm	1052

8-6-94

1005 Sampling Complete Scan Crew Clean and Equipment Swipe Samples

1210 De-con Begins Nancy Ness

1230 De-con Complete

1240 Pack-up of Zone Begins

1300 Exit Area

1310 Scan Crew & Vehicals Tires

1315 Go to Bldg #48 to dispose of waste & and to Label Samples Chain of Costode Sample Form &

1330 Sign out PX-11

1600 Written Kaiser Exit Form

[illegible]

8-22-94

0715 Arrive @ Tef-ka prepare Ryder

0730 Review Days Activys Source check Instruments

0840 Arrive @ Water Canyon

0930 Start to Set-up at PRS 36-004 Four Samples are to be Taken at this Location

1030 Tailgate Safty Meeting Task #6

1045 Enter Zone to begin Task #6

	Direct	Bowl	Time
~~1914~~ 1908	97 cpm	98 cpm	1100
~~1809~~ 1809	123 cpm	107 cpm	1118
~~1800~~ 1800	114 cpm	93 cpm	1141
~~1801~~ 1801	119 cpm	97 cpm	1200

1205 [illegible]
230 Scan Crew & Equipment Direct Readings and Soil Sample's Scans
235 B Trujillo Enters to decon
315 Scan Re-Con personnel
450 Exit Site
30 Exit Areas for the day

9-12-94
0 Arrive @ ICF Kaiser Review Days Activity's
0 Go to Inspect Drill Rig Take Direct and Smear Readings Pre Entry Survey
0 Continue to work and prepare Drill Rig welding Brackets & Minor Details
0 Took Direct Readings and Smears on Steam Cleaner
0 Exit Site the Way

9-13-94
00 Arrive @ Kaiser Source check Instruments
0 Pre-Entry Survey to do on Back-Hoe Rental unit = 471-6187 480C Turbo
Will Wash & Steam Clean Before Survey

9-15-94

1100 Go to DX-11 out-1130
1130 Perform Entry Survey off Back Hoe
Sign-in and Set Up Zone
1200 Lunch
1310 Enter Zone to begin Back
excavation
1330 Excavation is under way, Culvert opening
is Too Small for Bucket, Digging
outside to Remove, So Samples can
be Taken inside once it is Removed
1420 First Sample Taken Five feet Below
grade He Spot Test is Negative
Sample # ONE Direct Bowl
AAB-1801 118 cpm 109 cpm
1450 End Zone Scan Crew and Equipment
1500 De-con Bowls Tubs & Spoons
1510 Scan De-con Person
1600 Exit DX-11 Sign-out
1630 Exit Kwiser Park The Day

9-14-94

0730 Arrive at TEF-KA Facility Day Activity
0830 Sign-in DX-11 Head to Kappa-49 to Continue Sampling
0905 Arrive at 36 / Kappa 49
0950 Set-up of Zone for Sump pit Excavation and Sampling

Enter Begin Excavation of Sump

Sampling Begins all counts in cpm

	Direct	Bowl	Time
AB-1802	122 cpm	117 cpm	1019
AB-1803	109 "	99 "	
AB-1804 Dupe	109	99 "	1039

Continue Excavating of Gravel inside Sump pit Down eight feet gravel is still visable

Very near Bottom Dill material 8½' Down

	Direct	Bowl	Time
AB-1805	98 cpm	97 cpm	1153

Nine and one Half feet Hit Bottom of Sump pit Sample is taken

	Direct	Bowl	Time
06	102 cpm	118 cpm	1210

9-14-94

1400 Serv. 3 De-con Complete Rig
To Move OKE to De-con Line
Take Down Move 3 Set-up
For Client De-con Back
Release Survey is Complete
1530 Exit DX-11
1600 Exit Work For The Day

9-15-94

0700 Drill Rig Set-up

1530 Done For Today

9-16-94

0700 Trip to Santa Fe and
Van Set-up
1530 Exit Call Weatherford

9-19-94

0700 Arrive @ Kitty
0900 Get DX-11 Engine Head to
Pinedale for Inspection
1030 Drill Rig Service Rest of Day 1530

9-20-80

[illegible] Arrive to Monitor
[illegible] Sign in at DX-11 Go to Lower
[illegible] Set-up
[illegible] Source Check [illegible]
[illegible] Set-up [illegible] to Begin Water Samples
[illegible] Chachere
[illegible] Tripod Set up PRS-004

Direct Reading at first location 36-3090
97 cpm Total of 3 2 liter Jars with
Screens on Top will be placed 0 less than
one foot below [illegible] Stream Bed to Collect
Water for future Sampling

Next location 36-3091 Direct Reading
is 108 cpm

Location # 36-3092 Direct Reading
113 cpm

Location # 36-3093 Direct Reading
125 cpm
Jar are placed in Stream Bed Head Back
To UKZ

Decon Equipment and Release Scam
personnel

Location # 36-3119 Direct 110 cpm
Location # 36-3120 " 119 cpm

1300 Location # 36-3121 Direct 120
1320 Location # 36-3122 Direct 110

1100 [illegible] Decon Equipment
1130 Scan personnel & Vehicles [illegible]
Drive Go to Big 49
1500 Exit Area 49 Sign-out
1530 Exit Back the Bag

9-21-94

0700 Arrive @ ICF-RA Review Days Activitys
0800 Going to MCE area of TA-36 to put Water Samplers into the Creek
0830 Sign-in DX-11
0900 Arrive at MCE. Source check Instrument Set-up Zone
1007 Enter Zone Location # 36-3086 Direct Reading 119 cpm

1032 Location 36-3087 Direct Reading is 97 cpm

1100 Location 36-3088 Direct Reading is 119 cpm

1119 Location 36-3089 Direct Reading is 113 cpm

1200 Scan personnel & Equitment
1215 Take Down Zone
1300 Drill Rig Service
1600 Exit for Day Work

9-25-94

0500 Arrive @ Kaiser
0600 Drill Rig Service "Welding"

0630 Head to Water Canyon for Water Sampler Installation
0745 Source Check Instruments
800 Set-up Zone
808 Lunch
830 Enter Zone
837 Location #36-3082 Direct Reading is 129 cpm
850 Location #36-3083 Direct Reading is 137 cpm
903 Location #36-3084 Direct Reading is 102 cpm
915 Location #36-3085 Direct Reading is 121 cpm

950 De-con Complete Exit Area
930 Exit TA-36 Water Canyon Head to Los Alamos Paper-work!
930 Exit for Day

9-26-94

700 Arrive @ TA-54 Review Days Activities
800 Drill Rig Service and prep

00 Go to DX-11 Sign in go to lower Slobbovia Set-up Drill Rig at Burn Pit
00 Lunch
30 Wait for Surveyors to locate LINES

9-26-94

1430 Set-up CRZ able to leave
over-night still waiting on
hing spoons. 1445 is when I
will be able to get-in because c
Secured Shot
1500 Sit DX-11 Sign-out here.
1450 See Also Any Guest

9-27-94

0730 Arrive @ TEF-KO
0800 Review Daily activities
0830 Sign-in @ DX-11
0900 Continue set-up of Support Zone
and Drill site
1000 De-con on Spit-spoons with Steam
Cleaner
1030 De-con Curtiner's Peter-Gram in Chi
Zeb Bingham is Assisting

1045 Tailgate Safety-meeting Task #14

1055 Enter Zone
1110 Begin Drilling for first Sample

1245 Secure site and CRZ for
Lunch
1325 Start time to Resume Drilling.
Spit-spoon when 3 min. no hole Time
Time Stopped

[illegible]

[illegible]

Get [illegible] Drilling [illegible] Resistance

Send out [illegible] pick-up [illegible]

Site

DX-11 Signout

Leave [illegible] Day [illegible]

9-28-94

Arrive @ [illegible]

Sign in Sign check [illegible]

Arrive [illegible] Stabbing

Tailgate Meeting

Equip [illegible]

Drilling is [illegible]

15 [illegible] Bit [illegible] 5 [illegible]

Sample at [illegible] 2009 Direct 130 psi Bent [illegible]

Enter Zone Take Auger out of Hole

Jeff Brown De-couple Augers Direct Boring

Taken on Drill Rig

Move [illegible]

Move [illegible] Setup [illegible]

[illegible]

Send Tech [illegible] Home for

[illegible]

Sign out

Exit [illegible]

0730 [illegible] Review Days Activities
0830 Sign-in DX-11
0905 Tailgate Safety Meeting
0920 Service Check Transit Time
0945 Crew Begins to Enter Area
0949 Drill Rig is Being Setup for Days Sampling Split-Spoon Set-up
1038 Spit-Spoon is Stuck 3½ Down
1045 Adjust Vibrator Head for Maxium Torque
1136 Rad Reading is Direct At 3.5 feet is 697 cpm Design Spoon for Another Try, Soil Appears Be Dill Dirt May or May-not Be over Trench will Investigate Further
1220 Refusall at 4½ feet Will Transfer to [illegible]
1300 Lunch
1330 Crew Enters CRZ
1337 Crew Enters Zone to Begin Augering
1350 Begin Drilling
1500 No Rad Detected above BKG Normal Soil in Area
1515 Pack-up Rig and Send Crew
1600 DX-11 Sign-out
1630 Exit CRZ The Day

Arrive at Site
Review Days Activities
Source Check Equipment Sign-in OX-11
Entire Crew Attend Tailgate Safety Meeting
Take Split-Spoon and Direct Rod Reading
Split-Spoon Sample Direct 5' to 7' 10:20 am AHB-1952
Lunch
Return To CE2 and E2
Still Drilling
No Rad Detected Above Normal
Exit Area Decon Gloves Boots and Personnel
Store Water in Jugs for Storage
Exit for Weekend

10-3-94

Arrive at Site-Rd
Exit for TR-36
Sign-in at OX-11
Tailgate Safety Meeting
Enter Zone
Start-up Rig Remove Augers 7½' Down
Setup Split-Spoon Sampler to Return Down to
7½ feet for Sample
AHB-1953 Direct Rod Reading 7:9 am Split-Spoon
Bow Reading 8' to 10' feet Sample Source
Lunch
Return to Zone
Split-Spoon Down to 12' to 14' Spoon Ready to Retrive

10-3-94

1400 Spit-Spoon Reduced 2ND Reading
Direct from open Spoon at 12'-13.5'
Sample is to be taken Bow Reading
1407 ARR. 1954

1550 Exit Area Secn Samples Personnel
Equipment
1600 pack-up Zone Secn Vehicles
1615 Sign-out DX-11
1630 Exit for Day Out

10-4-94

0700 ARRIVE ICE-RA Review Day Activ

0800 Go with Mike Henke Drill Rig Set
and Service welding drill pipe

10:00 Sign-out
1030 Back at ICE-RE for paper-work
Control Charts
1400 Exit for Day Out

10-5-94

0700 Arrive ICE
0815 Exit for Lewine Slobbovia Move Rig
Up-con Equipment
0945 Enter Area

1200 Complete Above Sain Task

Exit for Drill
Sign out for the day [illegible]
Drill [illegible] Stop
Equipment [illegible] Daily Grind

10-6-94

Arrive at Ice-Ka Review Days Activity
Prep - Meeting
Exit for TA-36
Sign-in at DX-11 CRZ was Blown
away 100 yards do to High over-night
Winds
Re-set CRZ
Source check Instruments
Enter Zone Battery is Down on Rig Change
Steam Cleaner
Start-up Rig Drill 2' Down Sample 2'-4'
No Rad Detects above Normal of the Huge Cuttings
At 2' Change out Motor for Spit-spoons to get
[illegible] first Sample
2'-4' Rad Reading is 95 cpm Direct HNB-1950
Bowl Rad is 118 cpm
Exit Steam Cleaner
Enter Zone
Rad Reading Direct 97 cpm Bowl 109 6'-8'
Each Area Re-cov Equipment Personnel
Clean out DX-11
Exit for the Day Duty 10-6-94

10-7-94

First Day

10-10-94
Admin Day in NIBR

10-11-94

0700 Arrive @ ICE-KA
0730 Review Days Activity
0850 Sign in DA-11 Hand for Lunch
Stobbovin
0900 Source check instruments
0930 Tailgate Safety-Meeting
0945 Enter Zone
1000 Start-up Rig Drive Split-Spoon 8' to 10'
1100 Sample Taken 4" to 6" of Sample
169 cpm Direct Not a Complete Sample
1148 Take Spit-Spoon out of Hole
1205 Sample Collected 134 Direct Bowl Read.
169/134 cpm
1220 Ground is still very soft Down 16' Add one more flight Minimal Sample Recovery Expected
1235 Vibrated Down to 32' feet

1335 Exit Zone Area Lunch
1400 Reenter for Scan Survey and Decon
1445 Exit Area Decon Complete
1500 Move Rig
1530 Scan Personnel and Equipment out
1630 Sign out DA-11 Exit Facility (Wed)

10-12-94

[illegible] Second [illegible]
Begin [illegible]
Begin Stabilizer Drill Rig Setup
Tailgate Safety Meeting
Enter Zone to Begin Drilling
Drilling is Begun Augering Down to 8'
Drilling Completed Split-Spoon Setup for First Sample
Range Mast Down [illegible]
No Sample Taken at 5' to 10'
No Sample Taken Due to Missing Thermal
12' to 17' Reviewed No Trench
Survey out Steam Cleaner Tables & Blast Shields
Survey out Final Smears, Direct Readings
Decon Continues "Trujillo" and Myself in Hazmat
Drying
Exit Survey out Decon
Lunch
Continue Survey of Drill Rig Smears Taken
Direct Readings Also Taken
Take Lunch Break
Take Rig & Cleaner out Scum Tires
Exit
Sign out Drill
Exit Site the Day

11-8-94

Store Steam Cleaner Water into
five Gallon jugs
Clean Spoil pad at CRZ with Steam
Cleaner Long hose view
Exit for Equipment Mod ate at TW-18
Big 48
Exit DX-11
Dump off liquid waste at Storage
Call it A day JWC

11-9-94

Arrive on TCF-14 Review days activity
Rider Van is being used for a video,
This Morning will be able to go to work
when it gets back
Paper-work and Control Charts for
November

Set-up Will his, Steam Cleaner

Finished set-up at Zone

Exit area
Exit for the day

11-17-94

0700 Drive to Site - Weekly Safety Meeting
Start of Seven Days Work
0915 Unload Cold Weather Gear
0830 Go to TA-15 Laundromat Post the Employee
0710 TA/Site Safety Meeting
0815 Enter Zone - Moving to Next Location TA-36
1003 Move Complete
1010 Start Driving Split-Spoon
1020 14th Borehole Unsuccessful Move Rig 20 feet North for another Try
1037 Survey and Decon Spit Spoon
1058 Second Hit Trench Move Rig
1103 Rig is Moved one foot North Try Again
1107 Drive Split Spoon
1130 Missed again Move Rig
1158 Set up Rig Again Drive Two Split-Spoon
1217 First spoon driven
1220 Second Spoon is driven
1250 Sample of Trench is Take Location Number HAB 1906 Direct 95 cpm Bowl Reading is 112 cpm
1307 Decon Move Split-Spoons
1330 Second Sample is Taken Direct Read 117 cpm Bowl 107 cpm Sample # 1907
1500 Sampling Stop
1545 End the Day

11-12-94

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

11-21-94 - [illegible]

0630 [illegible] RECEIVED [illegible]
[illegible] KEN MCFARLANE [illegible]
[illegible] RECEIVED THIS.

0815 SCHEDULED TAILGATE
0900 DRIVEN TA-18 WORK LOCATION.
0930 " TA 18 WORK AREA

1400 TOOK TWO SOIL SAMPLES ABS 1916 & 1917 [illegible]
Equip Release Forms for Onto - Surveyed
Equip & Swipes for Release - 70 Swipes Taken
& Read - All O.K.

1600 Finished Counting Swipes
Surveyed Last.
1630 Departed Kaiser for Benavilla
You are welcome

[signature]

11-22-94
0700 Arrive @ TA-18
0900 Head to TA-18 Work Area Survey out
Vehicles and de-mob site
1200 Lunch
1200 Drop off Equipment at Drilling Tech Ar
Give Release Tag to Joe Sobolski His
Truck Released for Unconditional Use
1400 Go Back to Kaiser
1530 Exit for the day

1-23-94

[illegible] Arrive [illegible] [illegible] [illegible] [illegible]
[illegible]00 No Field work Today
[illegible]00 Admin and paperwork
[illegible]00 Take U3-10 for Re-Calibration
[illegible]00 Set-up Control Chart for New U3-10
[illegible]00 Exit for the Evening

1-30-94

[illegible]00 [illegible]
[illegible]00 [illegible]
[illegible]53 [illegible] DA-11
[illegible]10 [illegible]
[illegible]20 [illegible]
[illegible]30 [illegible]
[illegible]
[illegible]40 [illegible]
[illegible]0 [illegible]
[illegible]
[illegible]15 [illegible]
[illegible] [illegible] ELK
[illegible]5 [illegible]
[illegible] [illegible] Sample
[illegible]0 Last Sample is [illegible]
[illegible]25 Scan [illegible] [illegible] [illegible] [illegible]
Canyon
[illegible]2 Arrive at [illegible] Canyon
[illegible]00 [illegible]
[illegible]6 [illegible] HIGH
[illegible]
[illegible]0 [illegible] HIGH

[illegible] Crew
[illegible] Sign out DX-11
[illegible] Head to Water Canyon
1300 Enter Water Canyon
1400 Re-sample local off three Sediment Log water Recovery
1420 Sampling of Canyons Complete
Sediment Log
1430 Leaving to TCF-KE
1530 Exit Gate The Day Ends

12-1-94

0800 Arrive @ TCF-KE Review Plans [illegible]
0900 Sign out DX-11
0930 Go to TJ Ranch point to Refund Soil Sampler to point of origin
1100 Go to b/g 48 for de-con of Sample Cans

1545 de-con Complete Store
1410 Sign-out DX-11
1420 Go to TF-18 to pick-up Ord 1130 WASH
1500 Back at TCF-KE
1530 Exit for Day

[illegible]

Arrive to Site
Get Sand Probes
Arrive @ Initial Compound to Pit Sample
Back at house where they were
Collected
Exit Compound
At Site
Exit for the day [illegible]

12-5-94

Arrive to Site
Paperwork
Exit Site to the Drilling Tech waste water
Collection & Sample
Return to Site - Paper-work for Rest
of Day
Exit Job for Day [illegible]

12-6-94
Arrive to Site
Paper-work
1130 Storage and Clean-up
Exit Job for the day [illegible]

0700 [illegible] Paper-work
[illegible] complete
0950 Exit for lunch Stubbevin
to return soil sample
1200 Back at office to do Report
Survey on Ryder Van Smear
Points taken
1400 Survey complete
1500 Exit for the day [illegible]

12-8-91

0730 Arrive office and review days
activity
0800 [illegible] Report in Lunge 1093 +
1130 Stuff
1430 Arrive back at office
1500 Paperwork and Survey sheets
1530 Exit for the day [illegible]

12-9-91

0700 Arrive office
0800 Paper-work copys
0900 Go to Tw-27 to drop off soil sample
Design
1300 Go drop off paperwork and instrument
1500 Exit for day [illegible]

12-12-94

[illegible]

12-13-94

[illegible]

12-14-94

[illegible]

APPENDIX 6

ATTACHMENT 2

Control Access Register Forms

ENVIRONMENTAL [illegible]ENSIONS, INC.

Controlled Area
Access Register

Date: [illegible]

Sheet [illegible] of [illegible]

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	EDI	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: [illegible]
Serial Number: [illegible]
Probe Model: [illegible]
Serial Number: [illegible]
Eff [illegible] % Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model [illegible]
Serial Number [illegible]
Probe Model [illegible]
Serial Number [illegible]
Eff [illegible] % Bkg [illegible] cpm

ENVIRONMENTAL [illegible]NSIONS, INC.

Controlled Area
Access Register

Date: [illegible] Sheet [illegible] of [illegible]

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	EDI	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] Tougville	ICF KA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model [illegible]
Serial Number: [illegible]
Probe Model: [illegible]
Serial Number: [illegible]
Eff [illegible] % Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model [illegible]
Serial Number: [illegible]
Probe Model [illegible]
Serial Number: [illegible]
Eff [illegible] % Bkg [illegible] cpm

ENVIRONMENTAL DIMENSIONS, INC.

Controlled Area
Access Register

Date: [illegible]

Sheet [illegible] of [illegible]

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	

Results Reported in: ☒ cpm | | dpm

Alpha Survey Instrument

Scaler Model: [illegible]
Serial Number [illegible]
Probe Model: [illegible]
Serial Number: [illegible]
Eff [illegible] % Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model: [illegible]
Serial Number [illegible]
Probe Model: [illegible]
Serial Number [illegible]
Eff [illegible] % Bkg [illegible] cpm

ENVIRONMENTAL DIMENSIONS, INC.

Controlled Area
Access Register

Date: 8-6-94

Sheet 1 of 1

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	EDI	[illegible]	1055	1210	<1	75	
[illegible]	[illegible]	[illegible]	[illegible]	1210	1	75	
[illegible]	[illegible]	[illegible]	1055	1305	<1	[illegible]	
[illegible]	[illegible]	[illegible]	1055	1210	<1	[illegible]	
[illegible]	CAMC	[illegible]	---				

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: N/A
Serial Number:
Probe Model:
Serial Number:
Eff - % Bkg - cpm

Beta-Gamma Survey Instrument

Scaler Model: [illegible]
Serial Number: [illegible]
Probe Model: [illegible]
Serial Number: [illegible]
Eff [illegible]% Bkg [illegible] cpm

ENVIRONMENTAL [illegible]ENSIONS, INC.

Controlled Area
Access Register

Date: [illegible]

Sheet [illegible] of [illegible]

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Results Reported in: [X] cpm [ ] dpm

Alpha Survey Instrument

Scaler Model: [illegible]
Serial Number [illegible]
Probe Model: [illegible]
Serial Number: [illegible]
Eff [illegible] Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model [illegible]
Serial Number [illegible]
Probe Model [illegible]
Serial Number. [illegible]
Eff [illegible] Bkg [illegible] cpm

ENVIRONMENTAL D[illegible]SIONS, INC.

Controlled Area
Access Register

Date: [illegible]

Sheet [illegible] of [illegible]

Name	Organization	Employee ID#	Time In	Time Out	EXIT SURVEYS Alpha	EXIT SURVEYS Beta-Gamma	Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
NANCY [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model [illegible]
Serial Number [illegible]
Probe Model [illegible]
Serial Number [illegible]
Eff [illegible] % Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model [illegible]
Serial Number [illegible]
Probe Model [illegible]
Serial Number [illegible]
Eff [illegible] % Bkg [illegible] cpm

ICF KAISER ENGINEERS

Site: [illegible]

Controlled Area Access Register

Date: [illegible]

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOI	115773	1310	1455	[illegible]	[illegible]					
Ken McFadyen	MK	115392	1310	1455	[illegible]	[illegible]					
Ambrose Cox	KE	115568	1310	1445	[illegible]	[illegible]					
[illegible]	[illegible]	103012	1510	[illegible]	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	1310	1455	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	1405	1510	[illegible]	[illegible]					

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: Eberline 139
Serial Number: 71312
Probe Model: 43-32
Serial Number:
Eff. 50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg 73 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg 5.2 cpm

ICF KAISER ENGINEERS

Site: [illegible]

Controlled Area
Access Register

Date: [illegible]

Sheet [illegible] of [illegible]

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EDI	115773	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible] McFarlane	MK	115392	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		
[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	

Results Reported in: ☒ cpm ☐ dpm

pha Survey Instrument

aler Model: Eberline 139
rial Number: 71312
obe Model: 43-32
rial Number: [illegible]
f. 50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg 0.1 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg [illegible] cpm

ICF KAISER ENGINEERS

Site: [illegible]

Controlled Area
Access Register

Date: 1 27 11

Sheet 1 of [illegible]

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOT	115773	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1	67	
[illegible] McFarlane	MK	115792	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1	70	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1550	<1	74	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1550	<1	80	

Results Reported in: ☒ cpm ☐ dpm

[illegible]a Survey Instrument

[illegible]er Model: Ludlum 139
[illegible]al Number: 21312
[illegible]e Model: 43-32
[illegible]al Number:
50 % Bkg 10 cpm

Alpha Tray Counter

Scaler Model: Ludlum 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: pr-112654
Eff. 33.9 % Bkg 0.7 cpm

Beta Gamma Survey Instrument

Scaler Model: Ludlum 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg 71 cpm

ICF KAISER I [illegible]EERS

Site: [illegible]

Controlled Area
Access Register

[illegible]e: [illegible]

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
[illegible] Taylor	EOI	115773	1130	[illegible]	[illegible]	[illegible]					
[illegible] McFarlane	MK	115772	1130	1243	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]	1130	1245	[illegible]	[illegible]					
[illegible]	ICF-KA	[illegible]	1130	1245	[illegible]	[illegible]					
[illegible]	ICF-KA	[illegible]	1130	[illegible]		[illegible]					

Results Reported in: ☒ cpm ☐ dpm

[illegible]pha Survey Instrument

[illegible]ler Model: Eberline 139
[illegible]ial Number: 71312
[illegible]be Model: 43-32
[illegible]ial Number:
[illegible]. 50 % Bkg 2 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PP-112654
Eff. 33.9 % Bkg 0.3 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg 80 cpm

ICF KAISER ENGINEERS

Site: [illegible]

Controlled Area
Access Register

Date: [illegible]

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOI	115773	[illegible]	[illegible]			[illegible]				
[illegible] McFarlane	MK	115392	[illegible]	[illegible]			1550				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]				
[illegible]	[illegible]	[illegible]031	[illegible]	[illegible]							

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: Eberline 139
Serial Number: 21312
Probe Model: 43-32
Serial Number:
Eff. 50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg 0.2 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg 71 cpm

ICF KAISER ENGINEERS

Site: [illegible]

Controlled Area
Access Register

Date: 12-5-94

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EDI	115773	0600	1130	[illegible]	64					
Kent McFarlane	MK	115392			[illegible]	68	—				
Bert Trujillo	Kaiser	058602	0945	1150	[illegible]	51					
Jeff Bishop	Lanl	[illegible]	0945	1130	[illegible]	70					
Mike Gallegos	Kaiser										

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: Eberline 139
Serial Number: 21312
Probe Model: 43-32
Serial Number: —
Eff. 50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg 0.2 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: [illegible]
Eff. 16.2 % Bkg 67 cpm

ICF KAISER ENGINEERS

TA-36

Site: Lower Sublimation

Controlled Area
Access Register

ate: 10-11-94

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOI	115773	0945	1355	1	76	1400	[illegible]	1	31	
Neal McFarlane	MK	115792	0945	[illegible]	1	81					
Bart Trujillo	ICF KJ	056605	0945	1313	1	77	1400	[illegible]	1	35	
Jeff Baughman	LANL	88550	0945	1335	1	81	1400	1415	1	15	
Joe Green	ICF-KJ	103026	0945	1313	1	80	1400	[illegible]	1	40	

Results Reported in: ☒ cpm ☐ dpm

pha Survey Instrument

aler Model: Eberline 139
rial Number: 71312
obe Model: 43-32
rial Number:
f. 50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PR-112654
Eff. 33.9 % Bkg _____ cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: 112190
Eff. 16.2 % Bkg 92 cpm

ICF KAISER ' NEERS

Site: Tr1-18 PCS:36 cpl 34

Controlled Area
Access Register

ate: 11-14-94

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOI	115775	1010	1215	<1	58	1257				
Gene McKeever	MK	115792	1010	1215	<1	70	1257				
Jeff Bassett	LMHC	05886	1010	1215	<1	66	1257				
Steve Graham	ICF-KE	05806	1010	1215	<1	71	1257				
D. Bozzell	ICF Kaiser	10220	1010	1215	<1	70	1257				

Results Reported in: ☒ cpm ☐ dpm

pha Survey Instrument

aler Model: Eberline 139
rial Number: 71312
obe Model: 43-32
rial Number:
f. 50 % Bkg 2 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PR-112654
Eff. 33.9 % Bkg 0.3 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105934
Probe Model: 44-9
Serial Number: [illegible]
Eff. ~~[illegible]~~ % Bkg 71 cpm
139

Site: [illegible]

Controlled Area
Access Register

Date: 1-17-94

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOI	115723	[illegible]	[illegible]	[illegible]	[illegible]					
Ken McFarren	MK	115392	[illegible]	[illegible]	[illegible]	[illegible]					
Jeff Barnhart	GAAL	078580	[illegible]	[illegible]	[illegible]	[illegible]					
[illegible]	ICF-KE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
[illegible]	ICF KAISER	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: Eberline 139
Serial Number: 71312
Probe Model: 43-32
Serial Number:
50 % Bkg 2 cpm

Alpha Tray Counter

Scaler Model: Eberline 2221
Serial Number: 108847
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg 0.3 cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2221
Serial Number: 105734
Probe Model: 44-9
Serial Number: 112174
Eff. 13.4 % Bkg 11 cpm

Site: [illegible]

Controlled Area
Access Register

Date: 11 21 9[illegible]

Sheet 1 of 1

NAME	ORG.	EMP. ID#	TIME IN	TIME OUT	Alpha	Beta	TIME IN	TIME OUT	Alpha	Beta	COMMENTS
John Taylor	EOZ	115775									
Kai McFarlane	MK	115392	1017	1330	0	79					
Jeff Barnhart	LANL	078580	0930	1330	0	82					
[illegible]	EOL	115172	0940	1035	0	71	1112	1552	0	[illegible]	
[illegible]	EOF Kaiser	[illegible]	[illegible]	1216	0	76		1310	0	82	
Peter [illegible]	2LF KS	10072	0930	1004	0	69	1252	1320	0	81	
[illegible]	1LF LE	35405	1018	1217	0	72					

Results Reported in: ☒ cpm ☐ dpm

Alpha Survey Instrument

Scaler Model: Eberline 139
Serial Number: 71312
Probe Model: 43-32
Serial Number:
50 % Bkg 1 cpm

Alpha Tray Counter

Scaler Model: Eberline 2220
Serial Number: 108497
Probe Model: 43-10
Serial Number: PC-112654
Eff. 33.9 % Bkg [illegible] cpm

Beta-Gamma Survey Instrument

Scaler Model: Eberline 2220
Serial Number: 105734
Probe Model: 44-9
Serial Number: 112194
Eff. 13.4 % Bkg 76 cpm

APPENDIX 6

ATTACHMENT 3

Equipment and Material Release Forms

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 5-25-94 Site: ICF Kaiser Survey Number: 0001 Surveyor Name: J. Spyker	Beta-Gamma Direct Inst: 105934 Blg 58 cpm Probe: 44-9 #112193 Effeciency: -149	Alpha Direct Inst: _____ Blg ____ cpm Probe: _____ Effeciency: _____	Alpha Transferable Detector: _____ Blg: _____ Effeciency: _____	Beta Gamma Transferable Detector: _____ Blg: _____ Effeciency: _____

ITEM SURVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE ALPHA		TRANSFERRABLE BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
Ryder Truck												
Model # 16469C												
Storage Box #1			47	<43								PRE-FIELD
2			62	173								SURVEY of
3			54	<43								TRUCK Beta
4			55	<43								GAMMA DIRECT
Inside Cab #1			73	649								No A/B
2			59	43								TRAY Counter
3			69	476								Available
4			63	216								

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 7-14-94 Site: TH-36 Photo Outfall Survey Number: Surveyor Name: [illegible]	Beta-Gamma Direct Inst: 2221 Bkg: 58 cpm Probe: 44-9 Effeciency: 149	Alpha Direct Inst: — Bkg: — cpm Probe: — Effeciency: —	Alpha Transferrable Detector: 43-10 Bkg: 0.1 Effeciency: 33.9	Beta Gamma Transferrable Detector: — Bkg: — Effeciency: —

ITEM SURVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE ALPHA		TRANSFERRABLE BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
Bowls & Spoons			61	129	1	2.6						
Sample # 1911			62	173	0	<2.6						
1912			76	779	0	<2.6						
1913			82	1039	0	<2.6						
1914			86	1212	1	2.6						
1915			82	1039	0	<2.6						

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date 7-21-94	Beta-Gamma Direct	Alpha Direct	Alpha Transferable	Beta Gamma Transferable
Site OU 1130 71-36-12 SEPTIC TANK Bldg 1	Inst: [illegible] Bkg 55 cpm	Inst: n/a Bkg — cpm	Detector: 43-10	Detector: N/A
Survey Number	Probe 449	Probe	Bkg 0.1 cpm	Bkg
Surveyor Name [illegible]	Efficiency 14.7%	Efficiency:	Efficiency: 33.9%	Efficiency

ITEM SURVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE: ALPHA		TRANSFERRABLE: BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
AAB-1873			68	567	2	5.6						
1874			66	476	2	5.6						
1875			62	303	0	<2.6						
1876			73	779	1	2.6						
1877			82	1169	0	<2.6						
1878			67	519	1	2.6						
Sampler Tube			63	346	0	<2.6						
Gloves			65	432	0	<2.6						
Tubs			61	259	2	5.6						
Buckets			75	865	3	8.5						

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 7-25-94 Site: TP-3C Pilot Outfall Survey Number: Surveyor Name: J. Taylor	Beta-Gamma Direct Inst: 2221 Bkg: 63 cpm Probe: 44-9 Efficiency: 14.9 %	Alpha Direct Inst: N/A Bkg: — cpm Probe: Efficiency:	Alpha Transferable Detector: 43-10 Bkg: 0.1 Efficiency: 35.9 %	Beta-Gamma Transferable Detector: N/A Bkg: Efficiency:

ITEM SURVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE ALPHA		TRANSFERRABLE BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
DAS 1918			52	<43	2	5.6						
DAB 1919			55	<43	1	2.6						

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 7-28-94 Site: TA-3-BURGARCO Survey Number: Surveyor Name: [illegible]	Beta-Gamma:Direct Inst: 2221 Bkg 74 cpm Probe: 44-9 Efficiency: 14.9%	Alpha:Direct Inst: — Bkg — cpm Probe: — Efficiency: —	Alpha:Transferrable Detector: 43-10 Bkg: 0.1 Efficiency: 33.9%	Beta-Gamma:Transferrable Detector: — Bkg: — Efficiency: —

ITEM SURVEYED FOR RELEASE	DIRECT:ALPHA		DIRECT:BETA-GAMMA		TRANSFERRABLE: ALPHA		TRANSFERRABLE: BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
HLD - 1853			96	952	1	2.6						
" 1854			96	957	1	2.6						
" 1855			116	1818	0	<2.6						
" 1856			103	1775	1	2.6						
" 1857			120	1991	1	2.6						
Devils Spoons			78	173	2	5.6						
PE Kit			79	216	0	<2.6						
Eagle's Spoons			73	<43	0	<2.6						
HLD - 1858			87	562	0	<2.6						
1859			89	699	1	2.6						
" 1860			93	872	0	<2.6						

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 8-3-94 Site: TH-3 Boneyard Survey Number: Surveyor Name: [illegible]	Beta-Gamma Direct Inst: 2221 Bkg: 68 cpm Probe: 44-9 Efficiency: 14.9%	Alpha Direct Inst: — Bkg: — cpm Probe: Efficiency:	Alpha Transferable Detector: 43-70 Bkg: 0.2 cpm Efficiency: 33.9%	Beta-Gamma Transferable Detector: NVM Bkg: Efficiency:

ITEM SURVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE ALPHA		TRANSFERRABLE BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
ABB-1834		n/a	108	1731	0			n/a				
1835			108	1731	1							
1836			115	2035	0							
1837			101	1478	1							
1838			102	1472	1							
1839			114	1991	1							
1840			116	2078	0							
1841			102	1472	0							
1842			113	1948	1							
Bowls & Spoons			68	<43	1							
Tubs			65	<43	0							

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 8-4-94 Site: TA-36 Building Survey Number: Surveyor Name: [illegible]	Beta-Gamma:Direct Inst: 2221 Bkg 61 cpm Probe: 44-9 Effeciency: 14.9%	Alpha:Direct Inst: ✓ Bkg — cpm Probe: — Effeciency: —	Alpha:Transferrable Detector: 43-10 Bkg: 0.1 cpm Effeciency: 33.9%	Beta-Gamma:Transferrable Detector: — Bkg: — Effeciency: —

ITEM SURVEYED FOR RELEASE	DIRECT:ALPHA		DIRECT:BETA-GAMMA		TRANSFERRABLE: ALPHA		TRANSFERRABLE: BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
HPB-1561			101	1731	0							
1562			101	1731	1							
1563			116	2381	1							
1564			108	2035	1							
1565			93	1385	0							
1566			134	3160	2							
1567			97	1558	1							
1568			115	2358	0							
1569			112	2308	0							
HPB 1543			121	2597	1							
1570			130	2987	0							
1571			130	2987	1							
1572			140	3420	1							
Tools 3 Drums			69	346	0							
Tools 3 Stools			74	562	0							

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 8-5-94 Site: [redacted] HK Site Test Survey Number: Surveyor Name: [illegible]	Beta-Gamma:Direct Inst: [illegible] Bkg: 6cpm Probe: 44-9 Efficiency: 14.9%	Alpha:Direct Inst: ___ Bkg: ___ cpm Probe: ___ Efficiency: ___	Alpha:Transferrable Detector: 43-10 Bkg: 0.2cpm Efficiency: 33.9%	Beta-Gamma:Transferrable Detector: ___ Bkg: ___ Efficiency: ___

ITEM SURVEYED FOR RELEASE	DIRECT:ALPHA		DIRECT:BETA-GAMMA		TRANSFERRABLE: ALPHA		TRANSFERRABLE: BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
EHS 1879			67	43	0	<2.3			JE			
1880			65	<43	0							
1881			78	519	0							
1882			77	259	1	2.3						
1883			70	173	0	<2.3						
Tubs & Cooler			74	346	0							
Clark's			67	43	0							

ENVIRONMENTAL DIMENSIONS, INC.

Equipment and Materials Release Form

Date: 2-8-94	Beta-Gamma Direct	Alpha Direct	Alpha Transferrable	Beta-Gamma Transferrable
Site: TI-56 T-3 Excess Site	Inst: 105434 Bkg 67 cpm	Inst: — Bkg — cpm	Detector: 43-10	Detector: [illegible]
Survey Number:	Probe: 44-9	Probe: —	Bkg: 0.3 cpm	Bkg:
Surveyor Name: [illegible]	Effeciency: 14.9 %	Effeciency: —	Effeciency: 33.9 %	Effeciency:

ITEM SUSVEYED FOR RELEASE	DIRECT ALPHA		DIRECT BETA-GAMMA		TRANSFERRABLE ALPHA		TRANSFERRABLE BETA-GAMMA		CERTIFIED AS MEETING CRITERIA			COMMENTS
	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	CPM	Dpm/100cm²	YES	NO	INITIALS	
AAB 1886			168	7373	0	<2.3						
AAB 1887			127	2597	1	2.3						
AAB 1888			120	2774	1	2.3						
AAB 1889			145	3577	1	2.3						
AAB 1885			174	4633	0	<2.3						
Tubs & Stools			79	519	2	5.3						
Bowls & Spoons			84	736	1	2.3						
AAB 1933			102	1515	0	<2.3						

Los Alamos
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG

Ludlum Model #2 Activity NA ID#2

1834-94
Source Type Th-230 ID# 1834-94 Activity 319nCi

Survey Instrument: 105934 Ludlum 2221 / 44-9 112193	Smear Counter: 108847 Ludlum 2221 / 43-10-112654	Facility: France Canyon "MOE"
HS Property Number: N/A	HS Property Number: 006288	TA-36
Calibration Due Date: 2-11-95 / 2-11-95	Calibration Due Date: 5-25-95 / 11-25-95	
EFF = 14.9 BKG = 63	BKG = 0.2 EFF = 33.9	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) Gen Bkg	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/no	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
3-11-94	J Taylor 115773 John W Taylor	Soil Samples						103076 Peter Hahn	
		AB-1812	98 / 1515	NDA					
		1813	104 / 1775						
		1814	114 / 2374						
		1815	102 / 1688						
		Bowls & Spoons	74 / 649	NDA					

[a] Item cannot be released unless survey results are below LANL Radiological Control Manual Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public).

[b] Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623 (

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[3]

8-12-94

Survey Instrument 44-9 112193	Smear Counter 43-10 PE113654	Facility Pueblo Canyon TA-36
HS Property Number ~~[illegible]~~	HS Property Number P006188	Soil Samples
Calibration Due Date 7-11-95	Calibration Due Date 11-25-94	ESLH 5400

BKG = 69 cpm EFF = 14.9% BKG = 0.3 cpm EFF = 33.4%

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) (fixed)	Direct Survey (dpm/100cm²) (removable)	Smear Survey (dpm/100cm²) (fixed)	Smear Survey (dpm/100cm²) (removable)	Interior Monitoring[2]: Required? Yes/No	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
8-12-94	Jack W Taylor 1573 [illegible]	AAB 1914	96	1169	0	<2.3	N/A			(505) 01[illegible] 10307 [illegible]	
		" 1917	90	909	0	<2.3	N/A				
		" 1918	94	1087	1	2.3	N/A				
		" 1919	78	389	0	<2.3	N/A				
		" 1920	96	1169	1	2.3	N/A				
		Soil Sample	74	216	0	<2.3	N/A				

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[1]

Survey Instrument: Ludlum 2221 # 105971 44-9 # 112193	Smear Counter: Ludlum 2221 # 103947 43-10 # 112654	Facility: Lower Potrillo Canyon
HS Property Number: N/A	HS Property Number: 006288	1939-1942 # 36-004
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94	ESH 54-001
EFF = 14.9% BKG = 68	EFF = 33.9% BKG = 0.1	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) Eff	Direct Survey (dpm/100cm²) Bkg	Smear Survey (dpm/100cm²) Eff	Smear Survey (dpm/100cm²) Bkg	Interior Monitoring[2]: Required? Yes/No	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
8-16-94	John Taylor 115773 John Taylor	5-1 Samples 1939	126 93	2511	0	2.6	NO			103976 for Peter Gram	
8-16-94	John Taylor	1940	112	1905	0	2.6	NO				
8-16-94	John Taylor	1941	104	1558 1555	3	8.5	NO				
8-16-94	John Taylor	1942	93	1082	1	2.6	NO				
8-16-94	John Taylor	Bags Spoons	87	877	1	2.6	NO				
8-16-94	John Taylor	Backpacks Crates	19	476	0	2.6	NO				

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 2221 F 105934 44-9 SF 112190	Smear Counter: Canberra 2221 F 105847 43-10	Facility: Water Canyon PRS-36-004
HS Property Number: 105934 112190	HS Property Number: 006288	sample #5 1821-1821, 1822, 1823, 1824
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94	ESH 94-011

EFF = 16.2% BKG = 68 EFF = 0.3 cpm BKG = 33.4%

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)			Interior Monitoring[3]: Required? Yes/No	Interior Monitoring: Direct Survey (dpm/100cm²)	Interior Monitoring: Smear Survey (dpm/100cm²)	Interior Monitoring: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Note additional contents on back
5-22-94	115222 John Taylor									103016 [illegible]	
	John Taylor									Peter Gram	
		1821	83	592	1	2.0					
		1822	85	677	0	<2.0					
		1823	86	698	0	<2.0					
		1824	84	637	1	2.0					
		Brush/Spatula	90	477	2	5.0					
		Backpacks	78	398	0	<2.0					
		Step Stools	74	238	0	<2.0					

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Ludlum 2221 # 105934 449 # 112190	Smear Counter: Ludlum 2221 # 108847 4310 # 112188	Facility: Pre Entry Survey of Drill Rig OU-1130 Lic # E-24406 / Steam Cleaner # E-24399
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95	Calibration Due Date:	
EFF 16.29% BKG 75 cpm	EFF 33.9% BKG 0.2 cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) BG	Exterior Survey: Smear Survey (dpm/100cm²) BG	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
1394	John Taylor 115773 John Wagner	Back Bed	74 <39	0 <23				Michael Lebrake 9760 37	
		Front Bed	58 <39	0 <23					
		Right Tire	66 <39	0 <23					
		Left Tire	68 <39	0 <23					
		Pipe Rack	66 <39	1 23					
		Tool Box	67 <39	1 23					
		Control Panel	63 <39	0 <23					
		Augers	60 <39	0 <23					
		Augers	83 318	0 <23					
		Pipes	77 79	0 <23					
		Steam Cleaner Front	63 <39	0 <23					
		Back	67 <39	0 <23					
		Tires Rt	60 <39	0 <23					
		Tires Lt	68 <39	1 23					
		Tank #1	80 199	0 <23					
		Tool Box	77 <39	2 53					

* All Readings in CPM *

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[3]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 #105934 44-9 11.2190	Ludlum 2221 #105841 43-10 11.2684	TA-36 Sump Pit
HS Property Number: N/A	HS Property Number: 006288	Samples #AB-1801
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94 / 11-25-94	ESH-54 (3)
EFF = 16.2% BKG = 73	EFF = 53.9% BKG = 0.2	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey B-γ AIPA: Direct Survey (dpm/100cm²)		Smear Survey (dpm/100cm²)		Interior Monitoring[2]: Required? Yes/No	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number and organization phone	Comments: Write additional comments on back
	John Taylor 115773									Peter Grant 103076	
2/3/94		AHB-1801	78	199	2	5.3	N/O				
		Bowl	72	<39	1	2.3					
		Spoon	68	<39	1	2.3					
		Tub	64	<39	0	<2.3					
		Stool	69	<39	0	<2.3					

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 2221 # 105934 449 # 112190	Smear Counter: Ludlum 2221 # 108847 43-10 # 112188	Facility: PE-Entry Survey Backhoe #471-6187 48C Turbo
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94 / 11-25-94	
EFF=16.2% BKG=73	EFF=33.9% BKG=0.2	

ES&H 94-031

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	B-γ Exterior Survey (cpm)		Smear Survey (dpm/100cm²)		Required? Tested	Interior Monitoring[1]: Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization/phone	Comments: Write additional comments on back
9-13-94	John Taylor U5773	Back Hoe								[illegible]	
		Front Bucket	73	<39	0	<23	NO				
		Back Bucket	70	<39	2	5.3	NO				
		RH Rear Tire	65	<39	1	23	NO				
		LF Rear Tire	74	39	0	<23	NO				
		Cab Inside	56	<39	2	5.3	U YES				
		Floor	64	<39	1	23					
		Samples	71	<39	0	<3.3	U YES				

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112190	Ludlum 2221 # 108847 43-10 # 92-11268	TA-36 Surface pit Soil
HS Property Number: N/A	HS Property Number: 006288	Samples AHB-1802, 1803, 1804
Calibration Due Date: 2-21-95	Calibration Due Date: 11-25-94 / 11-25-94	1805, 1806
EFF=16.2% BKG=71cpm	EFF=33.9% BKG=0.2cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Smear Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[1]: Required? Yes/No	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
9-14-94	[illegible] 115173 [illegible]	Soil Samples Misc Equipment					no			[illegible] Peter [illegible]	
		AHB-1802	90	756	0	<2.3					
		AHB-1803	87	631	1	2.3					
		AHB-1804	92	836	0	<2.3					
		AHB-1805	90	756	0	<2.3					
		AHB-1806	96	995	1	2.3					
		Bowls	79	318	0	<2.3					
		Spoons	77	238	0	<2.3					
		Tubs	69	<39	0	<2.3					
		Shovel	66	<39	3	5.3					
		Shovel + boots	71	<39	0	<2.3					
		Gloves + boots	71	238	0	<2.3					

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112190	Smear Counter: Ludlum 2221 # 105847 43-10 SN PR-112165	Facility: TA-36 Sump pit 111.3e
HS Property Number: N/A	HS Property Number: 006288	Equipment: Back Hoe
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94 / 11-25-94	Release Culvert
EFF=16.2 BKG=71	EFF=33.9% BKG=0.2cpm	ESH-54 321

Date	SCE: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring: Direct Survey (dpm/100cm²)	Interior Monitoring: Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
9-14-94	Scott Taylor 115773 John W. Zaylor	Gloves & Boots	68	<39	1	2.3		Peter Graham	
		Front Bucket	76	199					
		Back Bucket	64	<39	0	<2.3			
		RH Front Tire	73	79	0	<2.3			
		Left Front Tire	69	<39	0	<2.3			
		Cab Floor	57	<39	0	<2.3			
		Controls	63	<39	0	<2.3			
		Culvert Pipe	120	1951	1	2.3			
		Outside	85	557	0	<2.3			
		Inside	94	915	0	<2.3			
		Inside	91	796	0	<2.3			

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 2221 TI 105734 44-9 # 112190	Smear Counter: Ludlum 2221 # 108847 43-10 SC 112168	Facility: TA-55 Annex Sampler Installation
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-7-95	Calibration Due Date: 11-25-94 / 11-25-94	ESH-54-001
EFF=16.2 BKG=67	EFF=33.9% BKG=0.2	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[3]: Required? Yes/No	Interior Monitoring[3]: Direct Survey (dpm/100cm²)	Interior Monitoring[3]: Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
7/11/94	[illegible] / 117273 [illegible]	Boots	69 79	1 2.3				[illegible] 103874 [illegible]	
		Gloves	73 238	0 <2.3					
		Tub	71 159	0 <2.3					
		Shovel	65 <39	0 <2.3					
		Boots	66 <39	0 <2.3					
		Gloves	69 79	0 <2.3					
		Tub	73 238	0 <2.3					
		Shovel	67 <39	1 5.3					

[2]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[3]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Eberline 2221 # 105934 44-9 # 112190	Survey Counter: Eberline 2221 # 108847 43-10 # PR-112159	Facility: TA-36 Fence Canyon
HS Property Number: N/A	HS Property Number: 006288	Misc Equipment
Calibration Due Date: 2-7-95	Calibration Due Date: 11-25-94 / 11-25-94	
EFF=11.2 BKG=73	EFF=33.9% BKG=0.2	ESH-94-001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
7-21-94	John Taylor 115773							Peter Gramoso 5016	
		Shovel	73 139	0 <23					
		Tub	84 438	0 <23					
		Hammer	76 119	0 <23					
		Gloves	70 <39	0 <23					
		Coveralls	68 <39	0 <23					

[a]Item cannot be released unless survey results are below LANL *Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Eberline 2221 T 105934 44-94 # 112190	Smear Counter: Eberline 2221 # 105847 43-10 # PP-112154	Facility: TA-36 Water Canyon
HS Property Number: N/A	HS Property Number: 006288	Misc Equipment
Calibration Due Date: 2-11-95	Calibration Due Date: 11-25-94 / 11-25-94	
EFF=16.2 BKG=80	EFF=33.9% BKG=0.3	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization/phone	Comments: Note additional comments on back
7-22-94	Dalton Fayle 115773	Bucket	<39	0 <2.3				103079 Peter Gram	
		Shovel	76 <39	0 <2.3					
		Hammer	79 <39	0 <2.3					
		Gloves	67 <39	0 <2.3					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Eberline 2221 # 105734 44-9 # 112190	Survey Counter: Eberline 2221 # 108817 43-10 # PC-11269	Facility: Lower Slobovia
HS Property Number: N/A	HS Property Number: 006288	TA-36 DW-1130
Calibration Due Date: 2-21-95	Calibration Due Date: 11-25-94 / 11-25-94	ESEM 54.301
EFF=13.4% BKG=76	EFF=33.9% BKG=0.12	

Date	RCR: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)		Exterior Survey: Smear Survey (dpm/100cm²)		Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
			BKG	Dpm	BKG	Dpm					
7-27-94	Z-Taylor 115779	Boots	79	119	0	43.3	NO			Z-Gram 105076 Peter Gram	
		Gloves	85	278	1	3.3					
		Coveralls	80	159	1	3.3					

[a]Item cannot be released unless survey results are below LANL *Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112190	Smear Counter: Ludlum 2221 # 108847 43-10 # PR-11263	Facility: TA-36 Lower Shibboleth
HS Property Number: N/A	HS Property Number: 006288	Drilling in Basin Pit
Calibration Due Date: 2-7-95	Calibration Due Date: 11-25-94 / 11-25-94	8" DAM Pipe Tie-ins
EFF=14.2% BKG=75	EFF=33.9% BKG=0.3 cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Required? Yes/No	Interior Monitoring[1]: Direct Survey (dpm/100cm²)	Interior Monitoring[1]: Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
			dpm / CPM						
7-15-94	[illegible]	Boots	78 / 119	1 / 2.0	No			1050 [illegible] Peter Gram	
		Gloves	74 / 439	0 / <2.0					
		Coveralls	79 / 159	0 / <2.0					
		Undersock	80 / 915	0 / <2.0					
		Boots	80 / 199	0 / <2.0					
		Gloves	78 / 119	0 / <2.0					
		Coveralls	74 / 439	1 / 2.0					

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[2]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG*

Survey Instrument	Survey Counter	Facility
Eberline 2221 # 105934 44-9 # 112190	Eberline 2221 # 108842 43-10 # PX-11259	TA-36 Water Slobbing
NS Property Number: N/A	NS Property Number: 006288	Misc. Equipment & Samples
Calibration Due Date: 2-7-95	Calibration Date: 11-25-94 / 11-25-94	
EFF=16.7 BKG=80	EFF=33.9% BKG=0.1cpm	ESSH 94 001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring*: Removed? Yes/No	Interior Monitoring*: Direct Survey (dpm/100cm²)	Interior Monitoring*: Smear Survey (dpm/100cm²)	Interior Monitoring*: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
	Jim Pyke 115773							Peter Green 103076	
12-21-94	John D. Taylor	Boots	75 <39	0 <26	No			Peter Green	
		Gloves	76 <39	0 <26					
		Coveralls	41 39	1 2.6					
		Boots	39 <39	1 2.6					
		Gloves	76 <39	0 <26					
		Coveralls	0 <39	0 <26					
		Picket set	67 <39	0 <26					

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS AL●IOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL _OG[a]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112190	Ludlum 2221 # 108847 43-10 # PR-11268	TA-36 Louise Slobbo A
HS Property Number: N/A	HS Property Number: 006288	Misc Equipment & APB-1952
Calibration Due Date: 2-21-95	Calibration Due Date: 11-25-94 / 11-25-94	
EFF= BKG=	EFF= BKG=	ESH-14 QUI

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Smear Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[b]: Required? Yes/No	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
1-30-94	John Wright Z115731 John Wright	Boots	74	<39	0	<2.6	NO			Peter Grain Z073076 Peter Grain	
		Gloves	34	159	2	5.3					
		Coveralls	30	<39	2	5.3					
		APB-1952	109	1154	0	<2.6					
		Boots	0	<39	0	<2.6					
		Sheet	15	<39	0	<2.6					
		Coveralls	68	<39	0	<2.6					
		Gloves	81	39	1	2.6					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Survey Counter	Facility
Eberline 2221 # 105934 44-9 #112848	Eberline 2221 # 108547 43-10 pc-11248	TF-36 Lower Slobbovia
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-7-95	Calibration Due Date: 11-25-94 / 11-25-94	ES&H 94-011
EFF=13.4% BKG=73	EFF=33.9% BKG=0.3	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10-3-94	John Taylor 115173 John W Taylor	Boots	70 <48	1 2.0				10-3-94 505-667-6200 Dale Quam	
		Coveralls	77 193	0 <20					
		Gloves	70 ~~48~~ 337	1 2.0					
		Boots	68 <48	0 <20					
		Coveralls	71 <48	1 2.0					
		Gloves	70 <48	3 7.9					
		MB-1954	97 1155	0 <20					
		MB 1953	95 1059	0 <20					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112194	Ludlum 2221 # 108847 43-10 # 22-112654	Lower Slobbovia TA-36
HS Property Number: N/A	HS Property Number: 006288	Misc. Equipment
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	ESLH 54 QU1
EFF = 13.4% BKG = 67 cpm	EFF = 33.4% BKG = 0.1 cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Exterior Survey: Smear Survey (dpm/100cm²) CPM	DPM	Radioactive? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[b]: Smear Survey (dpm/100cm²) CPM	DPM	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10-5-94	John Taylor 115773	AUGERS	68	48	0	<2.6	NO					12-2-26 10-5-94	
		AUGERS	67	<48	0	<2.6	NO						
		Spit-Screen	76	433	1	2.6	YES	77	240	1	2.6		
		Spit-Screen	77	481	0	<2.6	YES	74	337	0	<2.6		
		Shovel	71	192	0	<2.6	NO						
		Misc Tools	69	96	1	2.6	NO						
		Screen/Bowl	77	481	0	<2.6							
		Stools & Tubs	71	192	1	2.6	NO						
		Gloves & Boot	64	<48	0	<2.6							
		Coveralls	75	288	1	2.6	NO						

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Survey Counter	Facility
Ludlum 2221 # 105934 44-9 # 112194	Ludlum 2221 # 105847 43-10 # 112591	TA-36 Lease Slabbing
HS Property Number: N/A	HS Property Number: 006288	Misc Equipment Samples
Calibration Date: 2-11-95 — 2-11-95	Calibration Date: 11-25-94 — 11-25-94	# NAB-1950, 1951, 1955
EFF=13.4 BKG=81cpm	EFF=33.9% BKG=0.1cpm	ES&E 94-001

Date	RCR Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) GM	Exterior Survey: Direct Survey (dpm/100cm²) DPM	Exterior Survey: Smear Survey (dpm/100cm²) GM	Exterior Survey: Smear Survey (dpm/100cm²) DPM	Interior Monitoring[b]: Regulatory Tracking	Interior Monitoring[b]: Direct Survey (dpm/100cm²) GM	Interior Monitoring[b]: Direct Survey (dpm/100cm²) DPM	Interior Monitoring[b]: Smear Survey (dpm/100cm²) GM	Interior Monitoring[b]: Smear Survey (dpm/100cm²) DPM	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10/6/94	John Taylor 115773	Soil Samples										10/6/94 Peter Gram	
		NAB-1950	98	818	0	<2.6							
		NAB-1951	96	722	0	<2.6							
		Darts	74	<48	2	8.2							
		Gloves	79	<48	1	2.6							
		Baggies	75	<48	0	<2.6							
		Spill-Spoon	72	529	1	2.6	U IES	70	433	1	2.6		
		Spill Spoon	75	674	0	<2.6	U IES	89	385	1	2.6		
		NAB-1955	105	1155	1	2.6							
		Darts	71	48	0	<2.6							
		Gloves	79	<48	2	5.6							
		Baggies	70	<48	1	2.6							

[a]Item cannot be released unless survey results are below LANL Radiological Control Manual Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112194	Ludlum 2221 # 108842 43-10 # 22-112654	TA-36 Lower Slobbovia
HS Property Number: N/A	HS Property Number: 006288	Misc Equipment & Samples
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	ESH-54-001
EFF = 13.4 BKG = 82	EFF = 33.9% BKG = 0.2	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Exterior Survey: Smear Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[b]: Required? Feasible	Interior Monitoring[b]: Direct Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[b]: Smear Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10-11-94	John Taylor 115773 John W Taylor	Spool Flights	91	<48	0	<2.3	NO					Peter Gerstman 1632-76 Peter Gerstman	
		Spool Flights	82	<48	1	2.3							
		Spool Flight	76	<48	1	2.3	↓						
		Spool Flight	77	<48	1	2.3							
		Split Spools	56	192	0	<2.3	YES	34	96	1	2.3		
		Split Spool	81	<48	0	<2.3	YES	30	<48	0	<2.3		
		Misc Hand Tools	73	<48	1	2.3							
		Gloves	79	<48	0	<2.3	NO						
		Auger	55	144	0	<2.3	↓						
		AAB-1956	91	433	1	2.3							
		AAB-1957	87	240	1	2.3	↓						
		Beds/Stands	81	<48	0	<2.3							

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112194	Survey Counter: Ludlum 2221 # 108847 43-10 # 22-112654	Facility: TA-36 Lower Slobbovia
HS Property Number: N/A	HS Property Number: 006288	Survey of Steam Cleaner &
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	Misc Tools & Equipment
EFF = 15.4% BKG = 78	EFF = 33.9% BKG = 0.1	ESSH 54.001

Date	RCR: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) Gm	Exterior Survey: Direct Survey (dpm/100cm²) Bkgd	Exterior Survey: Smear Survey (dpm/100cm²) Gm	Exterior Survey: Smear Survey (dpm/100cm²) Bkgd	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10-12-94	John Taylor 115773 John Taylor	Steam Cleaner E-3438 Back	80	96	1	2.6	NO			103934 Peter Gram Peter Gram	
		Front	81	144							
		Side (Right)	74	<48	0	<2.6					
		Side (Left)	79	<48	0	<2.6					
		Tires Left	81	288	1	5.6					
		Tires Right	71	<48	0	<2.6					
		Fuel Hitch	78	48	1	2.6					
		Table #1	89	529	0	<2.6					
		Table #2	86	385	1	5.6					
		Blast Shield	75	<48	0	<2.6					
		Blast Shield #2	76	385	0	<2.6					
		Engine	70	<48	0	<2.6					
		Misc Hand Tools	81	144	0	<2.6					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Ludlum 2221 # 105934 44-9 #113494	Smear Counter: Ludlum 2221 # 108847 43-10 #112498	Facility: TA-36 Lower Slickrock Mesa
HS Property Number: N/A	HS Property Number: 006288	Equipment & Sub-Samples
Calibration Due Date: 2-21-95	Calibration Due Date: 11-25-94 / 11-25-94	Drill Rig
EFF=13.4 BKG=78	EFF=33.9 BKG=0.1	ES&H 54 001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) cpm / dpm	Exterior Survey: Smear Survey (dpm/100cm²) cpm / dpm	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring: Direct Survey (dpm/100cm²)	Interior Monitoring: Smear Survey (dpm/100cm²)	Interior Monitoring: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
10 12 94	John Taylor 115775 John Taylor	Drill Rig							
		Front	69	0 <2.6	NO			John Taylor 115775	
		Rear	76	0 <2.6				Pete Gray 106275	
		Tire (Left)	74	1 2.6					
		Tire (Right)	78	0 <2.6					
		Mast Base	62	1 2.6					
		Left	67	0 <2.6					
		Right	73	0 <2.6					
		Hose	69	1 2.6					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112194	Ludlum 2221 # 108842 43-10 # 112654	TA-3 Water Sample
HS Property Number: N/A	HS Property Number: 006288	Ewie's
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF = 13.4 BKG = 77	EFF = 33.9% BKG = [illegible]	ESH-14 OCT

Date	RCR: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring: Direct Survey (dpm/100cm²)	Interior Monitoring: Smear Survey (dpm/100cm²)	Interior Monitoring: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write reference comments on back
12-1-94	John Taylor 115773 [signature]	Water Jugs	78 49	1 23				12-01-94 [signature]	
		56-3083	77 <48	0 <23					
		36-3082	74 <48	0 <23					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG*

Survey Instrument	Smear Counter	Facility
Ludlum 2221 # 105934 44-9 # 112194	Ludlum 2221 # 103847 43-10 # 113654	TA-18
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF=13.4% BKG= 71 cpm	EFF=33.9% BKG=0.5 cpm	

ESAH 94-001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) (dpm – dpm)		Smear Survey (dpm/100cm²) (cpm – dpm)		Reagent/Wipe Results	Interior Monitoring*: Direct Survey (dpm/100cm²) (cpm – dpm)		Smear Survey (dpm/100cm²) (cpm – dpm)		Responsible Person: Enter name (print), signature, Z number, and signature place	Comments: Write additional comments on back.
11-14-94	Jason Gallegos 115,733	Split Spoon	15	197	1	2.0		71	415	2	5.0	[illegible]	
		Gloves	68	<45	1	2.0							
		Boots	71	<45	0	<2.0							
		Split Spoon	13	96	0	<2.0		71	<45	0	<2.0		
		Split Spoon	15	197	0	<2.0		72	48	1	2.0		
		Bucket Spoon	78	357	1	2.0							
		Bucket Spoon	74	144	0	<2.0							
		PHO 1893	139	325	0	<2.0							
		PHB-1897	127	246	0	<2.0							
		Split Spoon	83	577	2	5.0		80	433	2	5.0		
		PHB-1898	103	540	0	<2.0							

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

.OS ALAMOS
ATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112194	Smear Counter: Ludlum 2221 # 109847 43-10 # 112654	Facility: TA-18 Soil Samples Miss Equipment
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF=13.4% BKG=77 cpm	EFF=33.9% BKG=0.3cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM – DPM		Smear Survey (dpm/100cm²) CPM – DPM		Disposal? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²) CPM – DPM		Smear Survey (dpm/100cm²) CPM – DPM		Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
11/15/94	John Taylor 119773	HB B03	89	577	1	20	No					[illegible]	
		HB B04	96	914	1	20							
		HB 1995	98	611	2	50							
		Jones	5	48	0	<20							
		[illegible]	76	<48	0	<20							

[a]Item cannot be released unless survey results are below LANL *Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

OS ALAMOS
ATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG*

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112194	Smear Counter: Ludlum 2221 # 103847 43-10 # 112365	Facility: TA-18 Soil Sample and Misc Equipment
HS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF=13.4% BKG=77 cpm	EFF=33.9% BKG=0.3 cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) (CPM)	(DPM)	Smear Survey (dpm/100cm²) (CPM)	(DPM)	Required? Yes/No	Interior Monitoring*: Direct Survey (dpm/100cm²) (CPM)	(DPM)	Smear Survey (dpm/100cm²) (CPM)	(DPM)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
11-15-94	John Taylor 115733	Split Spoon (1)	77	<48	1	2.0		78	48	1	2.0	John Taylor	
		" " (2)	75	<48	0	<2.0		77	96	1	2.0		
		" " (3)	80	144	0	<2.0		81	192	2	5.0		
		" " (4)	79	48	1	2.0		77	<48	1	2.0		
		Lid-1900	96	519	2	5.0							
		Lid-1901	97	762	1	2.0							
		Bowls/Spoon	80	144	1	2.0							
		Bowl Spoon	78	48	0	<2.0							
		Gloves	74	<48	0	<2.0							
		Boots	77	<48	1	2.0							
		Bag Fill/S	76	<48	0	<2.0							
		Spl Spoon	72	<48	0	<2.0		77	<48	1	2.0		
		Split Spoon	79	96	1	2.0		83	288	1	2.0		
		Spoons	77	<48	0	<2.0							
		Bowls	79	96	1	2.0							
		Levis	69	<48	0	<2.0							

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2.2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG*

Survey Instrument: Ludlum 2221 # 105934 44-9 # 112894	Smear Counter: Ludlum 2221 # 103887 43-10 # 113654	Facility: TA-36 Mics Cont. Lab
LS Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF = 13.4% BKG = 71 cpm	EFF = 33.9% BKG = 0.3 cpm	

Date	RCT: Enter name (print), signature, and I number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Smear Survey (dpm/100cm²) CPM	DPM	Reapplied? Tested	Interior Monitoring*: Direct Survey (dpm/100cm²) CPM	DPM	Smear Survey (dpm/100cm²) CPM	DPM	Responsible Person: Enter name (print), signature, I number, and organization phone	Comments: Write additional comments on back
11-17-94	John Taylor E115773	Spill - Spot 1	73	96	1	2.0		76	240	1	2.0	John Taylor 10-3-94	
		(2)	81	481	0	<2.0		74	144	0	<2.0	John Gram	
		(3)	75	192	1	2.0		79	385	0	<2.0		
		(4)	74	144	1	2.0		73	96	0	<2.0		
		(5)	79	285	0	<2.0		71	<48	0	<2.0		
		(6)	68	<48	3	5.0		69	<48	1	2.0		
		(7)	74	144	2	5.0		77	285	1	2.0		
		(8)	83	433	2	5.0		76	240	0	<2.0		
		Gas Can	73	96	0	<2.0							
		Spill Spot (9)	76	240	2	5.0		78	337	2	5.0		
		(10)	79	385	1	2.0		72	48	1	2.0		
		(11)	73	529	0	<2.0		77	285	0	<2.0		
		(12)	80	433	1	2.0		79	385	0	<2.0		
		HB - 1906	74	107	0	<2.0							
		GHD - 1906	97	251	1	2.0							

*Item cannot be released unless survey results are below LANL *Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG*

Survey Instrument	Smear Counter	Facility
Model 2221 # 105934 44-9 # 112194	Model 2221 # 108847 43-10 # 112365	[illegible]
LANL Property Number: N/A	HS Property Number: 006288	
Calibration Due Date: 2-11-95 — 2-11-95	Calibration Due Date: 11-25-94 — 11-25-94	
EFF = 13.4% BKG = 16 cpm	EFF = 33.9% BKG = 0.3 cpm	

ESH 54-011

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) (CPM)	Exterior Survey: Direct Survey (dpm/100cm²) (DPM)	Exterior Survey: Smear Survey (dpm/100cm²) (CPM)	Exterior Survey: Smear Survey (dpm/100cm²) (DPM)	Required? Yes/No	Interior Monitoring*: Direct Survey (dpm/100cm²) (CPM)	Interior Monitoring*: Direct Survey (dpm/100cm²) (DPM)	Interior Monitoring*: Smear Survey (dpm/100cm²) (CPM)	Interior Monitoring*: Smear Survey (dpm/100cm²) (DPM)	Responsible Person: Enter name (print), signature, Z number and organization phone	Comments: Value assessment, comments on back
10-6-94	John Taylor 115773	Soil Spoil (1)	75	<48	1	2.0		77		0	<2.0	Eric Gr[illegible] 10-20-94 [illegible]	
		(2)	78	96	3	7.9		77		2	5.0		
		(3)	85	192	1	2.0		81		2	5.0		
		(4)	82	255	2	5.0		83		2	5.0		
		(5)	81	240	2	5.0		81		3	7.9		
		(6)	79	144	1	2.0		80		2	5.0		
		Soil Sample	[illegible]		1	2.0							
		[illegible]	73	818	1	2.0							
		[illegible]	76	962	0	<2.0							
		[illegible]	76	<48	0	<2.0							
		[illegible]	74	<48	1	2.0							
		Soil	73	<48	1	2.0							
		Special	[illegible]	48	0	<2.0							
		[illegible]	115	2262	0	<2.0							
		[illegible]	76	1925	1	2.0							

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

Pg 1 of 7

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG

Survey Instrument: Ludlum 2221 #105934 449 #112194	Smear Counter: Ludlum 2221-108347 43-10 PLE 112654	Facility: PRS 36-003 A Tank
HS Property Number: NA	HS Property Number: 060258	
Calibration Due Date: 2-11-95 2-11-95	Calibration Due Date: 11-25-94 11-25-94	
EFF 1.49 BGR 76	EFF = 33.9% BKG 0.2 CPM	ESH 94-001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM		Exterior Survey: Smear Survey (dpm/100cm²) CPM		Interior Monitoring*: Required? Yes/No	Interior Monitoring*: Direct Survey (dpm/100cm²)	Interior Monitoring*: Smear Survey (dpm/100cm²)		Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
11-21-94	MARY B. LEE	SS41 Spool-(1)	75	48	0	<2.3		79	0	<2.3	[illegible] 1537E	
		" (2)	77	48	0	<2.3		71	0			
		(3)	74	<48	0	<2.3		77	0			
		" (4)	78	96	0	<2.3		83	0			
		(5)	73	<48	0	<2.3		81	0			
		(6)	74	<48	0	<2.3		80	0	<2.3		
	Soil Sample ABS 1911		87	579	0	<2.3		N/A				
	Soil Sample ABS 1911		74	<48	0	<2.3		N/A				
	3 Brooms		78	96	0	<2.3						
	1 Black Tool		80	197	0	<2.3		N/A				
	3 Rolls Weatherproofing Tape		120	2118	4	11.2		N/A				
	4 Coupons		92	388	3	8.2						
	4 Coupons		84	385	2	5.3		N/A				
	Sample bottle		92	770	1	2.3						
	" " plastic		89	625	3	8.2		N/A				

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

*Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

Pg 2 of 4

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument [illegible]	Smear Counter [illegible]	Facility PL-36 023 [illegible]
HS Property Number [illegible]	HS Property Number 062.33	
Calibration Due Date 3-11-95 3-11-95	Calibration Due Date 11-25-95 11-25-95	

[illegible] 13.92/[illegible] [illegible] 76 — [illegible] 33 9/0 BKG 0-2 [illegible]

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²)	Exterior Survey: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Required? Yes/No	Interior Monitoring[b]: Direct Survey (dpm/100cm²)	Interior Monitoring[b]: Smear Survey (dpm/100cm²)	Interior Monitoring[b]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments (Use additional comments on back)
11-3-[illegible]	[illegible] B GEE [illegible]	[illegible]	71 [illegible]	0 <2.3				10397 [illegible] [illegible]	
		[illegible]	59 144	1 2.3					
		[illegible]	81 335	0 <2.3					
		[illegible] 563-23010	—						
		[illegible]	63 [illegible]	0 <2.3					
		[illegible]	86 481	0					
		[illegible]	86 481	0					
		[illegible]	58 517	0					
		[illegible]	70 448	0					
		[illegible]	74 448	0 <2.3					
		[illegible]	[illegible] 448	1 2.3					
		[illegible]	[illegible] 448	1 2.3					
		[illegible]	82 384	0 <2.3					
		[illegible]	79 144	1 2.3					
		[illegible]	81 340	0 <2.3					

[a]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

Pg 3 of 4

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 222-E 105934 44-9* 112194	Smear Counter: Ludlum 222 1* 103847-43-10 112624	Facility: Pajarito 36-0039 TA-18
HS Property Number: N/A	HS Property Number: 06288	
Calibration Due Date: 2-11-95 - 2-11-95	Calibration Due Date: 11-25-94 - 11-25-94	
Eff 13.4 90 Bkg 76	Eff 33.9.90 Bkg 0.2 cpm	ESRH 94-001

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) cpm	Exterior Survey: Direct Survey (dpm/100cm²) dpm	Exterior Survey: Smear Survey (dpm/100cm²) cpm	Exterior Survey: Smear Survey (dpm/100cm²) dpm	Interior Monitoring[3]: Required? Yes/No	Interior Monitoring[3]: Direct Survey (dpm/100cm²)	Interior Monitoring[3]: Smear Survey (dpm/100cm²)	Interior Monitoring[3]: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
11-21-94	Mary J. Lee 115772	DECON trailer									
		Licence E24399									
		Right Tires	79	144	1	2.3					
		Left Tires	83	331	1	2.3					
		Torque	91	722	0	2.3					
		BED L-side	74	248		<2.3					
		BED R-side	58	<48	0	<2.3					
		L Water Tank	72	<48	0						
		R " "	94	866	0						
		Tool Box outside	84	385	0						
		Pressure washer	87								
		Fuel Tank		529	0						
		Motor	83	529	0	<2.3					
		Burner	78	96	1	2.3					
		L Side Tank	60	<48	0	<2.3					
		R-Side Tank	115	1977	0						
		L Rear Stabilizer	83	237	0						
		R " "	77	48	0						
		L Front "	81	240	0	<2.3					
		R " "	85	433	1	2.3					
		Rear STEP	86	481	0	<2.3					

*Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[3]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[2]

Survey Instrument: Ludlum 2221 # 105934-449 # 11249t	Smear Counter: Ludlum 2221 # 108847-43-10-1126 t	Facility: PRS 36-003A TA-18
HS Property Number: N/A	HS Property Number: 06288	
Calibration Due Date: 2-4-95 – 2-11-95	Calibration Due Date: 11-25-94 – 11-25-94	
Eff 17.4% BKG 76	Eff 33.9% BKG 0.2 cpm	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Exterior Survey: Direct Survey (dpm/100cm²) CPM	DPM	Exterior Survey: Smear Survey (dpm/100cm²) CPM	DPM	Interior Monitoring[3]: Required? Yes/No	Interior Monitoring: Direct Survey (dpm/100cm²)	Interior Monitoring: Smear Survey (dpm/100cm²)	Interior Monitoring: Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
11-22-94	Manly G. Lee Manly G. Lee 115792	Equip Tailgate USGOT Lift E 2440 BED	5 67	<48 <48	 0	<2.3				[illegible]	
		Down Tongue Plastic Shelf	69 54 72	<48 <48 <48	0 0						
		Hyd Hose 20' " 35' " 50' Control Unit	80 97 88 97	192 1011 577 529	0 0 1 0	<2.3 <2.3 2.3					
		Derrick Rear Platform Fire Ext	67 69 82	<48 <48 288	0 1 0	<2.3 2.3 <2.3					
		R Rear Stabilizer L " " L Front "	97 88 77	1011 577 48	1 0 0	2.3 <2.3					
		R " " Hose Tools R Fender	72 75 82	<48 <48 288	0 0						
		L Fender L Tires R Tires	80 97 86	192 1011 481	0						
		Shovel (3) Hose equipment	86 82	481 288	1 0	2.3 <2.3					

[1]Item cannot be released unless survey results are below *LANL Radiological Control Manual* Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public)

[3]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use

Form 1623

LOS ALAMOS
NATIONAL LABORATORY

EQUIPMENT AND ITEM REMOVAL LOG[a]

Survey Instrument	Survey Counter	Facility
Ludlum 2221 # 105734 44-9 # 11299	Ludlum 2221 # 108867 43-10 # 11657	Ruger Truck
HS Property Number: N/A	HS Property Number: 006287	Lic # 164690 Indiana
Calibration Due Date: 2-7-95	Calibration Due Date: 4-12-95 / 4-12-95	Cargo Van Lic # [illegible]
EFF= 13.4% BKG=72	EFF=33% BKG=0.2	

Date	RCT: Enter name (print), signature, and Z number	Item Part Number and Description	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Required[b] Tests	Direct Survey (dpm/100cm²)	Smear Survey (dpm/100cm²)	Responsible Person: Enter name (print), signature, Z number, and organization phone	Comments: Write additional comments on back
12-7-94	115773 John Tapia [signature]	Front Chase	70	296	0	<23					
			68	448	0	<23					
			71	448	0	<23					
			73	48	0	<23					
		Back Bed	70	448	0	<23					
			73	48	0	<23					
			71	448	0	<23					
			76	192	0	<23					
		Rt Front Tire	78	288	1	23					
		Lt Back Tire	74	96	0	<23					
	115773 John Tapia [signature]	Rt Rear Tire	76	192	0	<23					
		Lt Rear Tire	80	385	1	23					
		Interior FRT	74	96	1	23					
		Interior MID	77	144	0	<23					
		Interior RRD	75	144	1	23					
		Back Seat	81	433	0	<23					
		Floor	77	240	0	<23					

[a]Item cannot be released unless survey results are below LANL Radiological Control Manual Table 2-2 limits for conditional release and below detectable activity for unconditional release (release to the general public).

[b]Disassembly and interior monitoring is required unless responsible person verifies by his/her signature that internal contamination is not possible, based upon knowledge of process and previous use.

Form 1623

APPENDIX 6

ATTACHMENT 4

Operational Check Data Sheets and Source/Background Control Charts

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 112193 Calibration Expiration Date 2-11-95

Source Type Leakgellbottle # 2 Activity — Identification No. ____

Start Date 6-1-94 Technician Signature John W. Taylor Reviewer Signature ____

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
6-1-94					9217						58		ok	ok	ok	JWT
6-2-94					9285						54		ok	ok	ok	JWT
6-3-94					9218						65		ok	ok	ok	JWT
6-4-94					9192						58		ok	ok	ok	JWT
6-5-94					9278						61		ok	ok	ok	JWT
6-6-94					9243						62		ok	ok	ok	JWT
6-7-94					8859						62		ok	ok	ok	JWT
6-8-94					8607						51		ok	ok	ok	JWT
6-9-94					8636						60		ok	ok	ok	JWT
6-10-94					8567						65		ok	ok	ok	JWT
6-11-94					8716						66		ok	ok	ok	JWT
6-12-94					8707						48		ok	ok	ok	JWT
6-13-94					8755						58		ok	ok	ok	JWT
6-14-94					[illegible]						[illegible]		ok	ok	ok	JWT
6-15-94					9330						54		ok	ok	ok	JWT
6-16-94					8[illegible]						58		ok	ok	ok	JWT

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 108847 Calibration Expiration Date 5-23-95

Detector Make & Model 43-10 Serial No. PC 11265-1 Calibration Expiration Date 11-25-95

Source: Type Th-230 Activity 31,100 dpm Identification No. 1834-94

Start Date 6-9-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs initial
6-9-94					10830						2+/10 0.4		✓	✓	✓	[illegible]
6-10-94					10965						5+/10 0.5		✓	✓	✓	[illegible]
6-10-94					10745						2+/10 0.3		✓	✓	✓	[illegible]
6-11-94					10604						5+/10 0.5		✓	✓	✓	[illegible]
6-11-94					10733						2+/10 0.2		✓	✓	✓	[illegible]
6-14-94					10569						4+/10 0.4		✓	✓	✓	[illegible]
6-15-94					10531						3+/10 0.3 BK		✓	✓	✓	[illegible]
6-15-94					10733						2+/10 0.2		✓	✓	✓	[illegible]
6-16-94					10743						2+/10 0.2		✓	✓	✓	[illegible]
6-16-94					10781						2+/10 0.2		✓	✓	✓	[illegible]
6-17-94					10574						0-from Below		✓	✓	✓	[illegible]
6-17-94					10764						0.2		✓	✓	✓	[illegible]
20 6-18-94	6-20-94				10701						2+/10 0.2		✓	✓	✓	[illegible]
21 6-19-94	6-20-94				10748						1+/10 0.1		✓	✓	✓	[illegible]
6-21-94					10698						1+/10 0.1 est		✓	✓	✓	

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 108847 Calibration Expiration Date 5-25-95

Detector Make & Model 43-10 Serial No. PR 112654 Calibration Expiration Date 11-25-95

Source: Type Th-230 Activity 31,900 dpm Identification No. 1834-94

Start Date 6-21-94 Technician Signature John W Zeigler Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
6-21-94					10499						0.2	0.2	ok	ok	ok	JWZ
6-21-94					10589						0.1		ok	ok	ok	JWZ
6-22-94					10693						0.1		ok	ok	ok	JWZ
6-23-94					10511						0.2		ok	ok	ok	JWZ
6-25-94					10558						0.1		ok	ok	ok	JWZ
6-25-94					10462						0.3		ok	ok	ok	JWZ
6-25-94					10616						0.1		ok	ok	ok	JWZ
6-25-94					10573						0.2		ok	ok	ok	JWZ
[illegible]					10786						0.1		ok	ok	ok	JWZ
[illegible]					10763						0.3		ok	ok	ok	JWZ
6-30-94					10854						0.2		ok	ok	ok	JWZ
6-30-94					10580						0.1		ok	ok	ok	JWZ
7-5-94					10614						0.3		ok	ok	ok	JWZ
7-5-94					10735						0.1		ok	ok	ok	JWZ
7-6-94					10576						0.2		ok	ok	ok	JWZ

*Check mark on scale used.

May 03, 1994

Environmental Dimensions, Inc.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 112193 Calibration Expiration Date 2-11-95

Source: Type Uranium Metal #2 Activity N/A Identification No. #2

Start Date 6-14-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs initial
6-14-94					8931						59		ok	ok	ok	[illegible]
6-14-94					8721						54		ok	ok	ok	[illegible]
6-15-94					9025						62		ok	ok	ok	[illegible]
6-15-94					8714						57		OK	OK	ok	[illegible]
6-16-94					8623						49		ok	ok	ok	[illegible]
6-16-94					8585						65		ok	ok	ok	[illegible]
6-17-94					8463						61		ok	ok	ok	[illegible]
6-17-94					8249						64		ok	ok	ok	[illegible]
6-18-94	6-20-94				8802						56		ok	ok	ok	[illegible]
6-18-94	6-20-94				9211						62		ok	ok	ok	[illegible]
6-21-94					8856						60		ok	ok	ok	[illegible]
6-21-94					8623						58		ok	ok	ok	[illegible]
6-22-94					8720						54		ok	ok	ok	[illegible]
6-22-94					8784						59		ok	ok	ok	[illegible]
6-23-94					8594						56		ok	ok	ok	[illegible]
6-23-94					8785						64		ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 112193 Calibration Expiration Date 2-11-95

Source: Type Uranium Metal #2 Activity Identification No. #2

Start Date 6-26-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	HV OK?	Audio OK?	Techs initial
	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean				
6-2-94					8750						57		ok	ok	ok	[illegible]
6-3-94					8656						61		ok	ok	ok	[illegible]
6-5-94					9047						60		ok	ok	ok	[illegible]
6-23-94					8760						57		ok	ok	ok	[illegible]
6-27-94					9011						56		ok	ok	ok	[illegible]
6-27-94					8974						66		ok	ok	ok	[illegible]
6-28-94					9052						71		ok	ok	ok	[illegible]
6-30-94					8736						64		ok	ok	ok	[illegible]
7-5-94					8815						66		ok	ok	ok	[illegible]
7-5-94					8763						58		ok	ok	ok	[illegible]
7-6-94					8570						61		ok	ok	ok	[illegible]
7-[illegible]					8947						67		ok	ok	ok	[illegible]
7-7-94					9247						58		ok	ok	ok	[illegible]
7-7-94					9134						63		ok	ok	ok	[illegible]
7-8-94					8878						61		ok	ok	ok	[illegible]
7-8-94					8851						60		ok	ok	ok	[illegible]

*Check one scale on scale used.

May 03, 1994

Environmental Dimensions, Inc.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 168847 Calibration Expiration Date 5-25-95

Detector Make & Model 43-10 Serial No. PR-112554 Calibration Expiration Date 11-25-95

Source: Type Th-230 Activity 31500 dpm Identification No. 1834-94

Start Date 6-21-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs initial
7-7-94					10700						7/10 0.3		ok	ok	ok	[illegible]
7-8-94					10431						10/10 0.1		ok	ok	ok	[illegible]
7-9-94					10462						10/10 0.1		ok	ok	ok	[illegible]
7-10-94					10754						10/10 0.2		ok	ok	ok	[illegible]
7-11-94					10496						10/10 0.1		ok	ok	ok	[illegible]
7-12-94					10656						10/10 0.2		ok	ok	ok	[illegible]
7-13-94					10575						10/10 0.1		ok	ok	ok	[illegible]
7-14-94					10421						10/10 0.2		ok	ok	ok	[illegible]
7-15-94					10153						10/10 0.2		ok	ok	ok	[illegible]
7-18-94					10558						10/10 0.2		ok	ok	ok	[illegible]
7-19-94					10650						10/10 0.1		ok	ok	ok	[illegible]
7-20-94					10475						[illegible]		ok	ok	ok	[illegible]
7-21-94					10323						10/10 0.1		ok	ok	ok	[illegible]
7-22-94					10474						5/10 0.3		ok	ok	ok	[illegible]

*Check made on scale used.

May 03, 1994

Environmental Dimensions, Inc.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 106847 Calibration Expiration Date 5-25-95

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-95

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 7-20-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean	Background (cpm)* xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs initial
7-20-94					10882						3.5/100 0.3cpm		ok	ok	OK	[illegible]
7-20-94					10496						10/100 0.1cpm		ok	ok	ok	[illegible]
7-21-94					10739						10/100 0.1cpm		ok	ok	ok	[illegible]
7-21-94					10649						10/100 0.1cpm		ok	ok	ok	[illegible]
7-25-94					10658						10/100 0.1		ok	ok	ok	[illegible]
7-25-94					10838						10/100 0.1cpm		ok	ok	ok	[illegible]
7-26-94					10640						3.5/100 0.2		ok	ok	ok	[illegible]
7-26-94					10764						3.5/100 0.2		ok	ok	ok	[illegible]
7-27-94					10651						10/100 0.1cpm		ok	ok	ok	[illegible]
7-27-94					10557						10/100 0.1		ok	ok	ok	[illegible]
7-28-94					10766						10/100 0.1cpm		ok	ok	ok	[illegible]
7-28-94					10651						10.5/100 0.2		ok	ok	ok	[illegible]
8-1-94					10654						10.5/100 0.1cpm		ok	ok	ok	[illegible]
8-1-94					10571						10/100 0.2		ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 112193 Calibration Expiration Date 2-11-95

Source: Type Uranyl #2 Activity [illegible] Identification No. #2

Start Date 7-11-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
7/1/94					9203		63						ok	ok	ok	[illegible]
7/1/94					8964		61						ok	ok	ok	[illegible]
7/2/94					9131		60						ok	ok	ok	[illegible]
7/3/94					8987		55						ok	ok	ok	[illegible]
7/3/94					5873		63						ok	ok	ok	[illegible]
7/5/94					8715		65						ok	ok	ok	[illegible]
7/6/94					7073		58						ok	ok	ok	[illegible]
7/7/94					8113		69						ok	ok	ok	[illegible]
7/8/94					7271		57						ok	ok	ok	[illegible]
7/9/94					9183		64						ok	ok	ok	[illegible]
7/10/94					8936		53						ok	ok	ok	[illegible]
7/11/94					9074		59						ok	ok	ok	[illegible]
7/12/94					7180		55						ok	ok	ok	[illegible]
7/13/94					9068		61						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 162193 Calibration Expiration Date 2-11-95

Source: Type Alpha/#2 Activity n/A Identification No. #2

Start Date 7-25-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
[illegible]					9205		62						ok	OK	ok	[illegible]
[illegible]					9168		66						ok	ok	ok	[illegible]
[illegible]					9324		69						ok	ok	ok	[illegible]
[illegible]					9186		61						ok	ok	ok	[illegible]
[illegible]					9031		60						ok	ok	ok	[illegible]
[illegible]					9124		67						ok	ok	ok	[illegible]
[illegible]					8978		74						ok	ok	ok	[illegible]
[illegible]					9164		61						ok	ok	ok	[illegible]
[illegible]					9211		62						ok	ok	ok	[illegible]
[illegible]					9179		59						ok	ok	ok	[illegible]
[illegible]					9114		64						ok	ok	ok	[illegible]
[illegible]					9278		63						ok	ok	ok	[illegible]
[illegible]					[illegible]		68						ok	ok	ok	[illegible]
[illegible]					[illegible]		67						ok	ok	ok	[illegible]

*Check scale on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum-2221 Serial No. 108847 Calibration Expiration Date 5-25-95

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-95

Source: Type Th-230 Activity 34900 Identification No 1834-94

Start Date 4-2-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
8-2-94					10643		10100 0.10						ok	ok	ok	[illegible]
8-2-94					10062		20100 0.2						ok	ok	ok	[illegible]
8-3-94					10745		10100 0.0						ok	ok	ok	[illegible]
8-3-94					10766		10100 0.10						ok	ok	ok	[illegible]
8-3-94					10754		10100 0.0						ok	ok	ok	[illegible]
8-4-94					10693		10100 0.1						ok	ok	ok	[illegible]
8-5-94					10901		20100 0.02						ok	ok	ok	[illegible]
8-5-94					10541		10100 0.10						ok	ok	ok	[illegible]
8-5-94					10710		20100 0.2						ok	ok	ok	[illegible]
8-8-94					10947		20100 0.0						ok	ok	ok	[illegible]
8-9-94					10824		20100 0.2						ok	ok	ok	[illegible]
8-10-94					10967		20100 0.2						ok	ok	ok	[illegible]
8-10-94					[illegible]		20100 0.0						ok	ok	ok	[illegible]
8-12-94					10857		10100 0.10						ok	ok	ok	[illegible]

*Check made on scale used.

May 03, 1994

Environmental Dimensions, Inc.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 108847 Calibration Expiration Date 11-25-94

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 dpm Identification No. 1854-94

Start Date 8-16-94 Technician Signature John W. Zeigler Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean				
8/16/94					10500		10/10						ok	ok	ok	JWZ
8/16/94					10351		0.1						ok	ok	ok	JWZ
8/17/94					10495		0.3						ok	ok	ok	JWZ
8/18/94					10555		0.2						ok	ok	ok	JWZ
8/18/94					10399		0.2						ok	ok	ok	JWZ
8/18/94					10474		0.2						ok	ok	ok	JWZ
8/19/94					10442		0.4						ok	ok	ok	JWZ
8/20/94					10515		0.3						ok	ok	ok	JWZ
8/22/94					10490		0.1						ok	ok	ok	JWZ
8/23/94					10439		0.2						ok	ok	ok	JWZ
8/24/94					10415		0.3						ok	ok	ok	JWZ
8/25/94					10462		0.2						ok	ok	ok	JWZ
8/26/94					10473		0.1						ok	ok	ok	JWZ
8/27/94					10499		0.3						ok	ok	ok	JWZ
8/28/94					10473		0.1						ok	ok	ok	

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model 44-9 Serial No. 112193 Calibration Expiration Date 2-11-95

Source: Type Uranium Activity alpha Identification No. #2

Start Date 8-4-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
8-4-94					9209		61						ok	ok	ok	[illegible]
8-5-94					9068		64						ok	ok	ok	[illegible]
8-5-94					9178		66						ok	ok	ok	[illegible]
8-5-94					9064		69						ok	ok	ok	[illegible]
8-8-94					9217		62						ok	ok	ok	[illegible]
8-9-94					9168		65						ok	ok	ok	[illegible]
8-10-94					9248		69						ok	ok	ok	[illegible]
8-11-94					9195		77						ok	ok	ok	[illegible]
8-12-94					9254		73						ok	ok	ok	[illegible]
8-15-94					9265		61						ok	ok	ok	[illegible]
8-16-94					9252		68						ok	ok	ok	[illegible]
8-17-94					9178		67						ok	ok	ok	[illegible]
8-18-94					9248		65						ok	ok	ok	[illegible]
8-19-94					9267		67						ok	ok	ok	[illegible]
8-19-94					9164		68						ok	ok	ok	[illegible]
[illegible]					9231		67						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model 44-9 Serial No. 112190 Calibration Expiration Date 2-11-95

Source: Type Filtered #2 Activity n/a Identification No. #2

Start Date 8-19-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean	xI scale	xI0 scale	xI00 scale	xI000 scale	Log scale	Mean				
8-19-94					10524		70						ok	ok	ok	[illegible]
[illegible]					10139		69						ok	ok	ok	[illegible]
[illegible]					10545		68						ok	ok	ok	[illegible]
3-22-31					[illegible]		69						ok	ok	ok	[illegible]
4-23-31					10229		72						ok	ok	ok	[illegible]
5-23-31					10456		68						ok	ok	ok	[illegible]
6-23-31					10407		63						ok	ok	ok	[illegible]
7-23-31					10531		70						ok	ok	ok	[illegible]
8-23-31					10173		73						ok	ok	ok	[illegible]
9-23-31					10543		70						ok	ok	ok	[illegible]
[illegible]					10200		69						ok	ok	ok	[illegible]
[illegible]					10364		65						ok	ok	ok	[illegible]

*Check mode on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum-2221 Serial No. 108847 Calibration Expiration Date VD-05-94

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 2,700 dpm Identification No. 1534-94

Start Date 8-3-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
8-3-94					9886		24/10 0.1						ok	ok	ok	[illegible]
8-3-94					10557		20/10 0.2						ok	ok	ok	[illegible]
8-3-94					10.12		24/10 0.2						ok	ok	ok	[illegible]
8-3-94					11:13		10/10 0.1						ok	ok	ok	[illegible]
8-3-94					11709		10/10 0.1						ok	ok	ok	[illegible]
8-3-94					11736		20/10 0.2						ok	ok	ok	[illegible]

*Check made on scale used.

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 108847 Calibration Expiration Date 11-25-94

Detector Make & Model Ludlum 43-10 Serial No. PR-113654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 9-1-94 Technician Signature John W. Taylor Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Eat OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
9-2-94					10562		10/ker 0.1						OK	OK	OK	JWT
9-2-94					10695		10/ker 0.3						OK	OK	OK	JWT
9-6-94					10660		5/ker 0.3						OK	OK	OK	JWT
9-9-94					10730		20/ker 0.2						OK	OK	OK	JWT
9-20-94					10421		10/ker 0.1						OK	OK	OK	JWT
9-27-94					10498		2/ker 0.3						OK	OK	OK	JWT
9-8-94					10671		10/ker 0.1						OK	OK	OK	JWT
9-8-94					10511		10/ker 0.1						OK	OK	OK	JWT
9-13-94					10895		10/ker 0.2						OK	OK	OK	JWT
[illegible]					10947		[illegible]						OK	OK	OK	JWT
[illegible]					10687		10/ker 0.3						OK	OK	OK	JWT
9-13-94					10673		10/ker 0.1						OK	OK	OK	JWT
9-14-94					10746		10/ker 0.1						OK	OK	OK	JWT
9-19-94					10934		10/ker 0.3						OK	OK	OK	JWT

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Auburn 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. _____ Calibration Expiration Date 12-7-94

Source. Type Th-230 Activity 131,900 Identification No. 1834-94

Start Date 8-30-94 Technician Signature [illegible] Reviewer Signature _____

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Batt OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
8-30-94		100					2cts						OK	OK	OK	[illegible]
8-31-94		100					1ct						OK	OK	OK	[illegible]
9-31-94		100					1ct						OK	OK	OK	[illegible]
9-31-94		100					2cts						OK	OK	OK	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Eberline 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. _____ Calibration Expiration Date 12-7-94

Source: Type TA-230 Activity 31,900 Identification No. 1834-94

Start Date 9-1-94 Technician Signature [illegible] Reviewer Signature _____

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Eact OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
9-1-94			100/100				1cpm						ok	ok	ok	[illegible]
9-2-94			100/100				2cpm						ok	ok	ok	[illegible]
9-6-94			100/100				1cpm						ok	ok	ok	[illegible]
9-6-94			100/100				1cpm						ok	ok	ok	[illegible]
9-7-94			100/100				2cpm						ok	ok	ok	[illegible]
9-7-94			100/100				1cpm						ok	ok	ok	[illegible]
9-8-94			100/100				1cpm						ok	ok	ok	[illegible]
9-8-94			100/100				1cpm						ok	ok	ok	[illegible]
9-9-94			100/100				2cpm						ok	ok	ok	[illegible]
9-12-94			100/100				1ct						ok	ok	ok	[illegible]
9-13-94			100/100				1ct						ok	ok	ok	[illegible]
9-13-94			100/100				1ct						ok	ok	ok	[illegible]
9-14-94			100/100				2ct						ok	ok	ok	[illegible]
9-14-94			100/100				1ct						ok	ok	ok	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model [illegible] 2221 Serial No. 159934 Calibration Expiration Date 2-11-95

Detector Make & Model 44-9 Serial No. 112174 Calibration Expiration Date 2-11-95

Source. Type [illegible] #2 Activity [illegible] Identification No. #2

Start Date 8-30-94 Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Bat OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
8-30-94					7968		61						ok	ok	ok	[illegible]
8-30-94					11064		67						ok	ok	ok	[illegible]
8-31-94					9673		69						ok	ok	ok	[illegible]
8-31-94					9824		70						ok	ok	ok	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Ludlum 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model Ludlum 44-9 Serial No. 112190 Calibration Expiration Date 2-11-95

Source: Type Cobalt Lanthanum Nitrate Activity 1 µCi/L Identification No. #2

Start Date 9-1-94 Technician Signature John W Daylut Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Batt OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
9-2-94					10594		63						ok	ok	ok	JWD
9-2-94					10240		57						ok	ok	ok	JWD
9-6-94					10976		69						ok	ok	ok	JWD
9-6-94					10873		71						ok	ok	ok	JWD
9-7-94					10942		65						ok	ok	ok	JWD
9-7-94					10964		78						ok	ok	ok	JWD
9-8-94					10364		67						ok	ok	ok	JWD
9-8-94					10992		69						ok	ok	ok	JWD
9-9-94					10738		75						ok	ok	ok	JWD
9-10-94					10412		77						ok	ok	ok	JWD
9-13-94					10758		73						ok	ok	ok	JWD
9-13-94					10643		79						ok	ok	ok	JWD
9-14-94					10887		71						ok	ok	ok	JWD
[illegible]					[illegible]		74						[illegible]	[illegible]	[illegible]	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Ludlum 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. — Calibration Expiration Date 12-7-94

Source. Type Th-230 Activity 50,900 Identification No. 1534-94

Start Date 9-30-94 Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Bat OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
9-30-94			100/100				1ct						ok	ok	ok	[illegible]
[illegible]			100/100				3cts						ok	ok	ok	[illegible]
[illegible]			100/100				1ct						ok	ok	ok	[illegible]
[illegible]			100/100				3cts						ok	ok	ok	[illegible]
1/22/94			100/100				1ct						ok	ok	ok	[illegible]
1-27-94			100/100				2cts						ok	ok	ok	[illegible]
1-31-94			100/100				1ct						ok	ok	ok	[illegible]
1-31-94			100/100				1ct						ok	ok	ok	[illegible]
1-31-94			100/100				1ct						ok	ok	ok	[illegible]
1-31-94			100/100				1ct						ok	ok	ok	[illegible]
[illegible]			100/100				1ct						ok	ok	ok	[illegible]
[illegible]			100/100				2ct						ok	ok	ok	[illegible]
[illegible]			100/100				1ct						ok	ok	ok	[illegible]
[illegible]			100/100				2ct						ok	ok	ok	[illegible]
[illegible]			100/100				1ct						ok	ok	ok	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Ludlum 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. — Calibration Expiration Date 12-7-94

Source: Type Th-230 Activity 31,900 Identification No. 18361-94

Start Date 10-3-94 Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Batt OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
10-3-94			100/100				20cpm						ok	ok	ok	[illegible]
10-3-94			100/100				20cpm						ok	ok	ok	[illegible]
10-5-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-5-94			100/100				2.0cpm						ok	ok	ok	[illegible]
10-6-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-6-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-10-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-11-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-12-94			100/100				2cts						ok	ok	ok	[illegible]
10-13-94			100/100				1cts						ok	ok	ok	[illegible]
10-14-94			100/100				2cts						ok	ok	ok	[illegible]
10-13-94			100/100				2cts						ok	ok	ok	[illegible]
10-15-94			100/100				1.0cpm						ok	ok	ok	[illegible]
10-19-94			100/100				2.0						ok	ok	ok	[illegible]
10-20-94			100/100				1cts						ok	ok	ok	[illegible]
10-21-94																
10-22-94			100/100													
10-23-94			100/100													
10-24-94			100/100													
10-25-94			100/100													
10-26-94			100/100													
10-27-94			100/100													
10-28-94			100/100													
10-29-94			100/100													
10-30-94			100/100													
10-31-94			100/100													

Operational Check Data Sheet

Ratemeter/Scaler Make & Model [illegible] 2221 Serial No. 105934 Calibration Expiration Date [illegible]

Detector Make & Model [illegible] 44-9 Serial No. [illegible] Calibration Expiration Date [illegible]

Source Type [illegible] Activity [illegible] Identification No. [illegible]

Start Date [illegible] Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Batt OK?	HV OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
[illegible]					[illegible]		[illegible]						OK	OK	OK	[illegible]
[illegible]					[illegible]		71						OK	OK	OK	[illegible]
[illegible]					11685		73						OK	OK	OK	[illegible]
[illegible]					[illegible]		69						OK	OK	OK	[illegible]
[illegible]					10566		80						OK	OK	OK	[illegible]
[illegible]					10767		77						OK	OK	OK	[illegible]
[illegible]					10473		79						OK	OK	OK	[illegible]
[illegible]					[illegible]		75						OK	OK	OK	[illegible]
[illegible]					10303		68						OK	OK	OK	[illegible]
[illegible]					10470		76						OK	OK	OK	[illegible]
[illegible]					10154		74						OK	OK	OK	[illegible]
[illegible]					10073		75						OK	OK	OK	[illegible]
[illegible]					10339		80						OK	OK	OK	[illegible]
[illegible]					10379		79						OK	OK	OK	[illegible]
[illegible]					10387		91						OK	OK	OK	[illegible]
[illegible]					10506		79									

Rev. 0, February 24, 1994

~~Gamma Scintillation Detector — LMI Model 2221~~

Operational Check Data Sheet

Environmental Dimensions Inc

Ratemeter/Scaler Make & Model Lauren 2221 Serial No. 105934 Calibration Expiration Date 7-11-94

Detector Make & Model 44-9 Serial No. 112194 Calibration Expiration Date 2-11-94

Source Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 10-3-94 Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Ext OK?	HV OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
10-3-94					5795		73									
10-5-94					5706		76						ok	ok	ok	JWD
10-5-94					5535		67						ok	ok	ok	JWD
10-5-94					5740		74						ok	ok	ok	JWD
10-6-94					5553		81						ok	ok	ok	JWD
10-6-94					5798		77						ok	ok	ok	JWD
10-11-94					5587		92						ok	ok	ok	JWD
10-11-94					5533		74						ok	ok	ok	JWD
10-12-94					5464		78						ok	ok	ok	JWD
10-12-94					5571		71						ok	ok	ok	JWD
10-13-94					5740		80						ok	ok	ok	JWD
10-13-94					5531		77						ok	ok	ok	JWD
10-14-94					5969		74						ok	ok	ok	JWD
10-14-94					5985		71						ok	ok	ok	JWD
10-15-94					6055		91						ok	ok	ok	JWD
10-15-94					5627		75						ok	ok	ok	JWD

Operational Check Data Sheet

Ratemeter/Scaler Make & Model [illegible] Serial No. 108847 Calibration Expiration Date [illegible]

Detector Make & Model 43-10 Serial No. PR-11454 Calibration Expiration Date [illegible]

Source. Type Th-230 Activity [illegible] Identification No. [illegible]

Start Date [illegible] Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Bat OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
[illegible]					[illegible]		[illegible]						OK	OK	OK	[illegible]
[illegible]					10483		[illegible]						OK	OK	OK	[illegible]
[illegible]					[illegible]		[illegible]						OK	OK	OK	[illegible]
[illegible]					10548		[illegible]						OK	OK	OK	[illegible]
[illegible]					10527		[illegible]						OK	OK	OK	[illegible]
[illegible]					10670		[illegible]						OK	OK	OK	[illegible]
[illegible]					10718		[illegible]						OK	OK	OK	[illegible]
[illegible]					10498		[illegible]						OK	OK	OK	[illegible]
[illegible]					10730		[illegible]						OK	OK	OK	[illegible]
[illegible]					10601		[illegible]						OK	OK	OK	[illegible]
[illegible]					10559		[illegible]						OK	OK	OK	[illegible]
[illegible]					10672		[illegible]						OK	OK	OK	[illegible]
[illegible]					10575		[illegible]						OK	OK	OK	[illegible]
[illegible]					10536		[illegible]						OK	OK	OK	[illegible]
[illegible]					10552		[illegible]						OK	OK	OK	[illegible]
[illegible]					10500		[illegible]						[illegible]	[illegible]	[illegible]	[illegible]

Operational Check Data Sheet

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 108847 Calibration Expiration Date 11-25-94

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 10-3-94 Technician Signature [illegible] Reviewer Signature

Date	One minute integrated response to check source (cpm)						One minute integrated background count (cpm)						Batt OK?	H.V. OK?	Audio OK?	Tech's Initials
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Total	Count No. 1	Count No. 2	Count No. 3	Count No. 4	Count No. 5	Mean				
10-3-94					10463		10/10 0.3						ok	ok	ok	JWD
10-3-94					10820		10/10 0.3						ok	ok	ok	JWD
10-5-94					10415		10/10 0.3						ok	ok	ok	JWD
10-5-94					10344		10/10 0.2						ok	ok	ok	JWD
10-6-94					10407		10/10 0.2						ok	ok	ok	JWD
10-6-94					10473		10/10 0.2						ok	ok	ok	JWD
10-11-94					10357		10/10 0.3						ok	ok	ok	JWD
10-11-94					10405		10/10 0.3						ok	ok	ok	JWD
10-12-94					10377		10/10 0.1						ok	ok	ok	JWD
10-12-94					10571		10/10 0.2						ok	ok	ok	JWD
10-13-94					10713		10/10 0.2						ok	ok	ok	JWD
10-13-94					10471		10/10 0.3						ok	ok	ok	JWD
10-14-94					10647		10/10 0.1						ok	ok	ok	JWD
10-14-94					10571		10/10 0.2						ok	ok	ok	JWD
10-14-94					10596		10/10 0.3						ok	ok	ok	JWD
10-14-94					10595		10/10 0.3						ok	ok	ok	JWD

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum-2221 Serial No. 105934 Calibration Expiration Date 2-11-94

Detector Make & Model 44-9 Serial No. 112194 Calibration Expiration Date 2-11-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 12-19-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs Initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
[illegible]					5954		85						ok	ok	ok	[illegible]
[illegible]					5835		78						ok	ok	ok	[illegible]
[illegible]					6018		83						ok	ok	ok	[illegible]
[illegible]					5847		77						ok	ok	ok	[illegible]
[illegible]					5711		81						ok	ok	ok	[illegible]
[illegible]					6094		84						ok	ok	ok	[illegible]
[illegible]					5800		73						ok	ok	ok	[illegible]
[illegible]					5782		71						ok	ok	ok	[illegible]
[illegible]					5612		72						ok	ok	ok	[illegible]
[illegible]					5442		70						ok	ok	ok	[illegible]
[illegible]					5564		80						ok	ok	ok	[illegible]
[illegible]					5607		82						ok	ok	ok	[illegible]
[illegible]					5571		84						ok	ok	ok	[illegible]
[illegible]					5661		80						ok	ok	ok	[illegible]
[illegible]					5613		78						ok	ok	ok	[illegible]
[illegible]					5796		76						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum-2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model 44-9 Serial No. 112194 Calibration Expiration Date 2-11-95

Source Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 10-31-94 Technician Signature [signature] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs Initial
10-31-94					5561		77						ok	ok	ok	[illegible]
10-31-94					5609		79						ok	ok	ok	[illegible]
11-1-94					5621		79						ok	ok	ok	[illegible]
11-1-94					5669		74						ok	ok	ok	[illegible]
11-2-94					5798		75						ok	ok	ok	[illegible]
11-2-94					5660		83						ok	ok	ok	[illegible]
11-3-94					5630		86						ok	ok	ok	[illegible]
11-3-94					5706		88						ok	ok	ok	[illegible]
11-7-94					5499		85						ok	ok	ok	[illegible]
11-7-94					5687		80						ok	ok	ok	[illegible]
11-8-94					5732		78						ok	ok	ok	[illegible]
11-8-94					5916		81						ok	ok	ok	[illegible]
11-09-94					5778		68						ok	ok	ok	[illegible]
11-09-94					5804		65						ok	ok	ok	[illegible]
11-14-94					5804		71						ok	ok	ok	[illegible]
11-14-94					5849		73						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum-2221 Serial No. 185947 Calibration Expiration Date 11-25-94

Detector Make & Model 43-10 Serial No. PR-112651 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 Identification No. 1534-94

Start Date 10-19-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	HLV OK?	Audio OK?	Techs Initial
7-11-94					10531		24/100 0.2						ok	ok	ok	[illegible]
[illegible]					10560		34/100 0.3						ok	ok	ok	[illegible]
10-24-94					10307		27/100 0.2						ok	ok	ok	[illegible]
10-24-94					10515		10/100 0.1						ok	ok	ok	[illegible]
10-24-94					10610		25/100 0.2						ok	ok	ok	[illegible]
10-24-94					10519		34/100 0.3						ok	ok	ok	[illegible]
[illegible]					10555		10/100 0.1						ok	ok	ok	[illegible]
[illegible]					10357		24/100 0.2						ok	ok	ok	[illegible]
[illegible]					10343		34/100 0.3						ok	ok	ok	[illegible]
[illegible]					0316		10/100 0.1						ok	ok	ok	[illegible]
[illegible]					10435		25/100 0.2						ok	ok	ok	[illegible]
11-31-94					10531		10/100 0.1						ok	ok	ok	[illegible]
[illegible]					0504		[illegible]						ok	ok	ok	[illegible]
[illegible]					10003		[illegible]						ok	ok	ok	[illegible]
12-28-94					10462		24/100 0.2						ok	ok	ok	[illegible]
12-28-94					10360		10/100 0.1						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Lumum-2221 Serial No. 108847 Calibration Expiration Date 11-25-94

Detector Make & Model 43-10 Serial No. PR-112654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 Identification No. 1434-94

Start Date 10-31-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Tecks Initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
10-31-94					10672		31/10 0.2						ok	ok	ok	[illegible]
10-31-94					10453		31/10 0.1						ok	ok	ok	[illegible]
11-1-94					10439		31/10 0.5						ok	ok	ok	[illegible]
11-1-94					10321		31/10 0.2						ok	ok	ok	[illegible]
11-2-94					10499		31/10 0.3						ok	ok	ok	[illegible]
11-2-94					10539		31/10 0.1						ok	ok	ok	[illegible]
11-3-94					10441		31/10 0.2						ok	ok	ok	[illegible]
11-3-94					10357		31/10 0.2						ok	ok	ok	[illegible]
11-[illegible]-94					10368		31/10 0.3						ok	ok	ok	[illegible]
11-[illegible]					10551		31/10 0.2						ok	ok	ok	[illegible]
11-8-94					10481		31/10 0.2						ok	ok	ok	[illegible]
11-9-94					10647		31/10 0.3						ok	ok	ok	[illegible]
11-10-94					10374		31/10 0.3						ok	ok	ok	[illegible]
11-10-94					10907		31/10 0.2						ok	ok	ok	[illegible]
11-14-94					10240		31/10 0.5						ok	ok	ok	[illegible]
11-14-94					10721		31/10 0.1						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. — Calibration Expiration Date 12-7-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 10-20-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs Initial
[illegible]-7-94			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				1ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				1ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]-[illegible]-94			100/100				1ct						OK	OK	OK	[illegible]
[illegible]-[illegible]-94			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				1ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]			100/100				2ct						OK	OK	OK	[illegible]
[illegible]-31-94			100/100				1ct						OK	OK	OK	[illegible]
[illegible]-31-94			100/100				2ct						OK	OK	OK	[illegible]

Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 139 Serial No. 71312 Calibration Expiration Date 12-7-94

Detector Make & Model 43-32 Serial No. — Calibration Expiration Date 12-7-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 11-1-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs Initial
	xI scale	xI6 scale	xI06 scale	xI000 scale	Log scale	Mean	xI scale	xI6 scale	xI06 scale	xI000 scale	Log scale	Mean				
11-1-94			100/100				2ct						ok	ok	ok	[illegible]
11-1-94			100/100				1ct						ok	ok	ok	[illegible]
11-2-94			100/100				2ct						ok	ok	ok	[illegible]
11-2-94			100/100				2ct						ok	ok	ok	[illegible]
11-3-94			100/100				2ct						ok	ok	ok	[illegible]
11-3-94			100/100				2ct						ok	ok	ok	[illegible]
11-7-94			100/100				2ct						ok	ok	ok	[illegible]
11-7-94			100/100				1ct						ok	ok	ok	[illegible]
11-8-94			100/100				1ct						ok	ok	ok	[illegible]
11-8-94			100/100				1ct						ok	ok	ok	[illegible]
11-9-94			100/100				2ct						ok	ok	ok	[illegible]
11-9-94			100/100				2ct						ok	ok	ok	[illegible]
11-10-94			100/100				1ct						ok	ok	ok	[illegible]
11-10-94			100/100				2ct						ok	ok	ok	[illegible]
11-14-94			100/100				2ct						ok	ok	ok	[illegible]
11-14-94			100/100				1ct						ok	ok	ok	[illegible]
11-15-94			100/100				2ct						ok	ok	ok	[illegible]
11-15-94			100/100				2ct						ok	ok	ok	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model 44-9 Serial No. 117194 Calibration Expiration Date 2-11-95

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 11-[illegible]-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs Initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
11-15-94					5550		77						OK	OK	OK	[illegible]
11-15-94					5705		79						OK	OK	OK	[illegible]
11-16-94					5594		72						OK	OK	OK	[illegible]
11-16-94					5551		75						OK	OK	OK	[illegible]
11-17-94					5745		71						OK	OK	OK	[illegible]
11-17-94					5678		80						OK	OK	OK	[illegible]
[illegible]					[illegible]		76						OK	OK	OK	[illegible]
[illegible]					5790		75						OK	OK	OK	[illegible]
11-20-94 0700					5679 ~~5672~~		76						OK	OK	OK	[illegible]
11-21-94 1200					5650		78						OK	OK	OK	[illegible]
11-22-94					5750		79						OK	OK	OK	[illegible]
11-23-94					5607		75						OK	OK	OK	[illegible]
[illegible]					[illegible]		[illegible]						[illegible]	[illegible]	[illegible]	[illegible]
[illegible]					[illegible]		[illegible]						[illegible]	[illegible]	[illegible]	[illegible]
[illegible]					5613		71						[illegible]	[illegible]	[illegible]	[illegible]
[illegible]					5621		69						[illegible]	[illegible]	[illegible]	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2221 Serial No. 105934 Calibration Expiration Date 2-11-95

Detector Make & Model 014-9 Serial No. 112134 Calibration Expiration Date 2-11-95

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 12-5-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* xI scale	xI0 scale	xI00 scale	x1000 scale	Log scale	Mean	Background (cpm)* xI scale	xI0 scale	xI00 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs Initial
12-5-94				5493			69						OK	OK	OK	[illegible]
12-5-94				5547			72						OK	OK	OK	[illegible]
12-6-94				5701			67						OK	OK	OK	[illegible]
12-6-94				5459			70						OK	OK	OK	[illegible]
12-7-94				5675			74						OK	OK	OK	[illegible]
12-7-94				5535			72						OK	OK	OK	[illegible]
[illegible]				[illegible]			69						OK	OK	OK	[illegible]
[illegible]				5419			70						OK	OK	OK	[illegible]
[illegible]				[illegible]			68						OK	OK	OK	[illegible]
[illegible]				5421			67						OK	OK	OK	[illegible]
[illegible]				[illegible]			62						OK	OK	OK	[illegible]
[illegible]				[illegible]			65						OK	OK	OK	[illegible]
[illegible]				[illegible]			[illegible]						OK	OK	OK	[illegible]
[illegible]				[illegible]			[illegible]						OK	OK	OK	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model [illegible] Serial No 115-517 Calibration Expiration Date 11-25-94

Detector Make & Model 43-10 Serial No. PR-113654 Calibration Expiration Date 11-25-94

Source: Type Th-230 Activity 31,900 Identification No. 1834-94

Start Date 11-15-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs Initial
11-15-94					0577		0.5						ok	ok	ok	[illegible]
11-15-94					10284		0.6						ok	ok	ok	[illegible]
11-16-94					10421		0.1						ok	ok	ok	[illegible]
11-16-94					10513		0.2						ok	ok	ok	[illegible]
11-17-94					10453		[illegible]						ok	ok	ok	[illegible]
11-17-94					0356		[illegible]						ok	ok	ok	[illegible]
[illegible]					10421		0.3						ok	ok	ok	[illegible]
[illegible]					10294		0.2						ok	ok	ok	[illegible]
11-18-94					10360		[illegible]						ok	ok	ok	[illegible]
[illegible]					10427		[illegible]						ok	ok	ok	[illegible]
[illegible]					10531		[illegible]						ok	ok	ok	[illegible]
[illegible]					10457		0.5						ok	ok	ok	[illegible]
[illegible]					[illegible]		[illegible]									[illegible]
[illegible]					[illegible]		[illegible]						[illegible]	[illegible]	[illegible]	[illegible]
[illegible]					0.65		[illegible]						ok	ok	ok	[illegible]
[illegible]					0.65		[illegible]						[illegible]	[illegible]	[illegible]	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Eberline 2220 Serial No. 108867 Calibration Expiration Date

Detector Make & Model 43-10 Serial No. PR-112657 Calibration Expiration Date

Source: Type Th-230 Activity 31900 Identification No. 1834-901

Start Date 12-5-94 Technician Signature [illegible] Reviewer Signature

Date	Source (cpm)*						Background (cpm)*						Batt OK?	H.V. OK?	Audio OK?	Techs Initial
	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean				
0534					1075		Scale 0.3						OK	OK	OK	[illegible]
0552					1021		1CAP 0.1						[illegible]	OK	OK	[illegible]
1264					1092		0.1						OK	OK	OK	[illegible]
1296					1097		0.2						OK	OK	OK	[illegible]
1324					1061		0.2						OK	OK	OK	[illegible]
[illegible]					1013		0.1						OK	OK	OK	[illegible]
[illegible]					1053		0.2						OK	OK	OK	[illegible]
[illegible]					1034		0.5						OK	OK	OK	[illegible]
[illegible]					1016		0.2						OK	OK	OK	[illegible]
[illegible]					[illegible]		0.2						OK	OK	OK	[illegible]
[illegible]					1034		0.1						OK	OK	OK	[illegible]
[illegible]					1040		0.3						OK	OK	OK	[illegible]
[illegible]							0.2									
[illegible]					1038		0.2						OK	OK	OK	[illegible]

*Check made on scale used.

OPERATIONAL CHECK DATA SHEET

Ratemeter/Scaler Make & Model Ludlum 139 Serial No. 71312 Calibration Expiration Date 12-1-94

Detector Make & Model 43-32 Serial No. — Calibration Expiration Date 12-7-94

Source: Type Th-230 Activity 31,900 Identification No. 15301-94

Start Date 11-16-94 Technician Signature _____ Reviewer Signature _____

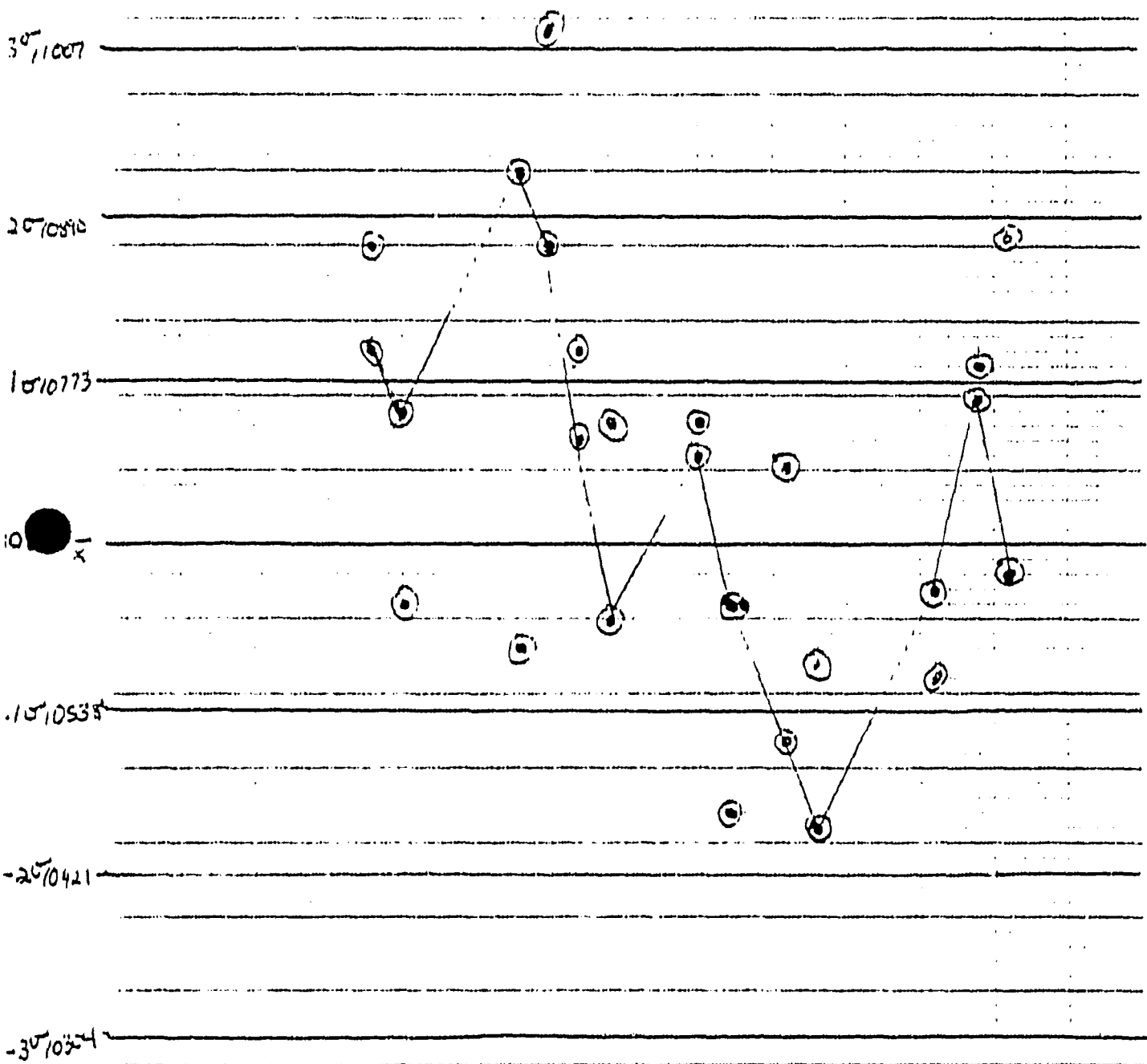
Date	Source (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Background (cpm)* x1 scale	x10 scale	x100 scale	x1000 scale	Log scale	Mean	Batt OK?	H.V. OK?	Audio OK?	Techs Initial
11-16-94			100/100				20+						OK	OK	OK	[illegible]
11-16-94			100/100				10+						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
11-21-94			100/100				[illegible]						OK	OK	OK	[illegible]
11-21-94			[illegible]				10+						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				10+						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				[illegible]						OK	OK	OK	[illegible]
[illegible]			[illegible]				10+						OK	OK	OK	[illegible]

*Check made on scale used.

Control Chart

Analyst 31,960 dpm
Date 5.20.1994

JUNE 94
SOURCE COUNTS

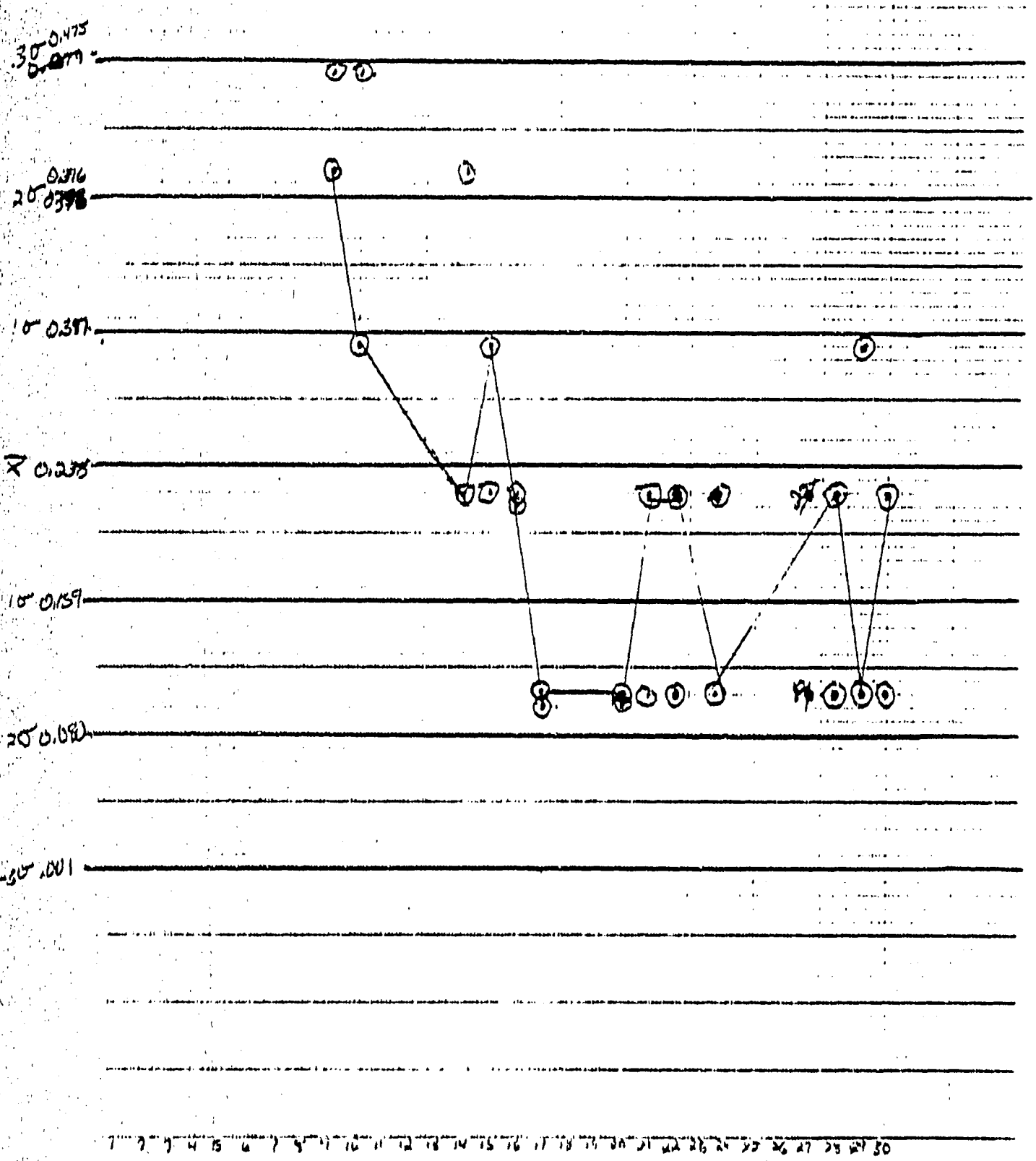


LUDLUM 2221 SN # 108947
LUDLUM 43-10 SN # PR11-2654

Control Chart

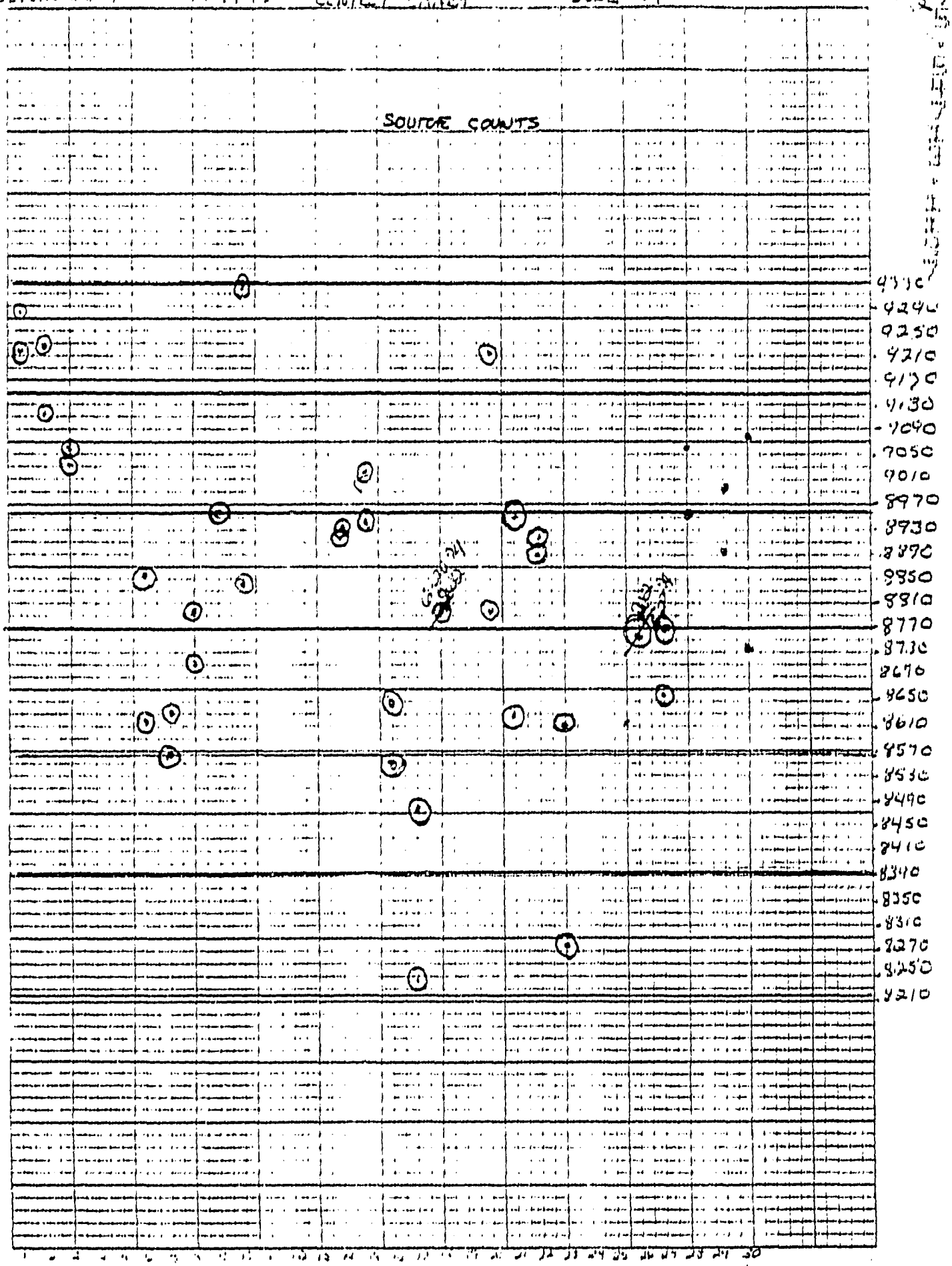
ISOTOPE 230 Th
AMOUNT 31,900 DPM
DATE 5-20-1994

JUNE 94
BACKGROUND COUNTS



LOCOMM 2231 SN # 105934 LAUREN MARTEL #2

[illegible] 11/7/93 Central Coast JUNE 94



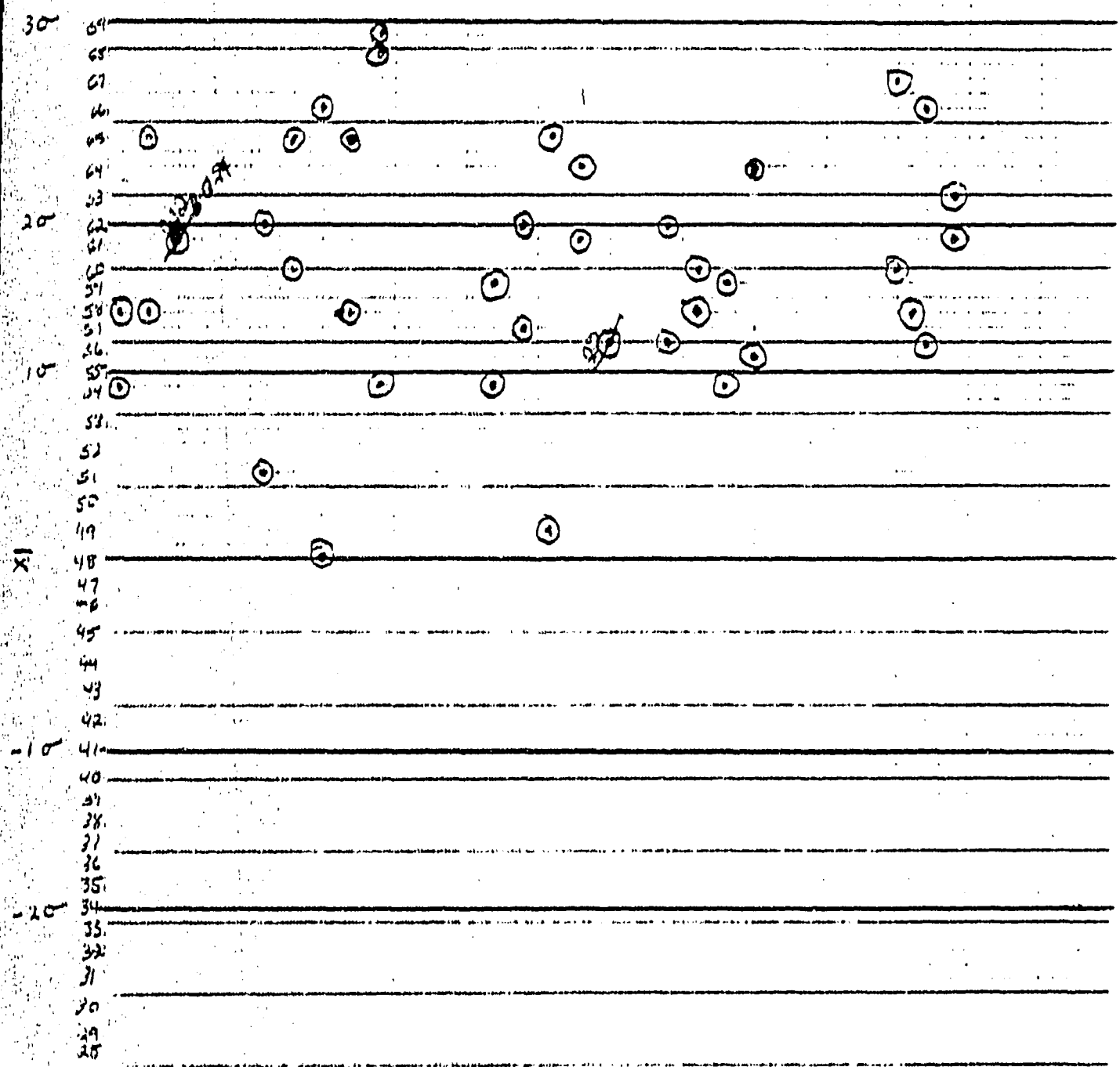
1 Squares to the Inch

$\bar{x}$ 8769

LUDLUM 2221 SN # 105734
LUDLUM 44-4 SN # 112193

JUNE 94

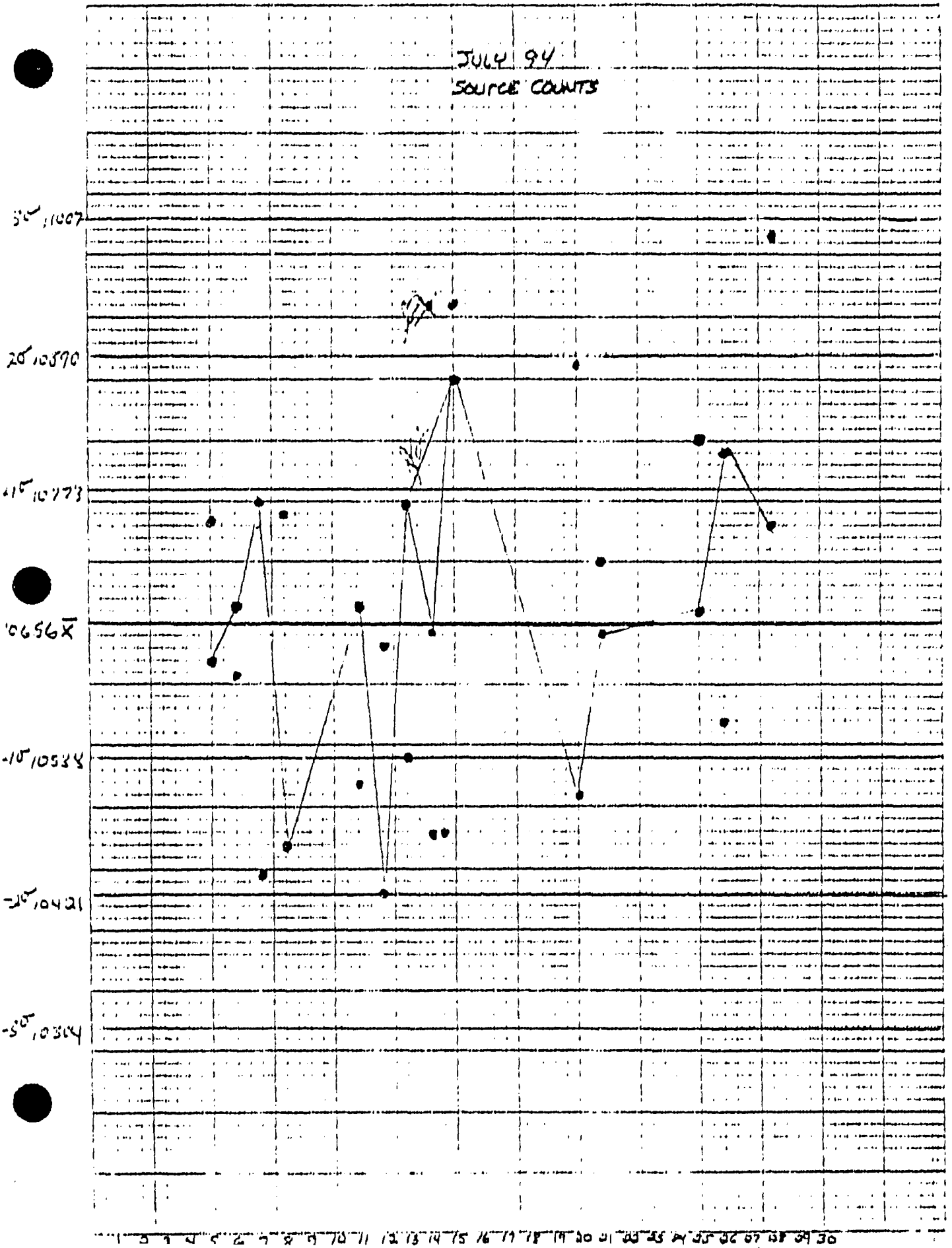
BACKGROUND COUNT



LUDLUM 4321 SN# 108847
LUDLUM 43-10 SN# PR 117625

Control Chart

Source .250 Th
Amount 31,900 dpm
Date 5-30-1994



Control Chart

JULY 94

BACKGROUND COUNTS

UCL 0.475

UWL 0.356

UCL 0.317

$\bar{X}$ 0.238

LCL 0.159

LWL 0.080

LCL 0.001

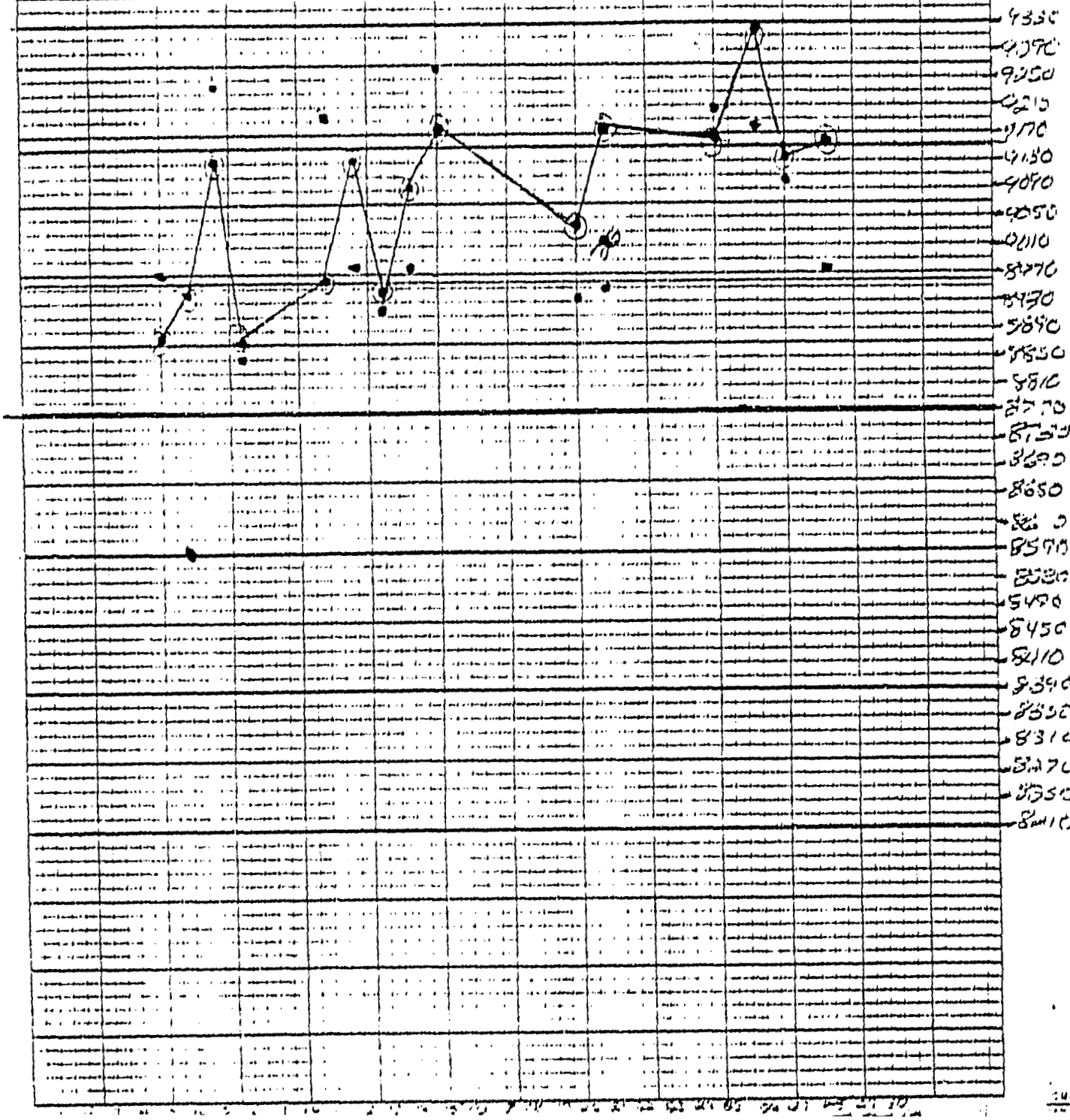
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

1 Squares to the Inch

Control Chart

JULY 94

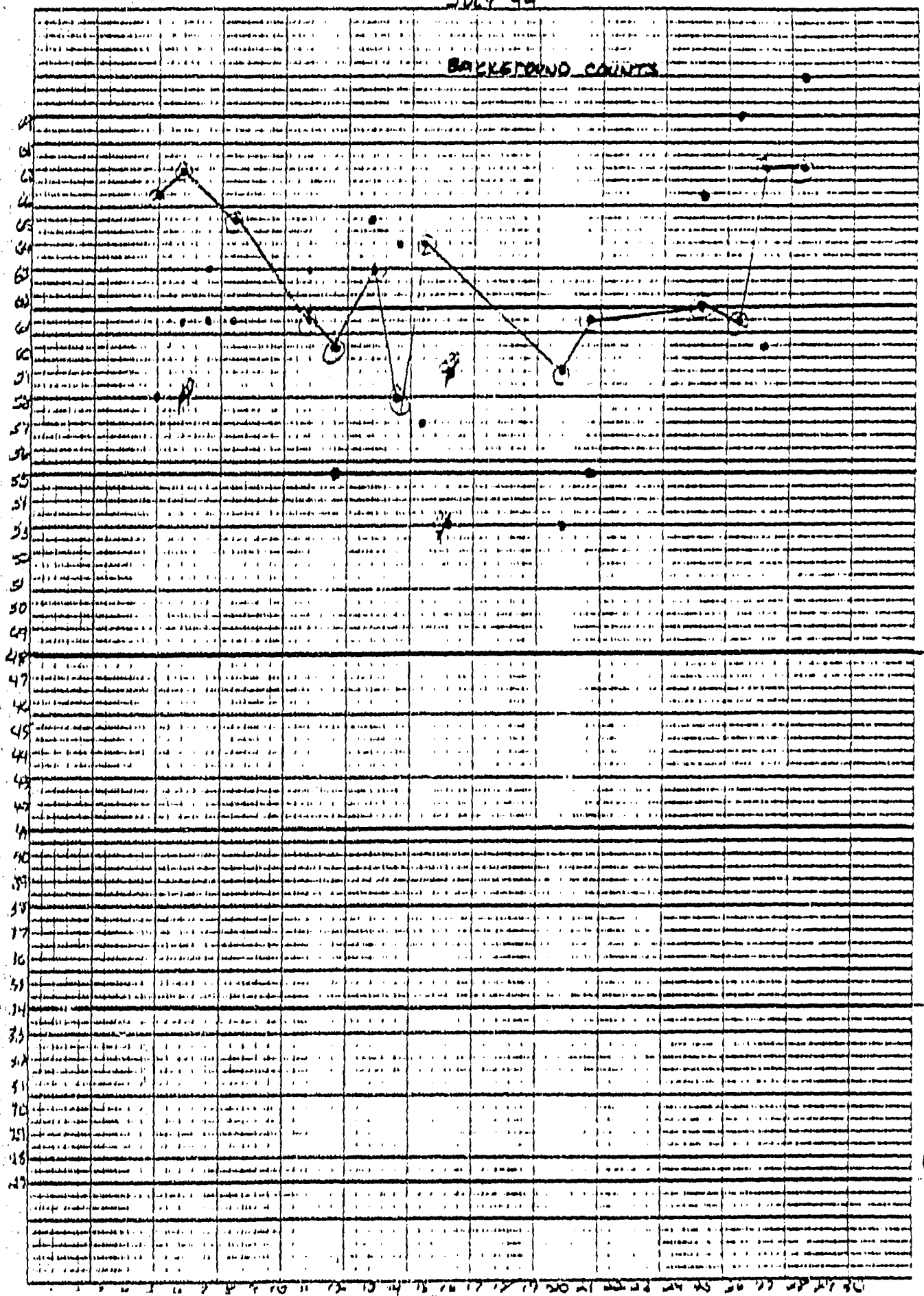
SOURCE COUNTS



Cuchem Circuit

JULY 94

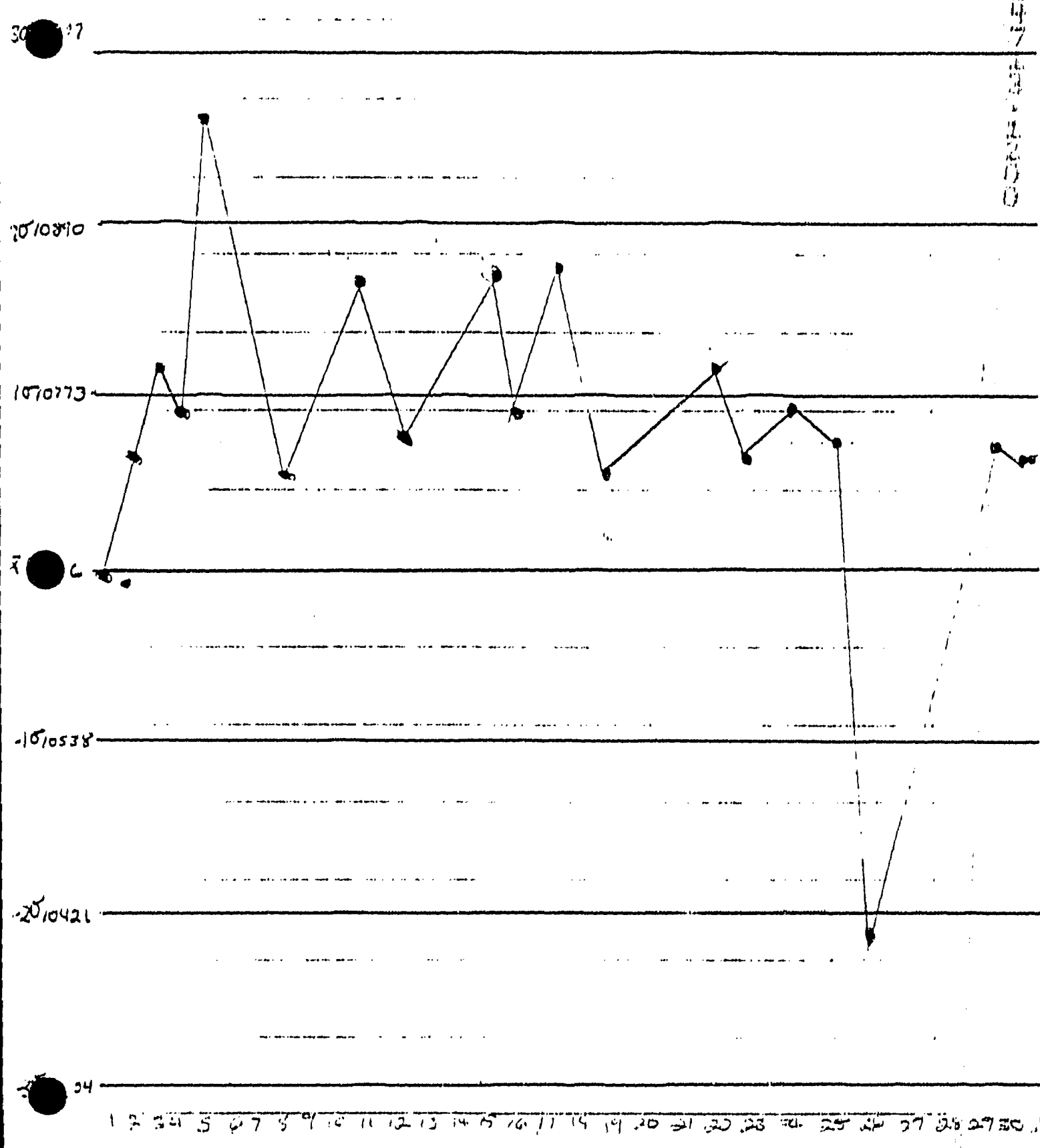
BACKGROUND COUNTS



Lodwin 2221 #108547
" 4.3-10 AR-112675

Control Chart

AUGUST 94
SOURCE COUNTS

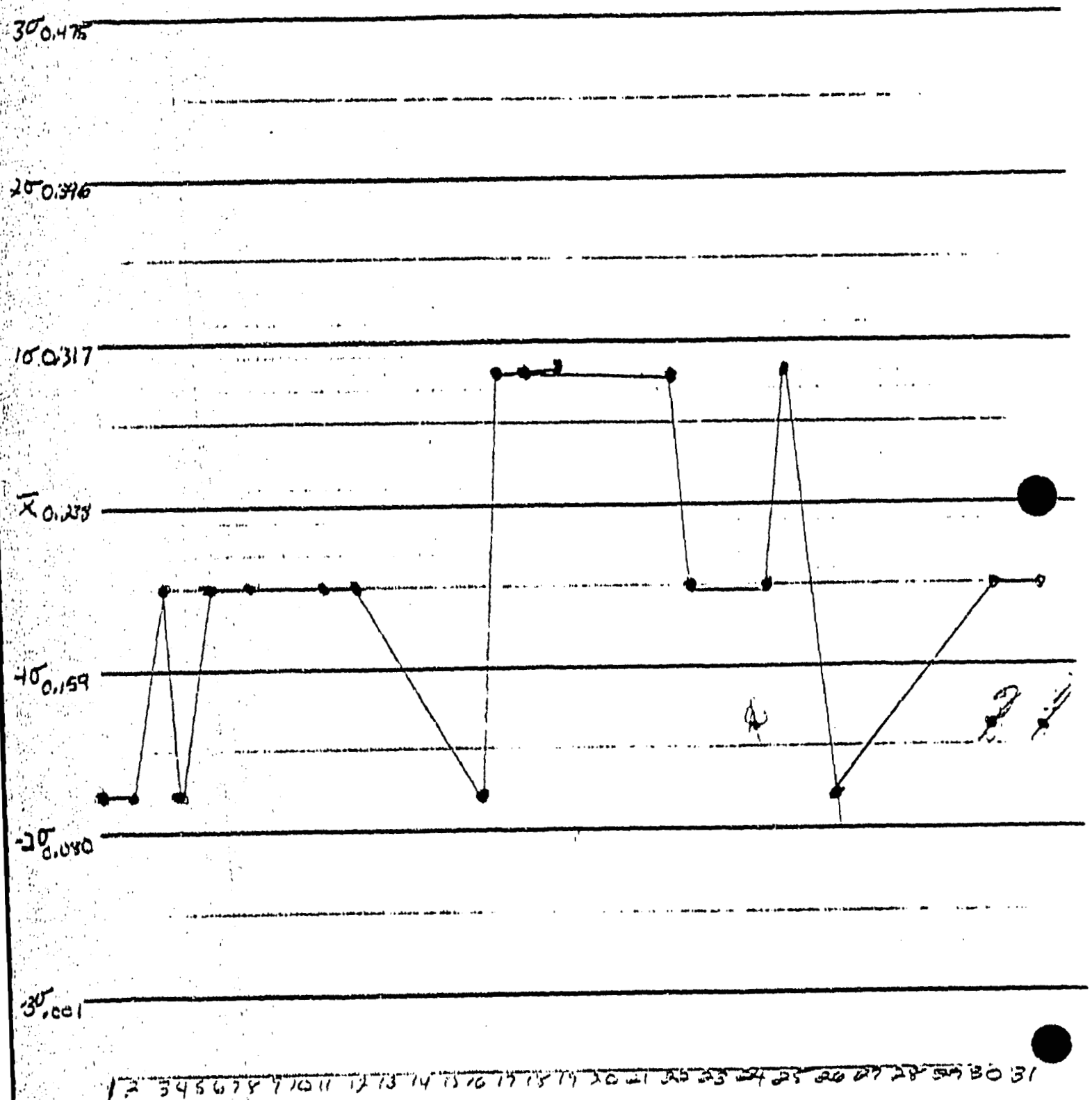


AUG-94 Source Counts

$\bar{X} = 10656$
S.D = 117.31

Window 2221 #188947
43-10 #PR-112625 Control Chart

AUGUST 94
BACKGROUND COUNTS



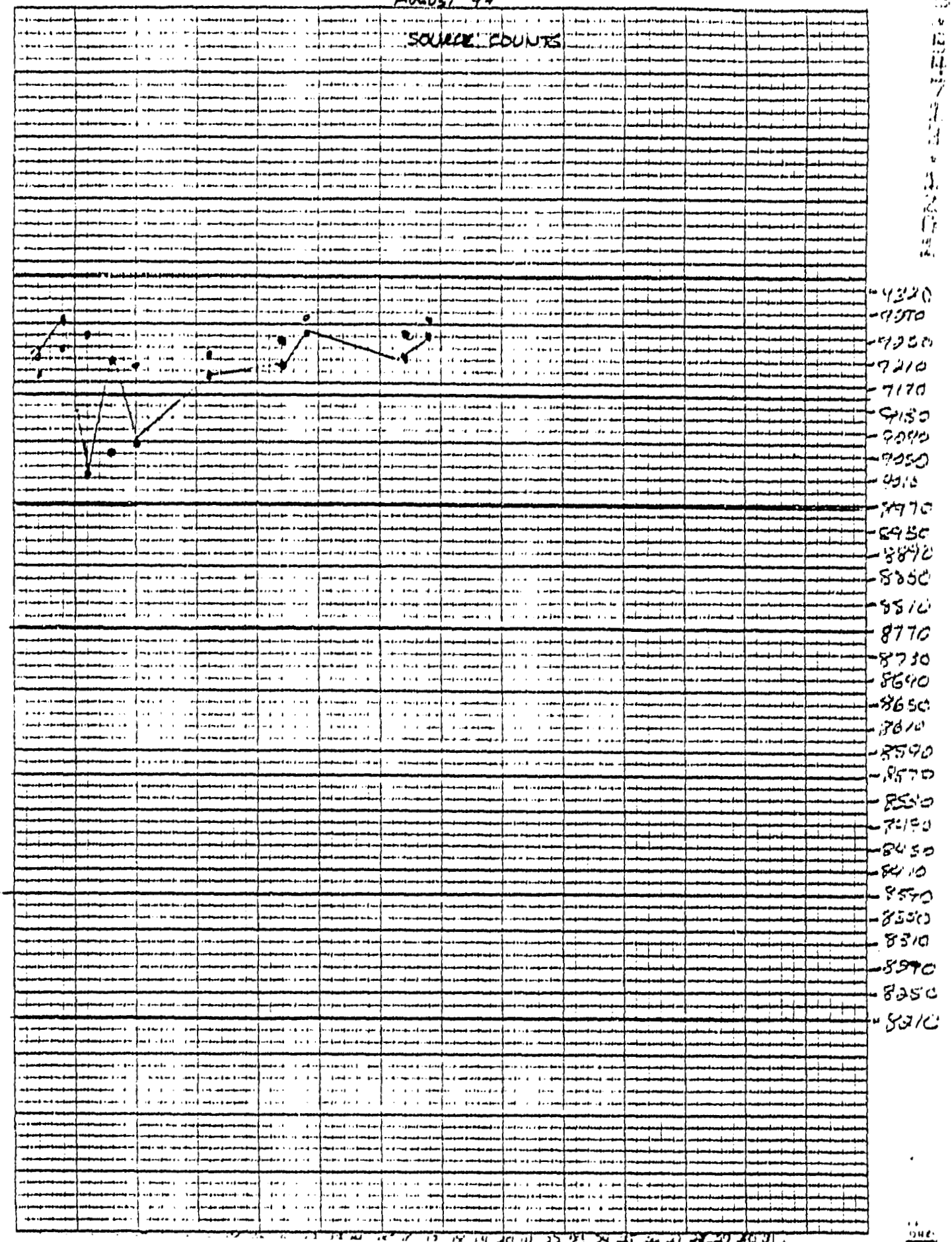
AUG-94 BKG Counts $\bar{X} = 9.33$

SD = 9.44

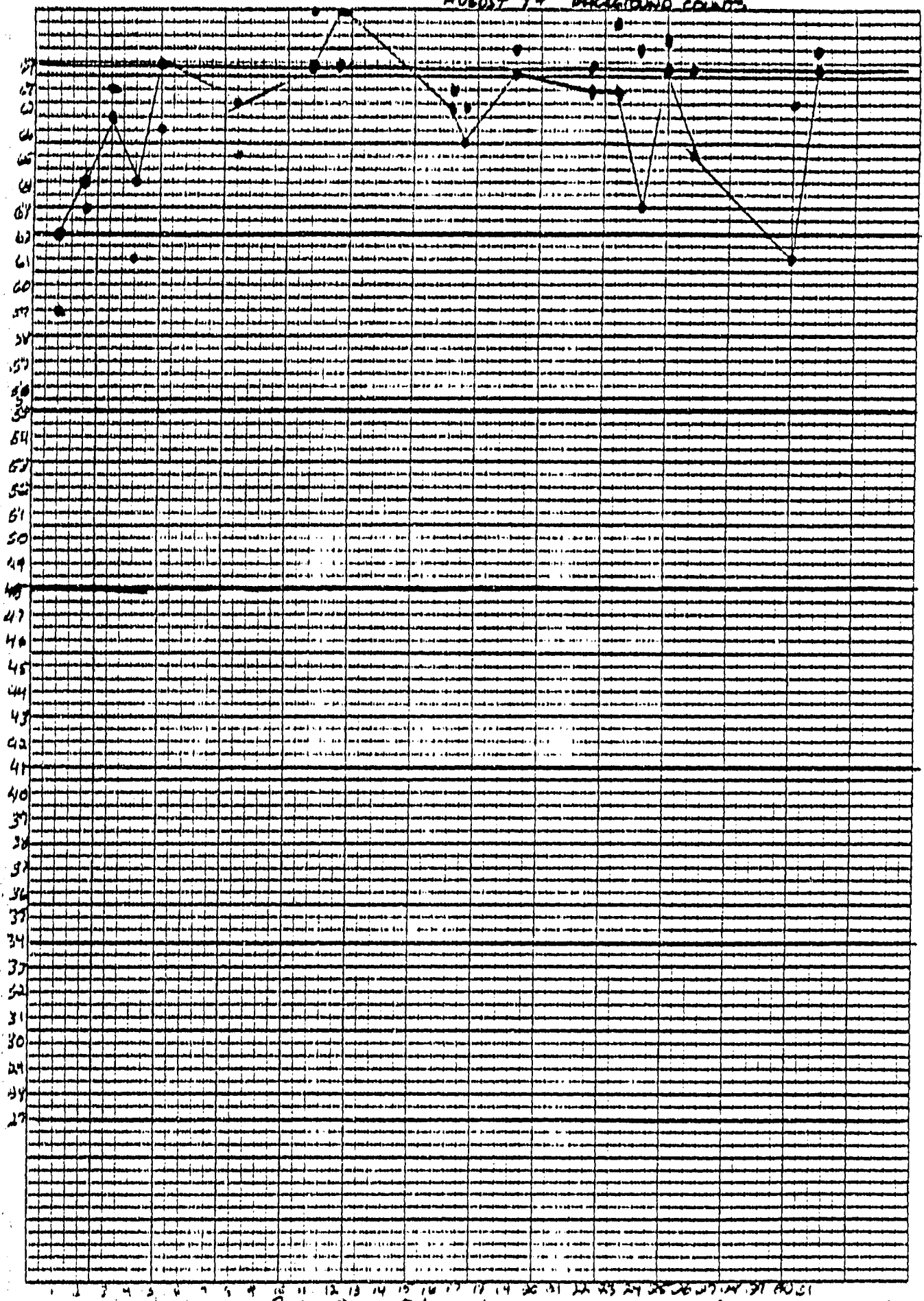
Control Chart

AUGUST 94

SOURCE COUNTS



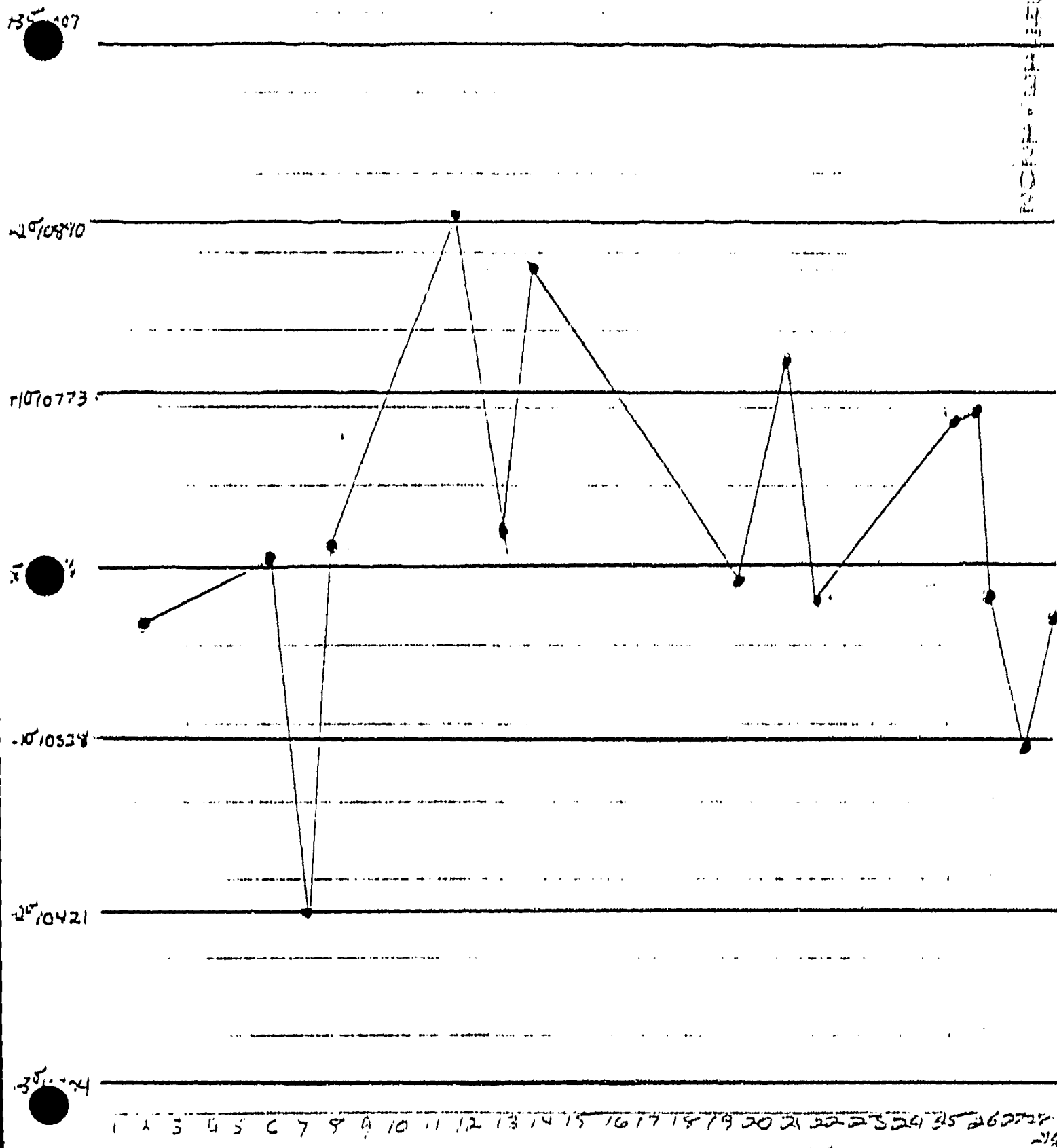
AUGUST 94 BACKGROUND COUNTS



Column 2201 #108847
" 43-10 ~ PR-112625

Control Chart

SEPTEMBER 94
SOURCE COUNTS



$\bar{X}$ = 10656

Sept-94 Source Counts

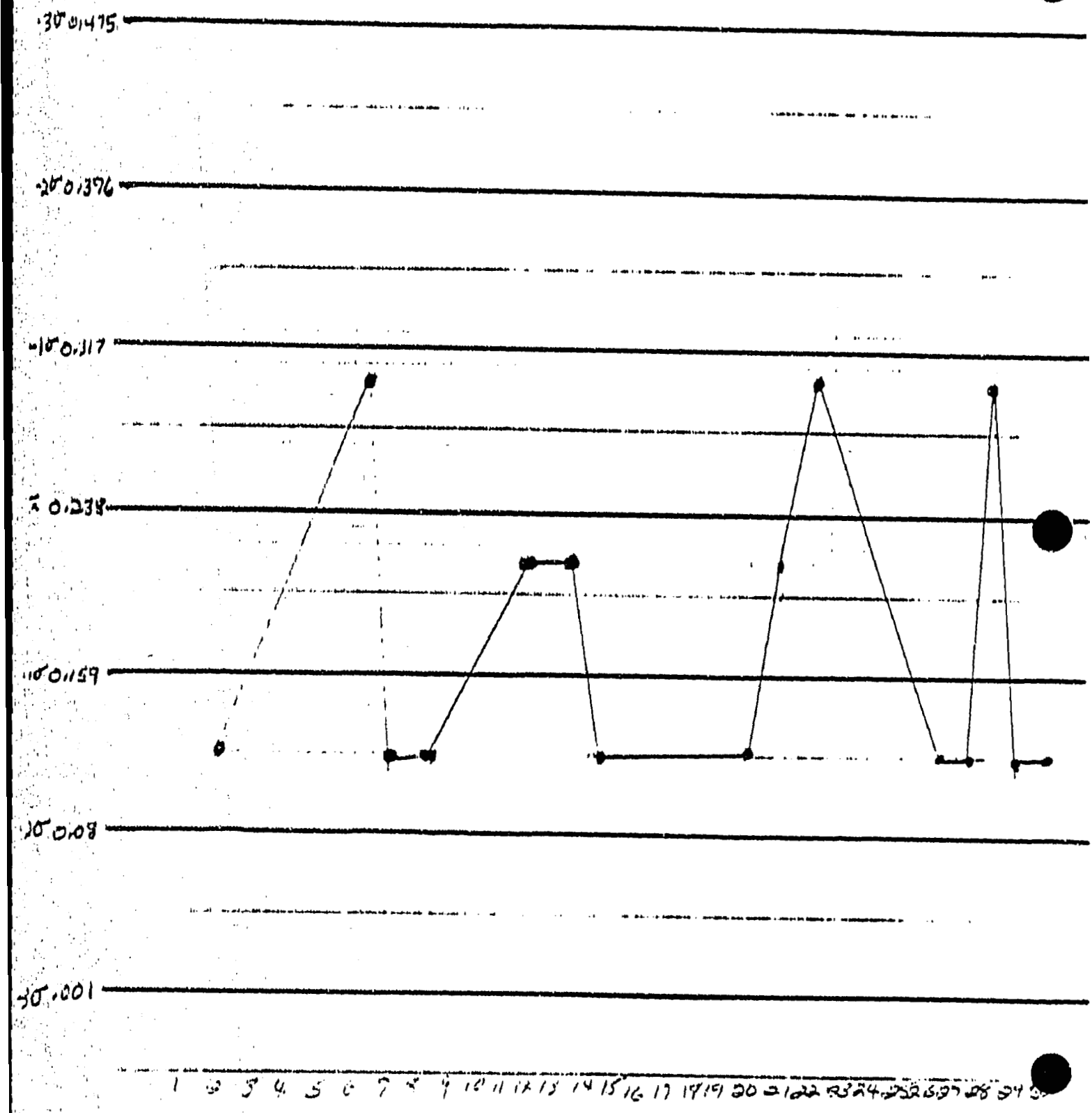
SD = 117.31

43-10 PRE-113625

Control Chart

SEPTEMBER 94

BACKGROUND COUNTS



Sept-94 BKG

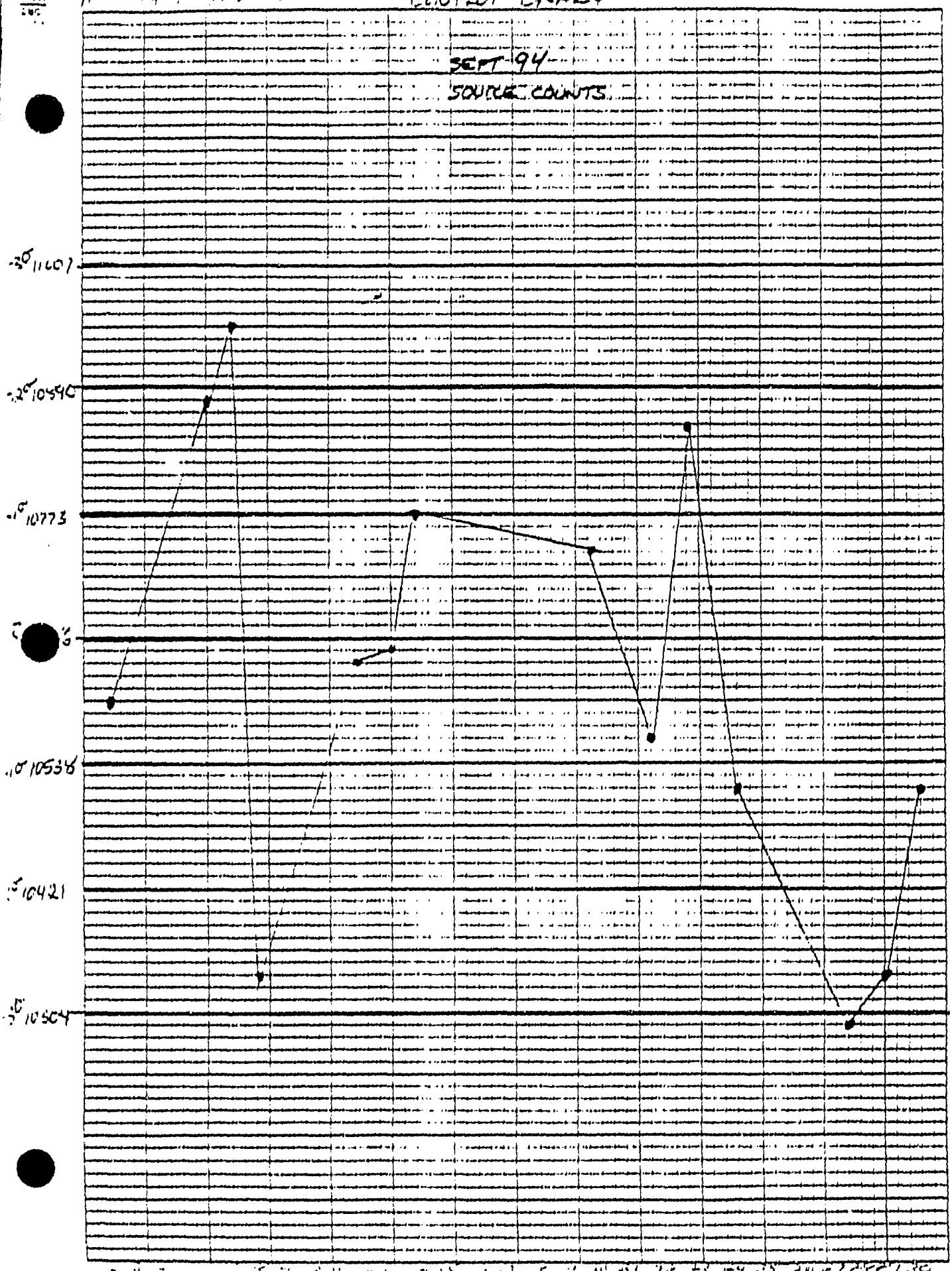
X̄ 9.33

S.D. 9.44

Control Chart

SEPT 94

SOURCE COUNTS



Squares to the inch

Sept 94

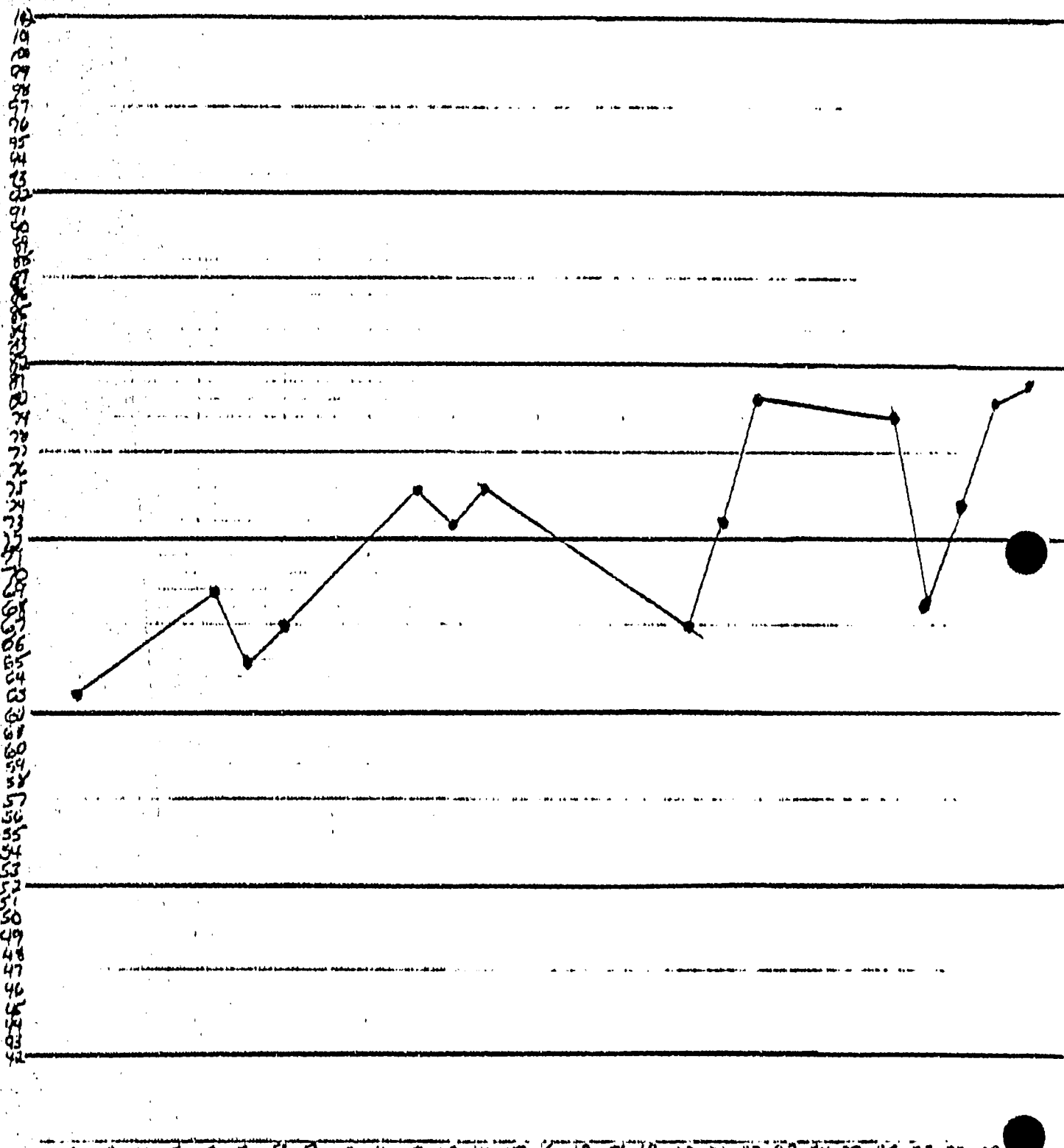
$\bar{X}$ = 10656

LUDLUM 2221 # 105934
LUDLUM 44-9 # 112190

Control Chart

SEPT 94

BACKGROUND COUNTS



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

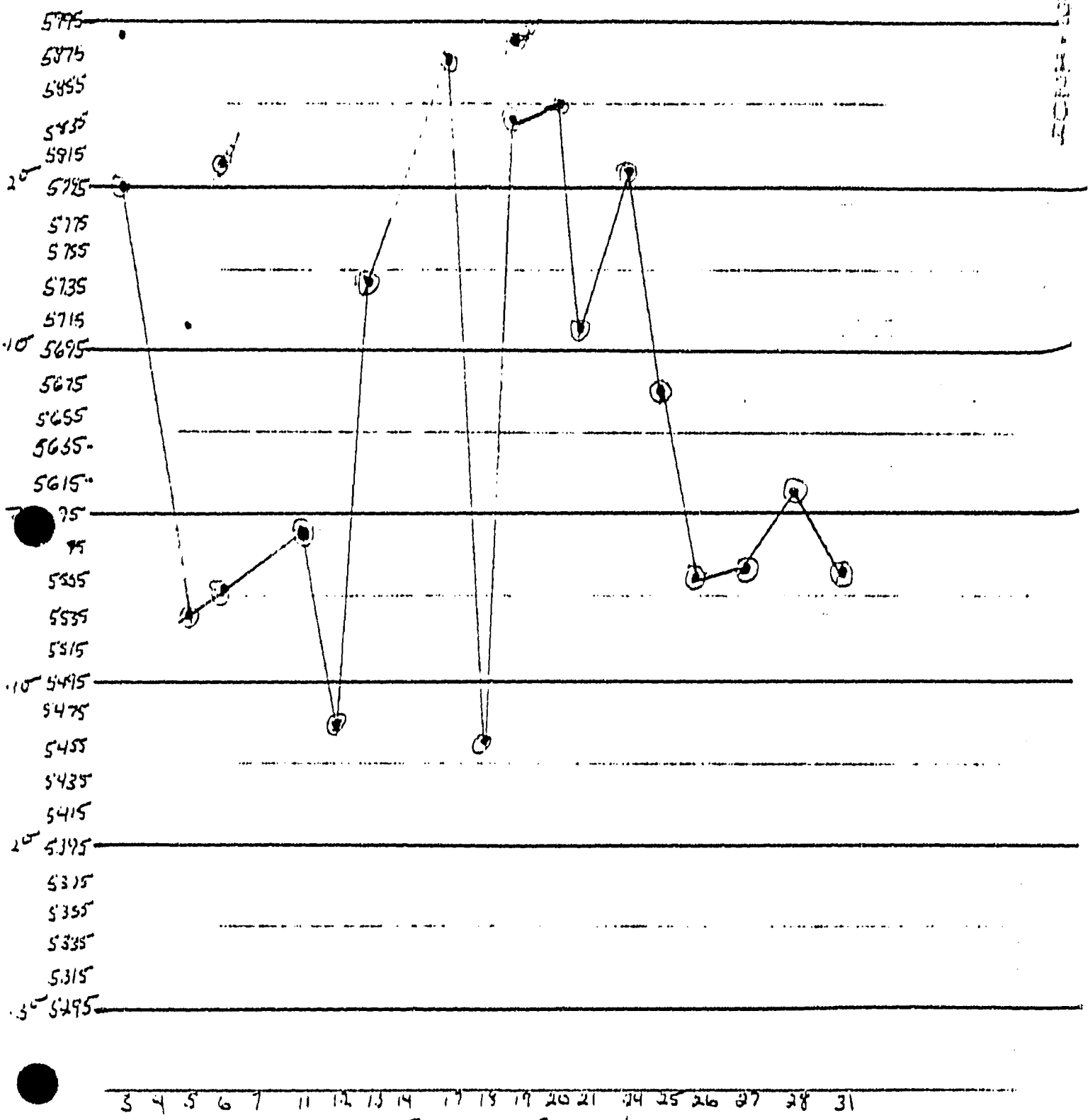
Sept-94 Background

Control Chart

TA-230 31,900 dpm

OCTOBER 94

SOURCE COUNTS



Source Counts

Oct-94

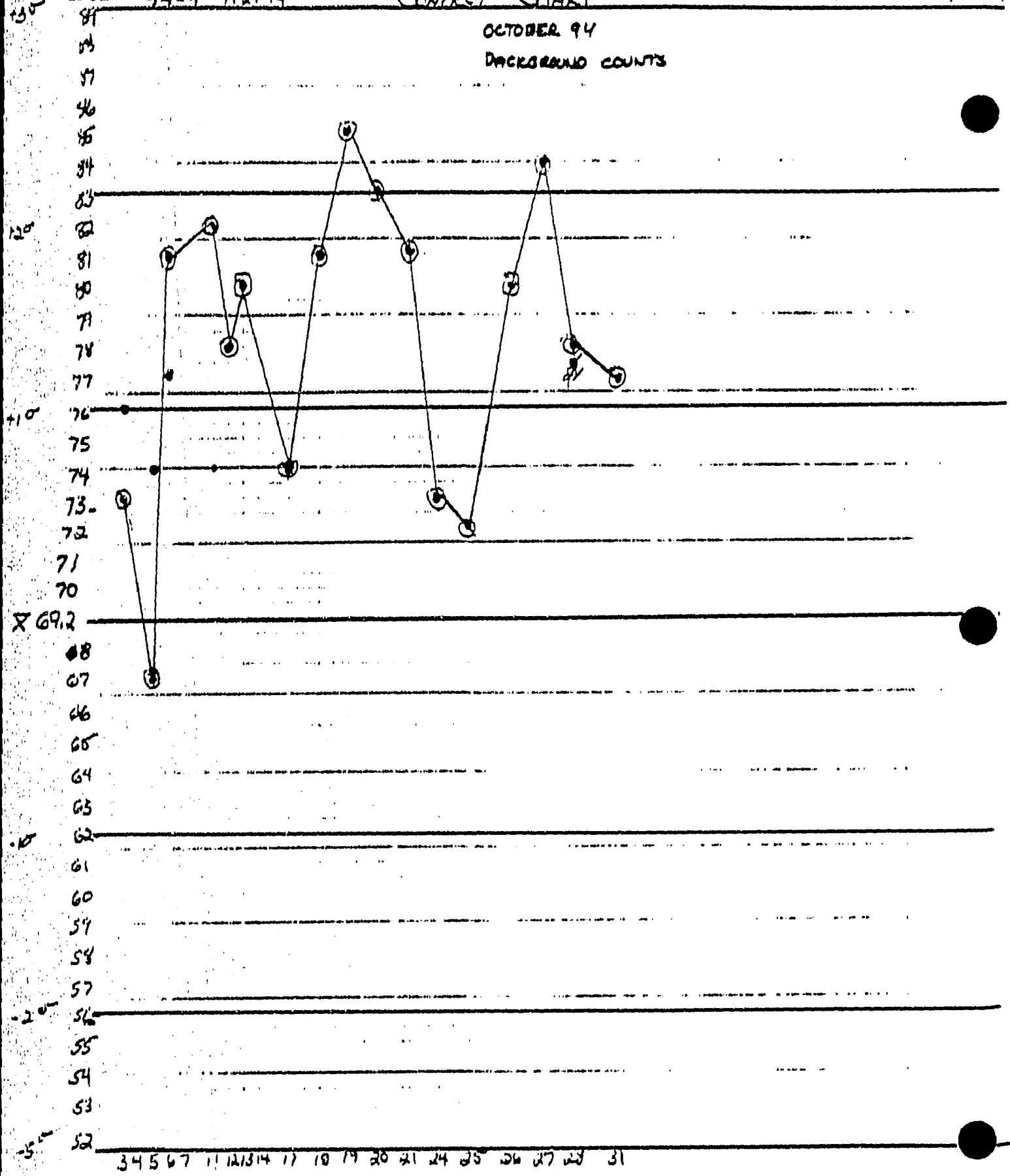
$\overline{X} = 5595$

S.D = 100.0

EUDOLIN 2221 #105934
EUDOLIN 44-7 # 112144

Control Chart

Th-230 31,900 ϕ



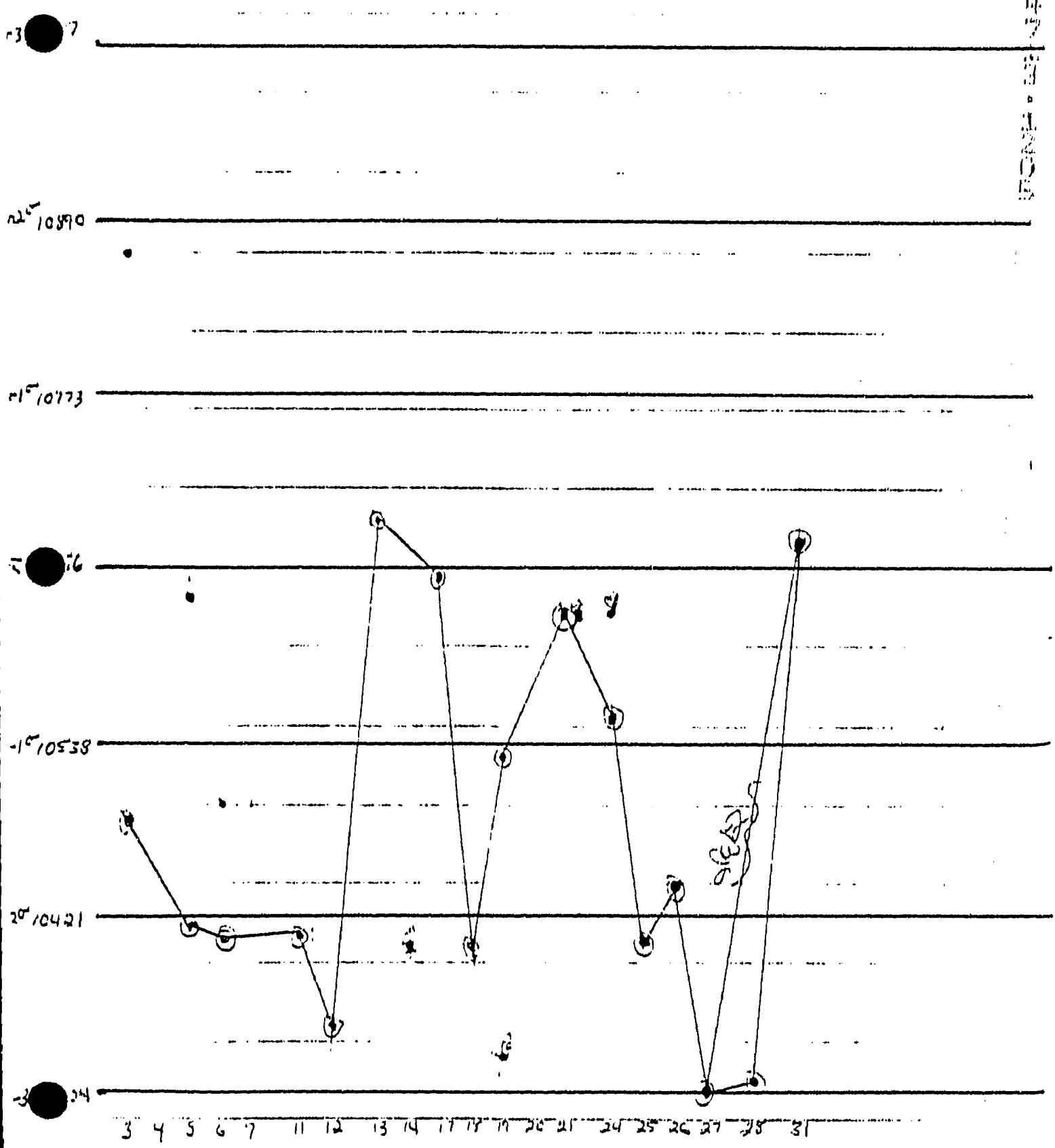
BKG Counts
Oct-94

69.2 = X̄
6.8 = SD

LUDLUM 2221 #108847
" 43-10 #PR-1126125

Control Chart

OCTOBER 94
SOURCE COUNTS



Oct-94

Source Counts

$\bar{X} = 10656$

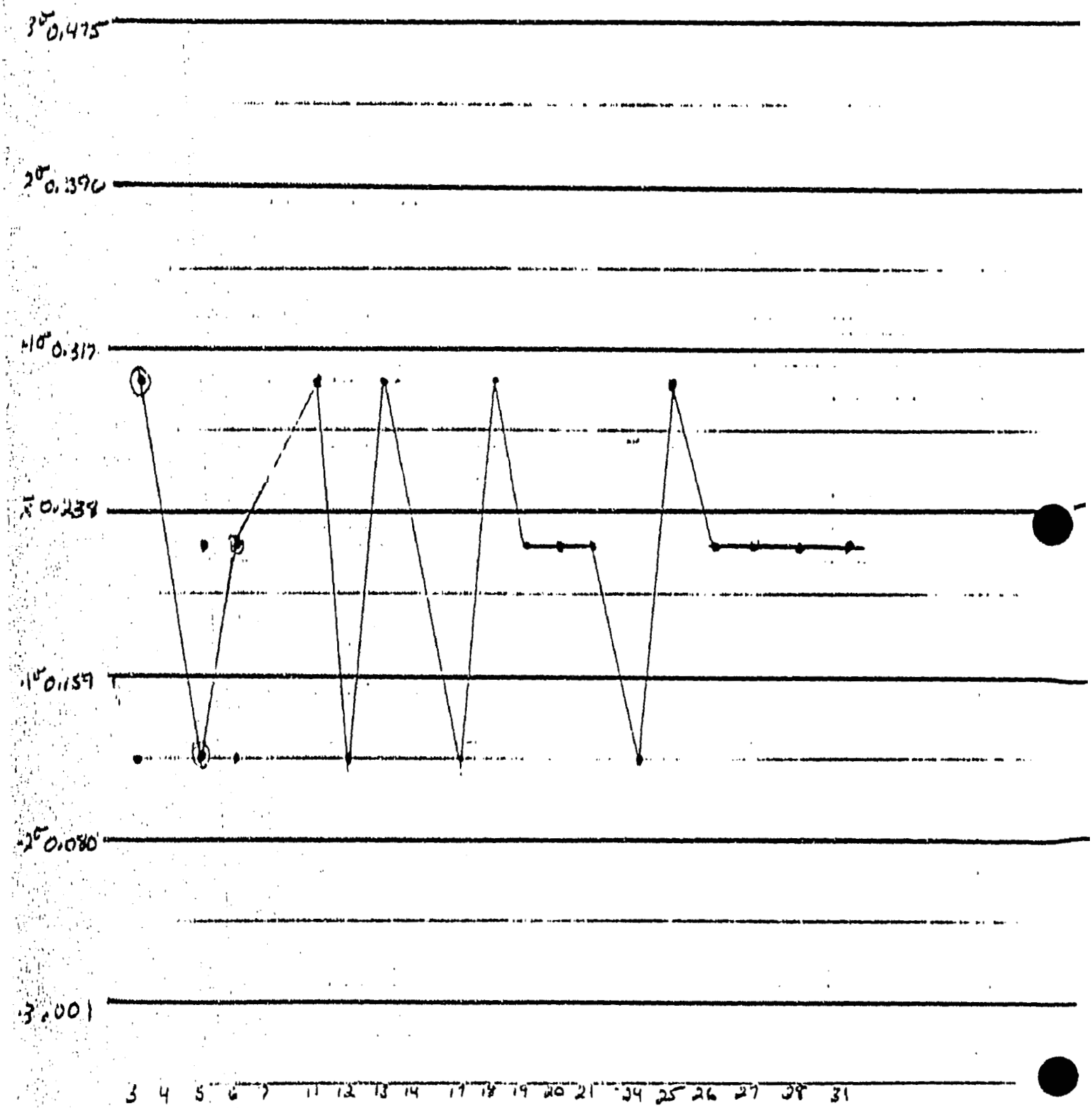
S.D 117.31

43-10 PR-112625

Control Chart

OCTOBER 94

BACKGROUND COUNTS



Oct-94

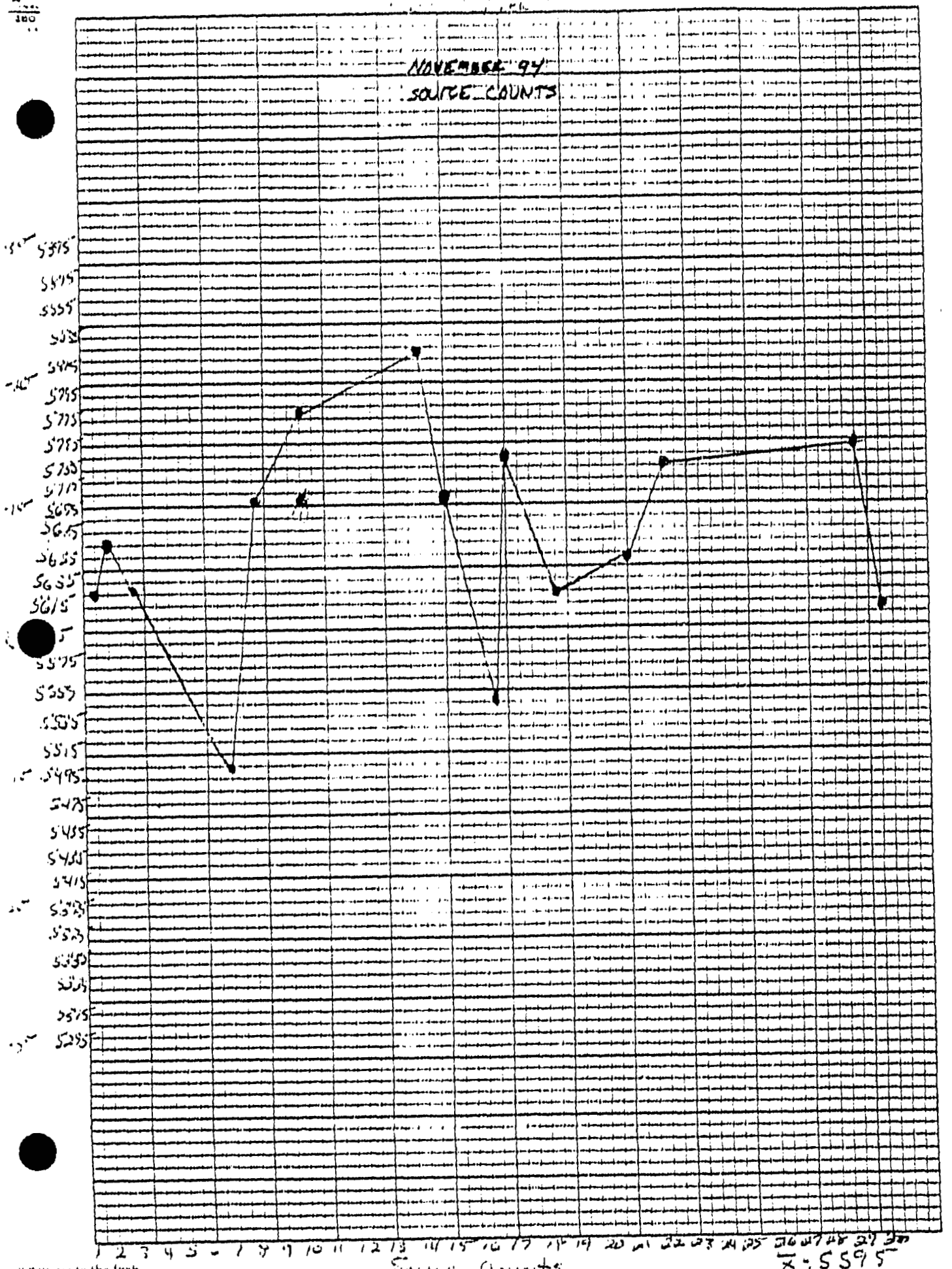
BKG Counts

$\bar{X}$ = 9.33

S.D = 9.44

NOVEMBER 94

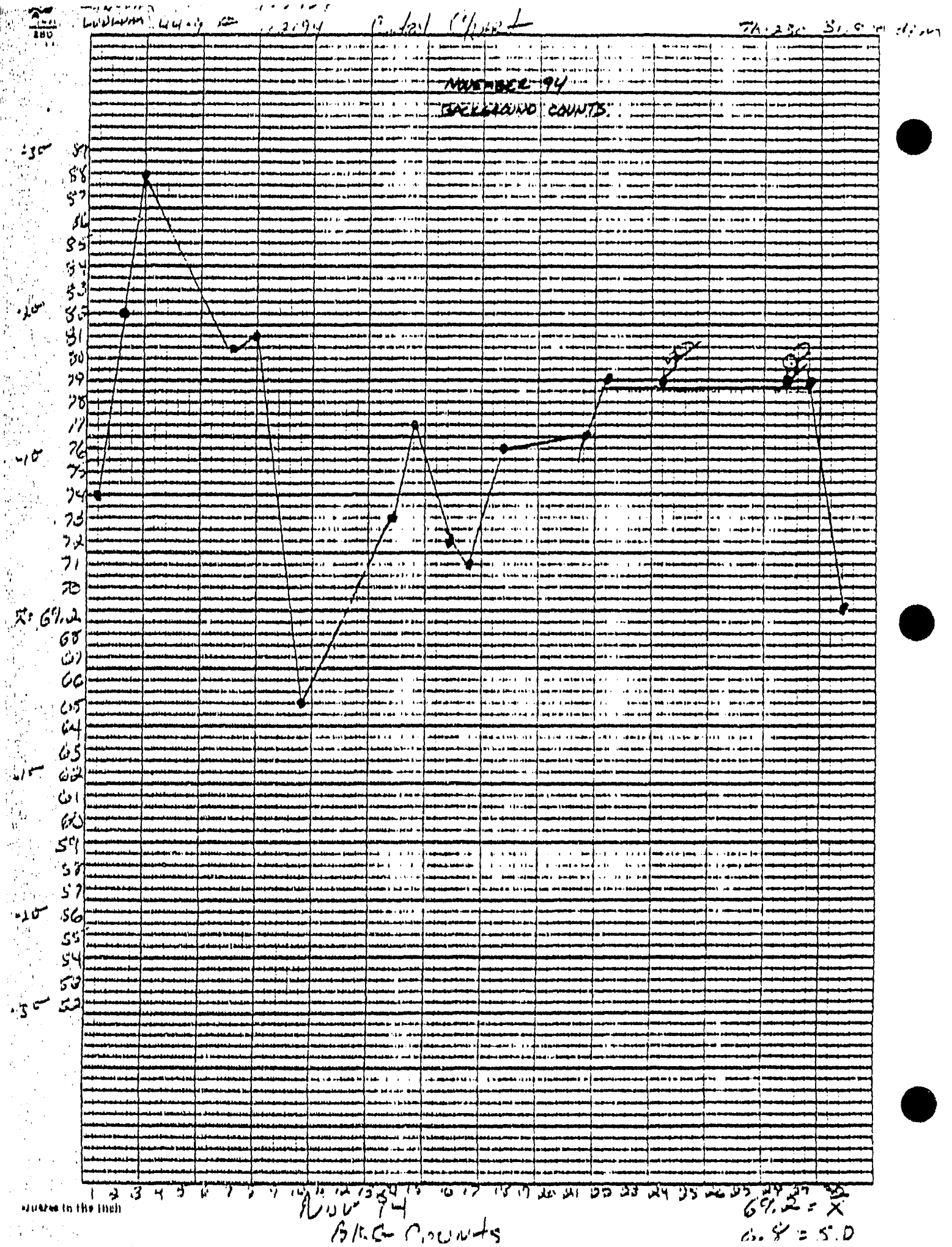
SOURCE COUNTS

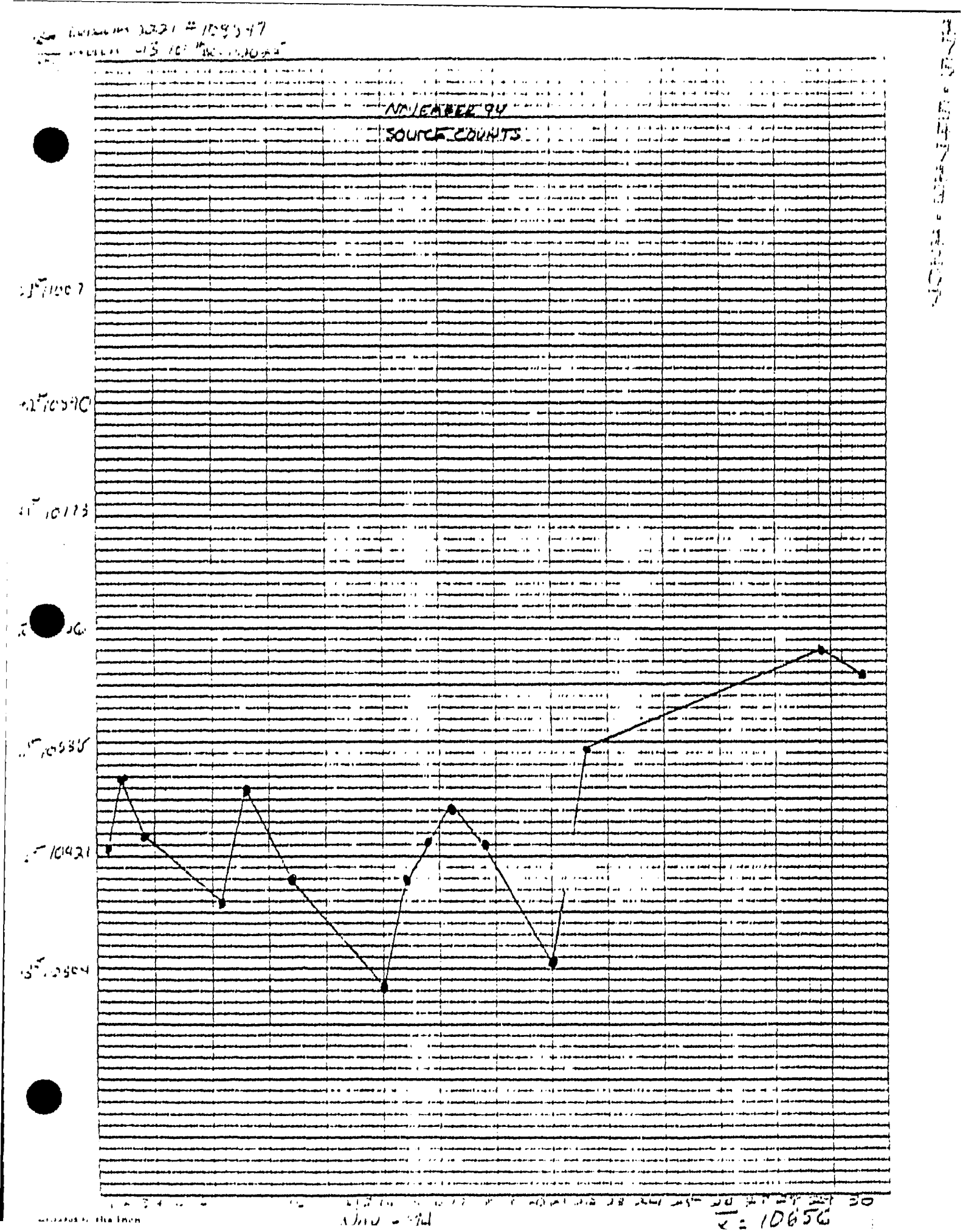


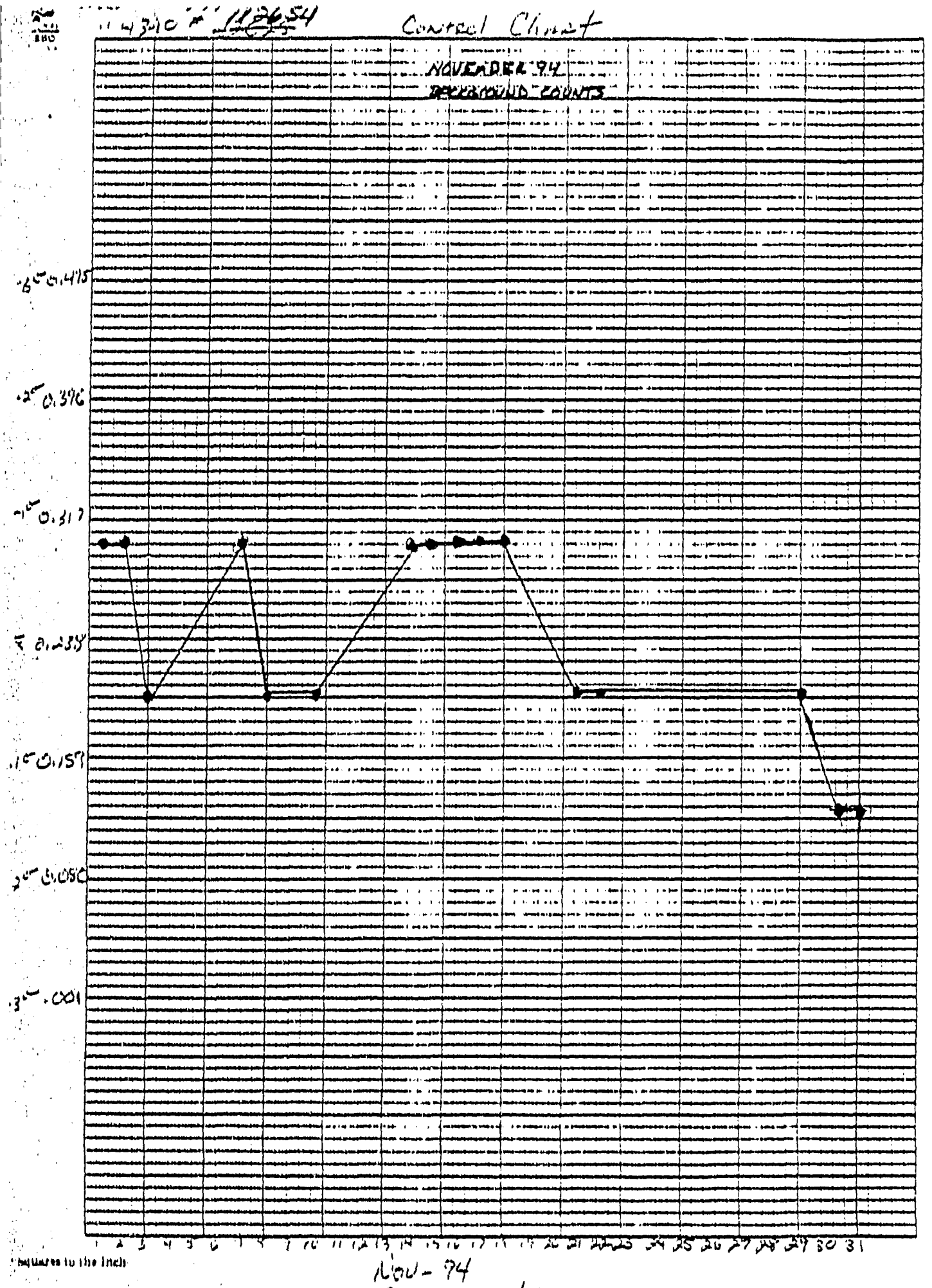
$\bar{x} = 5595$

$\sigma = 100.00$

0 squares to the inch

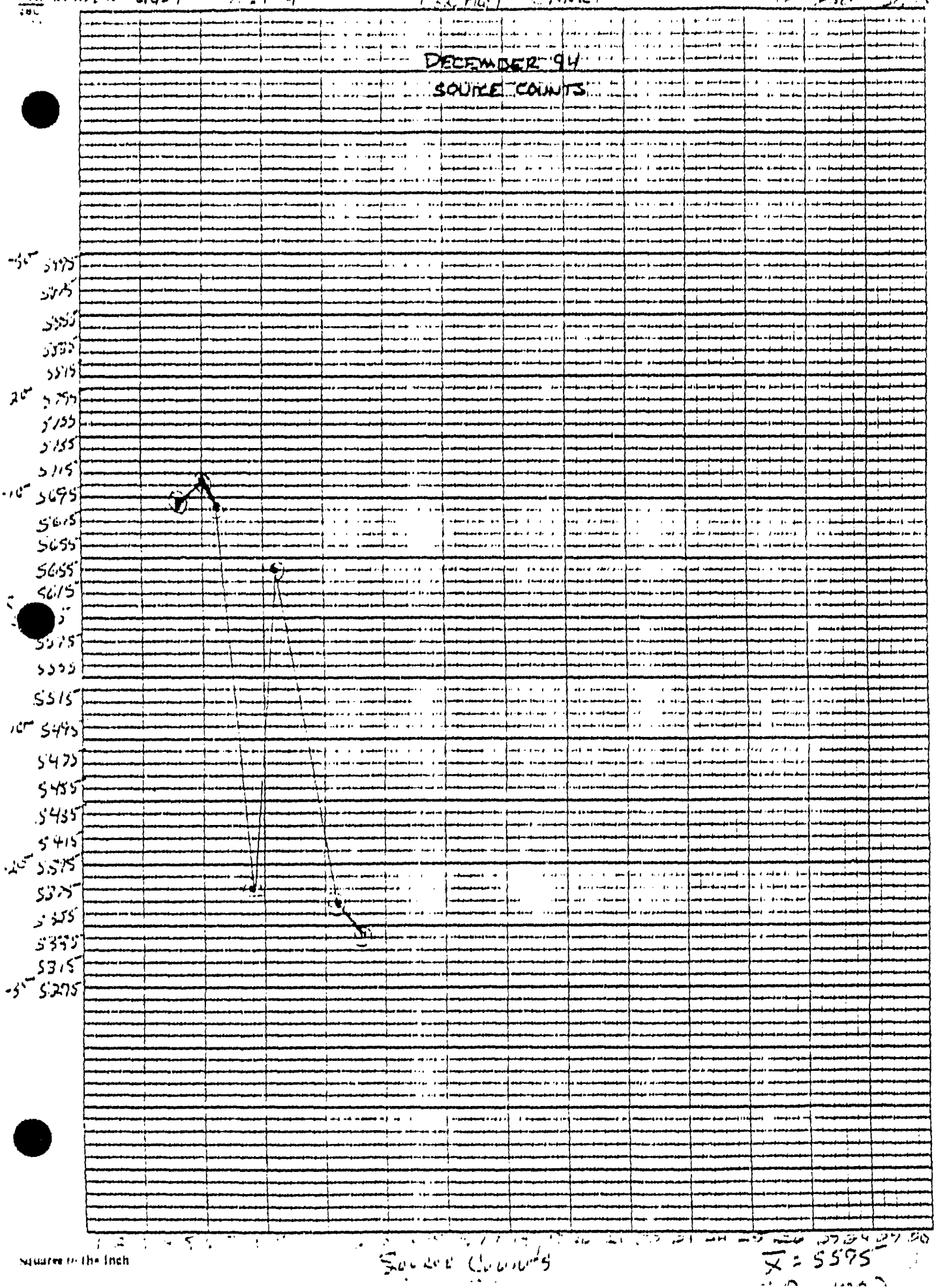

NOVEMBER 94
BACKGROUND COUNTS
X̄ = 64.2
Divisions to the inch
AUG 94
BKG Counts
64.2 = X̄
6.8 = S.D


NOVEMBER 94
SOURCE COUNTS
10921
10564
30
$\bar{x}$ = 10656


Control Chart
NOVEMBER 94
BACKGROUND COUNTS
0.415
0.376
0.337
0.298
0.259
0.220
0.181
0.142
0.103
0.064
0.025
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
squares to the inch
Nov - 94

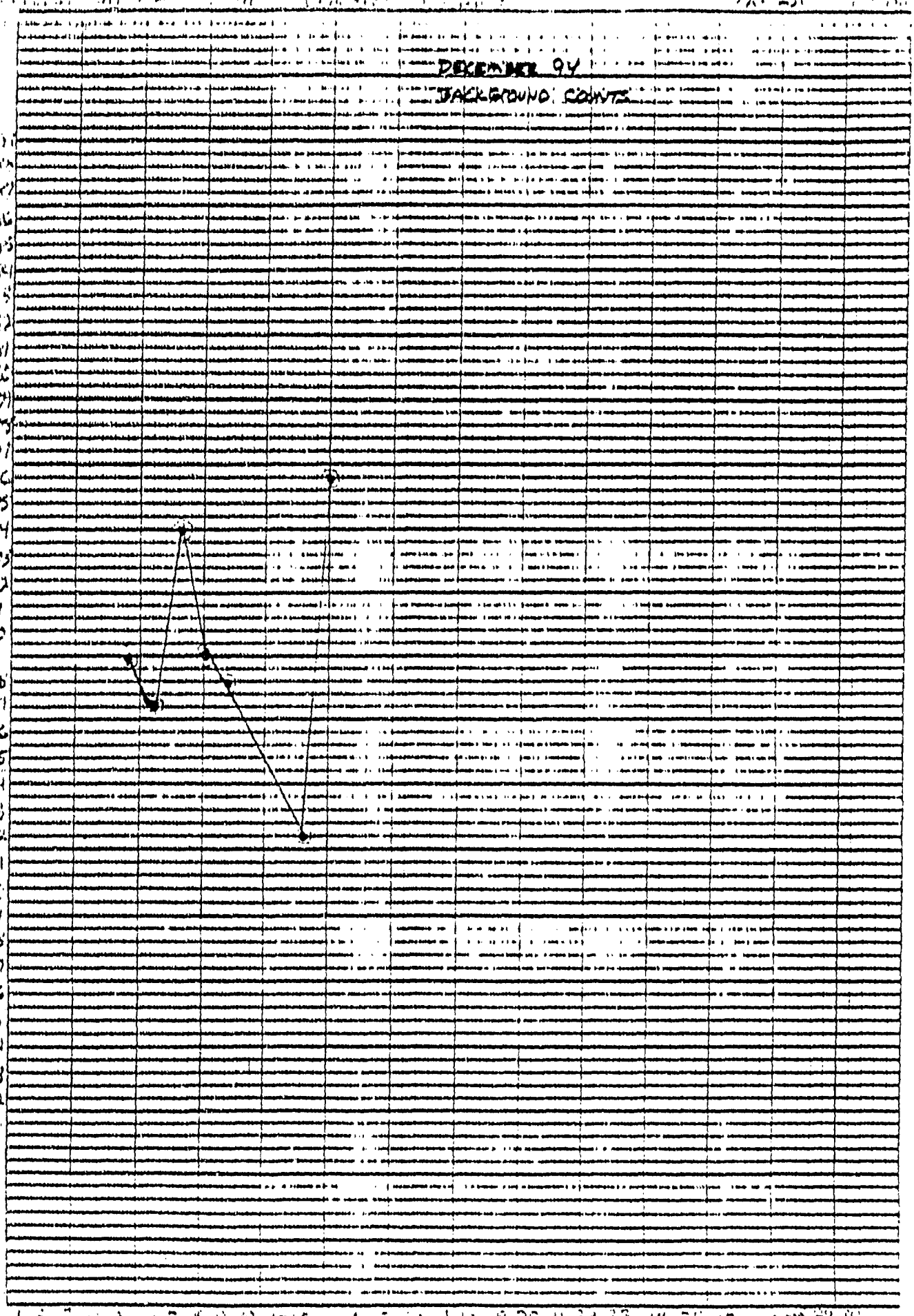
DECEMBER 94

SOURCE COUNTS


5595
5575
5555
5535
5515
5495
5475
5455
5435
5415
5395
5375
5355
5335
5315
5295
5275
5255
5235
5215
5195
5175
5155
5135
5115
5095
5075
5055
5035
5015
4995
4975
4955
4935
4915
4895
4875
4855
4835
4815
4795
4775
4755
4735
4715
4695
4675
4655
4635
4615
4595
4575
4555
4535
4515
4495
4475
4455
4435
4415
4395
4375
4355
4335
4315
4295
4275
4255
4235
4215
4195
4175
4155
4135
4115
4095
4075
4055
4035
4015
3995
3975
3955
3935
3915
3895
3875
3855
3835
3815
3795
3775
3755
3735
3715
3695
3675
3655
3635
3615
3595
3575
3555
3535
3515
3495
3475
3455
3435
3415
3395
3375
3355
3335
3315
3295
3275
3255
3235
3215
3195
3175
3155
3135
3115
3095
3075
3055
3035
3015
2995
2975
2955
2935
2915
2895
2875
2855
2835
2815
2795
2775
2755
2735
2715
2695
2675
2655
2635
2615
2595
2575
2555
2535
2515
2495
2475
2455
2435
2415
2395
2375
2355
2335
2315
2295
2275
2255
2235
2215
2195
2175
2155
2135
2115
2095
2075
2055
2035
2015
1995
1975
1955
1935
1915
1895
1875
1855
1835
1815
1795
1775
1755
1735
1715
1695
1675
1655
1635
1615
1595
1575
1555
1535
1515
1495
1475
1455
1435
1415
1395
1375
1355
1335
1315
1295
1275
1255
1235
1215
1195
1175
1155
1135
1115
1095
1075
1055
1035
1015
995
975
955
935
915
895
875
855
835
815
795
775
755
735
715
695
675
655
635
615
595
575
555
535
515
495
475
455
435
415
395
375
355
335
315
295
275
255
235
215
195
175
155
135
115
95
75
55
35
15
-5
-25
-45
-65
-85
-105
-125
-145
-165
-185
-205
-225
-245
-265
-285
-305
-325
-345
-365
-385
-405
-425
-445
-465
-485
-505
-525
-545
-565
-585
-605
-625
-645
-665
-685
-705
-725
-745
-765
-785

DECEMBER 94

BACKGROUND COUNTS



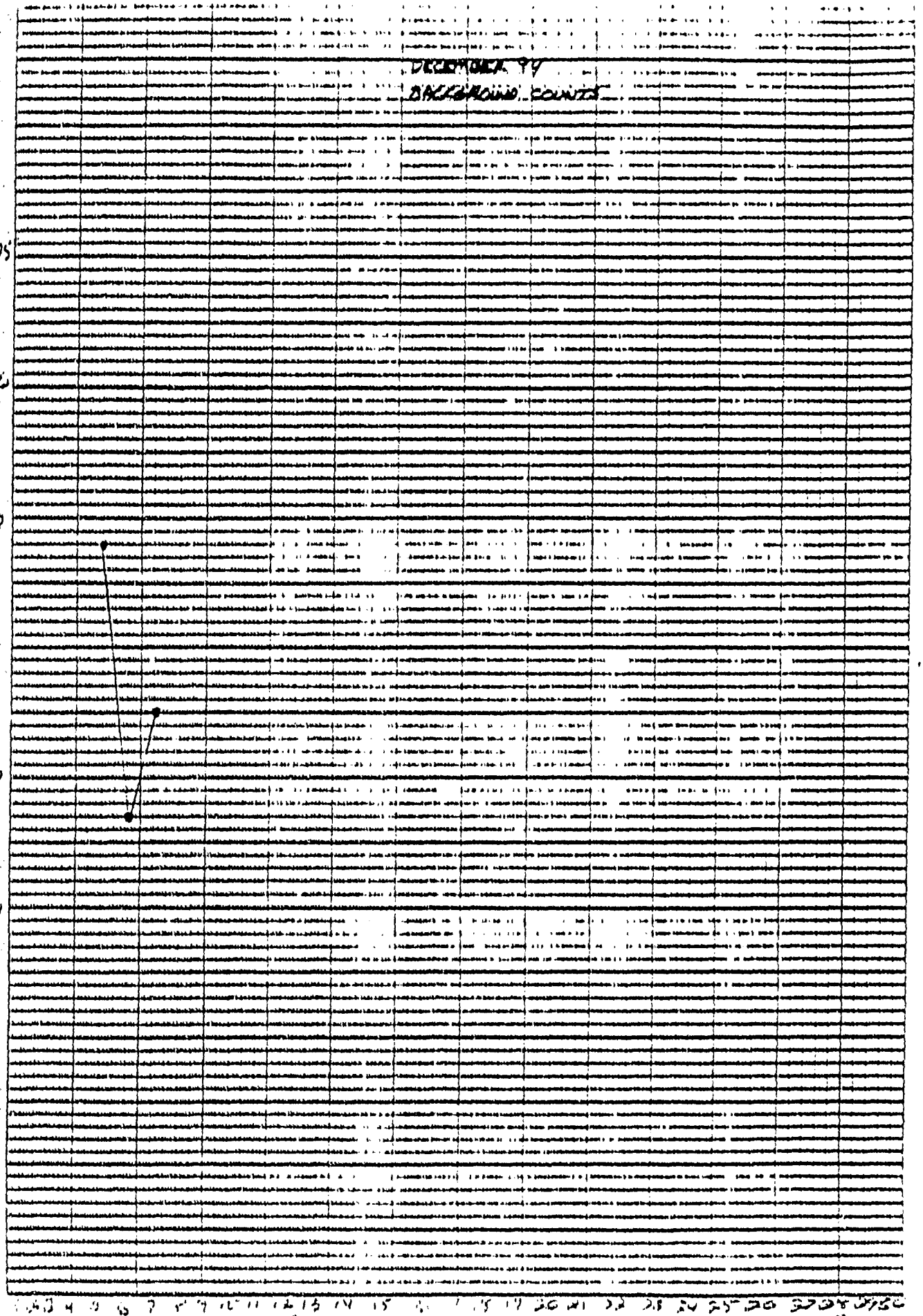
DECEMBER 94

SOURCE COUNTS

Squared to the inch

DECEMBER 99

BACKGROUND COUNTS



DEC - 10

$\bar{x} = 7.53$

Appendix 7

APPENDIX 7

FIELD IMPLEMENTATION PLAN

OU 1130 FIELD IMPLEMENTATION PLAN

for

The Phase I RFI at Technical Area 36 During the 1994 Sampling Season

ICF Kaiser Engineers, Inc.

Los Alamos, New Mexico

FOR INTERNAL PURPOSES ONLY

May 16, 1994

TABLE OF CONTENTS

1.0 Introduction ____ 1

2.0 Field Organization and Roles ____ 1

2.1 Field Team Manager ____ 2

2.2 Field Team Leader ____ 2

2.3 Health Physics Technician ____ 3

2.4 Site Safety Officer ____ 3

2.5 Sampler ____ 3

3.0 Identification, Description, and Schedule of Samples ____ 4

The Sump ____ 5

Aggregate Septic Systems ____ 6

Aggregate Firing Sites ____ 6

Boneyard ____ 7

Photo Outfall ____ 7

4.1 Sampling Procedures ____ 7

Surface Samples ____ 8

Fluid and Sludge Samples ____ 8

Subsurface Samples ____ 8

Trenching and Excavation Samples ____ 8

4.2 Sampling Equipment ____ 8

4.3 Sample Handling ____ 10

4.4 Quality Assurance and Quality Control (QA/QC) Samples ____ 11

4.5 Documentation ____ 12

4.6 Health and Safety ____ 13

Site Coordination and Control ____ 13

Safe Work Practices and Sanitation ____ 14

Personal Protective Equipment ____ 14

Health and Safety Equipment and Sample Screening ____ 14

4.7 Decontamination Procedures ____ 15

Decontamination of Personnel ____ 15

Decontamination of Manual Sampling Equipment ____ 15

Decontamination of Backhoe Equipment ____ 16

Decontamination of Samples ____ 16

Equipment Release Procedures ____ 16

4.8 Waste Management ____ 16

Appendix 1 Daily Sampling Schedules

Appendix 2 Maps of Sampling Areas and Support Zones

Appendix 3 Sampling Locations

1.0 Introduction

A Phase I investigation will be conducted at various solid waste management units (SWMU) throughout Technical Area (TA) 36 during the 1994 sampling season. Field activities will include surface soil and sediment sampling; subsurface soil and sediment sampling; fluid and sludge sampling; and excavation 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-36 will be conducted at or near the SWMUs being sampled. The site will be divided into three operational areas: the exclusion zone (defined in Section 4.6) where samples are collected; the contamination reduction zone (also defined in Section 4.6) where removal of contamination from the exclusion zone is controlled; and the support zone where site control and records are maintained. The field sampling trailer will be located in the support zone 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 support zone 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 before samples are collected (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 1130 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
Gene Gould	OU Project Leader	LANL ESA-4
Lynn Kidman	Field Team Manager	ICF KE
Mike Henke	Field Team Leader	LANL ESA-4
Peter Grum	Alternate Field Team Leader	ICF KE
Bob Cutherwood	Field Coordinator	LANL
John Taylor	Health Physics Technician	EDI Inc.
Ken McFadden	Site Safety Officer	MK
Nancy Ness	Sampler	ICF KE
Jeff Bingham	Sampler	LANL
Johnny Garcia	Sampler	LANL
Bert Trujillo	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 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 papers are placed in the coolers with the matching samples, and the coolers are 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 field team leader.

The FTL must ensure that all records are completed for the Records Processing Facility. Necessary records include the Daily Activity Logs, Samples 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 field team leader 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 support zone 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, an 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. Personnel 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 each morning before work begins, and at each new site that is sampled during the day. 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 exclusion zone, 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 on the Sample Collection Log Form and field notebook. After return to the support zone, the samplers must strictly follow decontamination procedures, including being field monitored before and after the decontamination process, if required.

3.0 Identification, Description, and Schedule of Samples

Sampling will be conducted at TA-36 from May 23 through August 15, 1994, and will conform to the RFI Work Plan. These sampling activities will complete Phase I sampling at TA-36.

Sampling activities will be conducted at SWMUs within the following sites at TA-36:

- The Sump
- Aggregate Septic Systems
- Aggregate Firing Sites
- Boneyard
- Photo Outfall

Sample schedules are presented in Appendix A that contains information on the SWMU numbers, location IDs, sample identification numbers (AAA #s), analyte suites, sample matrices, and container types for each sampling day. These daily schedules identify by number the areas from which the samples will be taken (exclusion zones) which are delineated on maps contained in Appendix B. The maps also identify the contamination reduction zones and support zones associated with each area to be sampled. Appendix C shows the sample locations. Samples will be collected from approximately 10 to 15 locations per day. Samples will be analyzed for various parameters and will be placed in specified containers. The containers will be pre-arranged for the field samplers on a daily basis.

Sampling activities may be interrupted due to explosive experiments which will be performed at the site during the sampling period. Note, these experiments may extend the field activities beyond the 6-week period.

Each site will be discussed below in terms of a brief background with a general list of corresponding PCOCs. Detailed descriptions of each SWMU are presented in the RFI Work Plan which will be available at the field site support zone if more information is needed.

The Sump

There has been no reported sampling of the sump, so it is not known whether it is contaminated. However, contaminants might have been discharged to the sump through the laboratory sinks. The fact that the sinks were designed to handle chemicals supports the idea that the sump was designed to handle industrial wastes.

Potential contaminants of concern (PCOC) at the Sump include high explosives, acetone, zinc chloride, acids, and depleted uranium.

Type of sampling to be conducted: surface soil and sediment, subsurface soil and sediment using a hand auger, fluid and sludge sampling and trenching and excavation sampling.

Aggregate Septic Systems

Two septic systems have been constructed at TA-36, 36-003(a) and 36-003(b). 36-003(a) is comprised of six components: the septic tank, two manholes, a seepage pit, a distribution box, and leach field, as well as the associated drain lines connecting the various parts. Samples will be taken from the tank and the leach field. PCOCs are likely to be in this septic system because, spent photochemicals were discharged to the system for many years.

PCOCs for Septic System 36-003(a) include photo processing chemicals, thiosulfates, silver cyanides, organic compounds, and high explosives.

36-003(b) is a holding tank that was built to handle sanitary wastes from a bathroom and an additional sink in bunker TA-36-55. The bunker houses electronics and instrumentation for the firing site; no explosives assembly is conducted in this bunker. There is no evidence of hazardous or radioactive materials or other PCOCs being discharged to this system. Samples will be collected from the tank and the associated outfall.

PCOCs for Septic System 36-003(b) include organic compounds, high explosives, depleted uranium, and metals.

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

Aggregate Firing Sites

The aggregate firing sites are composed of five active firing sites: Eenie, Meenie, Minie, Lower Slobbovia, and I-J sites. All firing sites were put into operation by 1951. The types of explosives experiments conducted at the firing sites include: firing of shoulder-mounted projectiles into targets, firing of shots into embankments, armor-piercing experiments involving metal penetrators shot into canyon walls, underground tests, drop tests, and liquid explosives tests. A radiological survey was conducted at Eenie Site in 1991. Sediment samples from the stream channel that travels from Eenie firing site contained total uranium concentrations ranging from 1.3 to 60.9 ppm, with a mean of 15.1 ppm. A surface radiological survey at I-J Site gave results ranging from 40,000 to 255,000 counts per minute.

PCOCs for the Firing Sites include asbestos, barium, beryllium, depleted uranium, solid and liquid explosives residues, lead, and mercury.

Type of sampling to be conducted: water and sediment sampling.

The Boneyard

The Boneyard is a surface storage area located near the Minie firing site. Until the 1970s the area was used as a parking area for trailers and large non-waste items. From the late 1970s to the 1980s the area was used as a surface storage area for large waste items that had been exposed to explosives tests. The Boneyard underwent a major cleanup in 1986, and is currently used for storing usable non-waste items. A radiological survey was conducted in 1988, and four locations in the Boneyard had above-background levels of radioactivity ranging from 31 to 100 mR/h.

PCOCs for the Boneyard include: asbestos, beryllium, chromium, copper, gamma emitters, lead, silver, uranium-238/236, zinc, explosives and explosives residues, organic compounds.

Type of sampling to be conducted: surface soil and sediment sampling.

Photo Outfall

The Photo Outfall is a permitted outfall located north of office and laboratory building TA-36-1. The outfall extends out a few feet over the steeply sloping edge of Threemile Canyon. It is believed that at one time spent photo processing fluids were discharged to this outfall. Water sampling performed in support of the NPDES permit indicated very low levels of cyanide at 0.125 ppm. The levels of silver have ranged from 0.004 ppm to 0.119 ppm.

PCOCs at the Photo Outfall include photo processing chemicals, cyanide, silver, thiosulfate, and organic compounds.

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 1130
- OU 1130 Site-Specific Health and Safety Plan
- OU 1130 Waste Management Plan
- OU 1130 Quality Assurance Plan
- 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, Collwasa 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-36.

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 from within these depth criteria and 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.

Fluid and Sludge Samples

All fluid and sludge sample collection activities will conform to LANL-ER-SOP-06.15, Collwasa Sampler for Liquids and Slurries. A Teflon mucksucker sampler will be used to collect fluid and sludge samples from septic tanks and sumps. The Teflon mucksucker is inserted into the tanks (aided by the extender if

necessary), and the fluid or sludge is drawn up and transferred directly to 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.

Trenching and Excavation Samples

All trenching and logging activities will conform to the LANL-ER-SOP-03.10, Trenching and Logging. A backhoe will be used to excavate an area approximately the width of the bucket and nine feet deep. Samples will be collected from either the bucket of the backhoe or the side of the trench, and will conform to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples.

4.2 Sampling Equipment

The following checklist will be used to ensure that equipment necessary to support sampling activities at TA-36 are available:

Support Zone	Sampling
__ first aid kit	__ sample tables
__ fire extinguisher	__ clip boards
__ phone	__ crates
__ tables	__ stainless steal bowls
__ chairs	__ stainless steal spoons
__ file boxes, folders	__ 1 gallon baggies
__ clear paper cover	__ sample containers
__ waste forms	__ rad van baggies
__ health and safety plan	__ hand auger
__ material data safety sheets	__ pipettes
__ transportation forms	__ pipette bulb
__ tailgate meeting forms	__ preservatives
__ exclusion zone log 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	__ Minirum
__ 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
__ hefty 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 - decon. zone	
__ tarps for storage drums	
__ pallets	
__ blocks or PVC for berm	
__ alconox	
__ DI 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 Documenuation. General steps to be used in sample collection and handling include:

In the Support Zone

1. Sampler and documenter have looked at daily schedule and picked out appropriate sample containers and placed them in crate with appropriate number of bowls and spoons. Crate is placed in SZ, adjacent to CRZ.
2. FTL goes over days activities.
3. FTL writes morning notes in the dedicated field notebook.
4. SSO gives tailgate safety meeting - all sign form.
5. Samplers, HPT, and SSO put on PPE: Cotton coveralls, canvas gloves (sampler puts on inner and outer disposable gloves).

In the Contamination Reduction Zone

6. Sampling team walks through CRZ to the EZ to collect samples. Sign in on the controlled area access register form.

In the Exclusion Zone

7. SSO and HPT monitor sample location. Take notes
8. Sampler collects sample: puts soil in bowl and homogenizes well.
9. HPT and SSO monitor soil in bowl. Take notes
10. Sampler puts soil in appropriate containers and puts containers back in plastic bag. Be careful to avoid contaminating exterior of containers and the resealable bag.
11. Documenter writes notes on sample collection log form: sample description, weather, containers used, rad and voc readings, any other appropriate information. Also takes picture of sample location (with camera that stamps date and time on picture) and documents photo number.
12. When finished collecting samples, team walks to CRZ.

In the Contamination Reduction Zone

13. Equipment is dropped off at equipment drop. Samples are placed in cooler next to drop.
14. HPT goes to dry wash tub if boots or clothes are dirty or muddy - uses wire brush to remove dirt - frisks self.
15. SSO, documenter, and sampler go to dry wash tub if boots or clothes are dirty or muddy - use wire brush to remove dirt.
16. HPT frisks SSO.
17. IF no rad detected, SSO goes through wet POT HAZ decontamination tubs.
18. IF rad is detected, SSO goes through wet POT MIXED decontamination tubs.
19. SSO removes coveralls, then gloves and places them on clean side of table for re-use.
20. SSO waits for HPT to give final frisk to leave CRZ. Results of frisk are recorded on access form. SSO signs out on EZ log in/out form.
21. Documenter goes through steps 16-20.
22. Sampler goes through steps 16-18.
23. Sampler removes outer gloves and disposes of them in POT MIXED or POT HAZ waste containers.

24. HPT takes swipes of: 1. sample bottles (1 swipe per entire batch)
    2. bowls and spoons, disposable gloves (1 swipe per entire batch).
    3. equipment (1 swipe per entire batch).

    Swiped material is placed on table.

25. HPT frisks self, signs controlled area access register form, and leaves CRZ to take swipes to portable counter in SZ. (Another field team member may count swipes instead of HPT).

26. HPT informs sampler, in CRZ, of swipe results:

    IF swipes are clean, sampler decontaminates sample bottles in POT HAZ bucket (spray bottles with mister and dry with kimwipe). Throw kimwipe in POT HAZ waste container.

    IF swipes are rad, sampler decontaminates sample bottles in POT RAD bucket (spray bottles with mister and dry with kimwipe). Throw kimwipe in POT MIXED waste container.

27. Sampler puts sample bottles in NEW plastic bag (and disposes of original bag in appropriate waste container). NOTE. Clean plastic bags must be labeled with sample number at this time.

28. Decontaminated sample bottles are placed in cooler (in support zone) or handed to person in SZ.

29. Sampler decontaminates equipment (repeat step 26) and places clean equipment on clean side of table.

30. Sampler decontaminates bowls and spoons (repeat step 26, however must decontaminate in 2 tubs: alconox water tub, then spray water to rinse in same bucket, then rinse in 2nd bucket with DI water). Places clean equipment on clean side of table. (At end of day the spoons and bowls are bagged and labeled to place in waste drum for temporary storage).

31. Sampler removes inner gloves and disposes of them in appropriate waste container.

32. HPT frisks sampler and writes results on controlled area access register form. Sampler signs out on EZ log in/out form. Sampler hands all equipment and bottles to HPT and leaves CRZ.

<u>In the Support Zone</u>

33. NOTE. Everyone first leaving CRZ and entering SZ must wash hand and face.

34. Documenter puts together PE blank sample either when getting to the SZ or in the beginning of the day.

34. Sample bottles are brought to trailer in SZ. Labels are put on bottles. Chain of custody forms are completed. Samples are placed in cooler to be brought to SCF.

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

Field team members will collect two types of field QC samples at TA-36: 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.

4.5 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
Exclusion Zone Log-in Log-out Form	SSO
Visitor Log-In Form	SSO, FTL
Waste Container Label	FTL, Sampler
Waste Profile Form	FTL, Sampler
Weekly Waste Storage Area Inspection Record	FTL, Sampler

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 form when the form is completed.

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

The FTL will maintain a dedicated 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
- Day's 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 Exclusion Zone Log-in Log-out Form will be filled in by team members but controlled by the SSO.

4.6 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 Gene Gould(OU Project Leader) at 667-0402 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 (CRZ), and a support zone. When working in the exclusion zone, 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 exclusion zone 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 exclusion zone. Team members will only be allowed to exit the exclusion zone through the CRZ except in the case of an emergency.

The support zone will only be located in uncontaminated areas. Emergency supplies and all records and documents necessary for site work will be kept in the support zone.

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 exclusion zone and areas where potential contamination exists.
- No cosmetics or creams shall be applied in the exclusion zone, 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 support zone. Personnel leaving the CRZ will wash their hands and faces. Potable and non-potable water in the support zone will be clearly marked.

Personal Protective Equipment

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

- steel-toed/chemical-resistant boots
- cotton coveralls
- 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 exclusion zone 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

4.7 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 according to the following steps which 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 are screened for radioactive contamination using hand-held radiation monitors.
3. Outer Boot and Glove Alconox Wash.
4. Outer Boot and Glove Clean Water Rinse.
5. Inner Glove Removal and Disposal and Field Coverall Removal.
6. Hand, Foot, and Mouth Radiation Screening.
7. Exit Exclusion Zone.
8. 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.

Decontamination of Manual Sampling Equipment

Sampling equipment such as hand augers, Teflon™ mucksucker samplers, 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—Deposit equipment used onsite on plastic drop cloths.
2. Equipment Radiation Screening—Equipment is screened for contamination using apropriate alpha, beta, and gamma detectors.
3. Equipment Wash—Equipment will be washed in a solution of Alconox™ and water.
4. Equipment Rinse.
5. Equipment Rinse—Equipment will be rinsed again with deionized or distilled water.

A sample of the decontamination water will be submitted for analysis at the end of the sampling activity to characterize the waste water. These analyses will also be used as a worst-case rinsate sample for reuse of the dedicated stainless steel spoons and bowls. If analyses of the decontamination water indicate the presence of contaminants, a rinsate sample will be generated from the dedicated spoons and bowls and submitted for analysis. Dedicated spoons and bowls will not be reused until analyses show that they are free of contamination.

Decontamination of Backhoe and Drilling Equipment

Decontamination of backhoe equipment will be conducted after excavation of each trench, and the decontamination of drilling equipment will be conducted after the completion of each borehole. Equipment may be decontaminated in tubs or in a constructed bermed area, as specified in the SSHASP. Decontamination of backhoe and drilling equipment will require the following steps:

1. Radiation Screening—Equipment will be screened for radioactive contamination.
2. Equipment Wash—The backhoe and drill rig will be decontaminated with a high-pressure steam cleaner in a large tub or in a bermed area covered with heavy plastic.

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 EZ requires a release from a health physics technician (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.

4.8 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 exclusion zone, 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 exclusion zone 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 exclusion zone 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 exclusion zone 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 and transferred into 55-gallon drums with an approved liner for storage. A label describing the materials and identifying the associated sample identification numbers will be affixed to each bag, as well as to the outside of each drum. These are not considered to be wastes.

The RCRA hazardous or mixed wastes will be stored at a satellite accumulation area until an equivalent amount total of 55 gallons is collected. At that time the wastes will be placed in the less-than-90-day storage area established just south of the Sump. Non-hazardous wastes will also be stored at the less-than-90-day storage area but will be separated from the hazardous wastes.

Appendix 1

Daily Sampling Schedules

Scheduling of Tasks

TASK	TASK NAME	DATE
Mobilization to Site		May 23, 1994
Task 1	Engineering Surveys at all PRSs	May 23, 1994
Task 2	Radiation Surveys at PRS 36-004(d), 36-005	May 25, 1994
Task 3	Geophysical Surveys at PRS 36-003(a,b), 36-004(e)	May 26, 1994
Task 4	Geomorphic Surveys at PRS 36-003(b), 36-004(a-e), 36-005, C-36-003	June 1, 1994
Task 5	Sludge and Liquid Sampling at Sump PRS 36-002	May 23, 1994
Task 6	Subsurface Soil Sampling at Sump PRS 36-002	July 18, 1994
Task 7	Fluid and Sludge Sampling at Septic System PRS 36-003(a,b)	May 30, 1994
Task 8	Surface Soil Sampling at Septic System PRS 36-003(b)	June 8, 1994
Task 9	Subsurface Soil Sampling at Septic System PRS 36-003(a)	June 10, 1994
Task 10	Water and Sediment Sampling at Active Firing Sites PRS 36-004 (a-e)	June 20, 1994
Task 11	Surface Soil Sampling at the Boneyard PRS 36-005	July 5, 1994
Task 12	Surface Soil, Sediment and Water Sampling at the Photo Outfall PRS C-36-003	July 11, 1994
Task 13	Preserve Water Samples, Rinsate Blanks, and Field Blanks	July 18, 1994

Appendix 2

Maps of Sampling Areas and Support Zones

Appendix 3

Sampling Locations

				Samples				Field Screening					Laboratory Analyses										
	Sampled Media			Structure		Subsurface																	
Description	soil/fill	sludge	fill	primary	duplicate	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)	Mercury	Cyanides	VOCs (SW 6260)	SVOCs (SW 6270)	Explosives (SW 8330)	
AAB1801			X			X		X	X	X	X	X		X			X			X	X	X	visual inspec (highest contam)
AAB1802			X			X		X	X	X	X	X		X			X			X	X	X	visual inspection
AAB1803			X			X		X	X	X	X	X		X			X			X	X	X	visual inspection
AAB1804			X				X	X	X	X	X	X		X			X			X	X	X	dup of AAB1801
AAB1805		X				X		X	X	X	X	X		X			X			X	X	X	if liq. sludge present
AAB1806		X				X		X	X	X	X	X		X			X			X	X	X	if liq. sludge present
AAB1807		X					X	X	X	X	X	X		X			X			X	X	X	dup (highest contam)

The fill material samples are top be collected at three depths below the discharge point of the pipe entering the sump. The samples will be biased by visual indicators of staining. Sample AAB1801 will be collected from the location thought to be the most contaminated. Three liquid sludge samples will be collected from the bottom of the tank if sludge is present.

	Sampled Media	Samples		Field Screening					Laboratory Analyses										
		Surface																	
Description	soil/sediments	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)*	Mercury (SW 7471)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1808	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 1st Water Can sed catch
AAB1809	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 2nd Water Can sed catch
AAB1810	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 3rd Water Can sed catch
AAB1811	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 4th Water Can sed catch
AAB1812	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 1st Fence Can sed catch
AAB1813	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 2nd Fence Can sed catch
AAB1814	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 3rd Fence Can sed catch
AAB1815	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 4th Fence Can sed catch
AAB1816	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 1st Potrillo Cn sed catch
AAB1817	x		x	x	x	x		x	x	x	z	x	x	x		x	x	x	Duplicate of AAB1816
AAB1818	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 2nd Potrillo Cn sed catch
AAB1819	x	x		x	x	x		x	x	x	z	x	x	x		x	x	x	surf. samp in 3rd Potrillo Cn sed catch
AAB1820	x	x		x	x	x		x	x	x	z		x	x		x	x	x	surf. samp in 4th Potrillo Cn sed catch

Surface soil/sediment samples will not be collected from beneath water. Isotopic uranium analysis will be conducted on those samples that excede the screening action level for total uranium. In most cases this can be performed by rerunning the total uranium aliquot and additional sample material will not be needed. The samples to be analyzed for plutonium were determined randomly (as per the work plan) by assigning integer numbers to each sample AAB number and then generating random integers with a hand held calculator.

z : Samples will be analyzed if total potential contaminants of concern are detected above screening action levels.

* : Applicable EPA SW 846 methods.

	Sample			Field Screening					Laboratory Analyses										
	Sampled Media	Surface																	
Description	water	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)*	Mercury (SW 7470)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1821	x	x		x	x	x		?	x	x	z		x	x		x	x	x	Most upstream Water Can water samp
AAB1822	x	x		x	x	x		?	x	x	z		x	x		x	x	x	2nd Water Canyon surface water samp
AAB1823	x	x		x	x	x		?	x	x	z		x	x		x	x	x	3rd Water Canyon surface water samp
AAB1824	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	Most downstream Wat Can water samp
AAB1825	x	x		x	x	x		?	x	x	z		x	x		x	x	x	Most upstream Fence Can water samp
AAB1826	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	2nd Fence Can surface water sample
AAB1827	x	x		x	x	x		?	x	x	z		x	x		x	x	x	3rd Fence Can surface water sample
AAB1828	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	Most downstream Fence Cn water samp
AAB1829	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	Most upstream Potrillo Can water samp
AAB1830	x		x	x	x	x		?	x	x	z	x	x	x		x	x	x	Duplicate of AAB1829
AAB1831	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	2nd Potrillo Can surface water sample
AAB1832	x	x		x	x	x		?	x	x	z		x	x		x	x	x	3rd Potrillo Can surface water sample
AAB1833	x	x		x	x	x		?	x	x	z	x	x	x		x	x	x	Most dwnstream Potrillo Cn water samp

Isotopic uranium analysis will be conducted on those samples that excede the screeneing action level for total uranium. In most cases this can be performed by reruuning the total uranium aliquot and additional sample material will not be needed. The samples to be analyzed for plutonium were determined randomly (as per the work plan) by assigning integer numbers to each sample AAA number and then generating random integers with a hand held calculator.

z : Samples will be analyzed if total potential contaminants of concern are detected above screening action levels.

* : Applicable EPA SW 846 methods.

Description	Sampled Media: soil/sediments	Samples: Surface: primary	Samples: Surface: duplicate	Field Screening: Beta-gamma	Field Screening: Alpha	Field Screening: Organic Vapor	Field Screening: Combustible gas/oxygen	Field Screening: Explosives (Spot Test)	Laboratory Analyses: Gamma spectroscopy	Laboratory Analyses: Total uranium	Laboratory Analyses: Isotopic uranium	Laboratory Analyses: Plutonium	Laboratory Analyses: Metals (SW 6010/7000)*	Laboratory Analyses: Mercury	Laboratory Analyses: Cyanides	Laboratory Analyses: VOCs (SW 8260)*	Laboratory Analyses: SVOCs (SW 8270)*	Laboratory Analyses: Explosives (SW 8330)*	Comments
AAB1834	x	x		x	x	x		x	x	x	z		x			x	x	x	1st sed catch in cntrl Bnyrd drainage channel
AAB1835	x		x	x	x	x		x	x	x	z		x			x	x	x	Duplicate of AAB1834
AAB1836	x	x		x	x	x		x	x	x	z		x			x	x	x	2nd sed catch in cntrl Bnyrd drainage channel
AAB1837	x	x		x	x	x			x	x	z		x			x	x	x	3rd sed catch in cntrl Bnyrd drainage channel
AAB1838	x	x		x	x	x			x	x	z		x			x	x	x	4th sed catch in cntrl Bnyrd drainage channel
AAB1839	x	x		x	x	x		x	x	x	z		x			x	x	x	5th sed catch in cntrl Bnyrd drainage channel
AAB1840	x	x		x	x	x			x	x	z		x			x	x	x	6th sed catch in cntrl Bnyrd drainage channel
AAB1841	x	x		x	x	x			x	x	z		x			x	x	x	1st sed catch in arroyo dn drainage from 1840
AAB1842	x	x		x	x	x		x	x	x	z		x			x	x	x	2nd sed catch in arroyo dn drainage from 1840
AAB1843	x	x		x	x	x		x	x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-9
AAB1844	x		x	x	x	x		x	x	x	z		x			x	x	x	duplicate of AAB1843
AAB1845	x	x		x	x	x			x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-10
AAB1846	x	x		x	x	x			x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-11
AAB1847	x	x		x	x	x		x	x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-12
AAB1848	x	x		x	x	x			x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-13
AAB1849	x	x		x	x	x		x	x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-14
AAB1850	x	x		x	x	x			x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-15
AAB1851	x	x		x	x	x		x	x	x	z		x			x	x	x	elevated rad sample correlates to ID# 5-89-16

x : All samples

The samples to be field analyzed for explosives were determined randomly (as per the work plan) by assigning integer numbers to each sample AAA number and then generating random integers with a hand held calculator.

Isotopic uranium analysis will be conducted on those samples that excede the screeneing action level for total uranium. In most cases this can be performed by rerunning the total uranium aliquot and additional sample material will not be needed.
Note: Additional samples may be taken based on field surveys and observations.
* : Applicable EPA SW 846 methods.

Description	Sampled Media	Samples		Field Screening					Laboratory Analyses										Comments
	soil/sediments	Surface																	
		primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)*	Mercury	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	
AAB1852	x	x		x	x	x		x	x	x	z		x			x	x	x	located in current storage area, stk ID#5-97-17
AAB1853	x		x	x	x	x		x	x	x	z		x			x	x	x	Duplicate of AAB1852
AAB1854	x	x		x	x	x			x	x	z		x			x	x	x	located in current storage area, stk ID#5-98-18
AAB1855	x	x		x	x	x		x	x	x	z		x			x	x	x	located in current storage area, stk ID#5-99-19
AAB1856	x	x		x	x	x		x	x	x	z		x			x	x	x	located in current storage area stk ID#5-100-20
AAB1857	x	x		x	x	x			x	x	z		x			x	x	x	located in former storage area stk ID#5-101-21
AAB1858	x	x		x	x	x			x	x	z		x			x	x	x	located in current storage area stk ID#5-102-22
AAB1859	x	x		x	x	x			x	x	z		x			x	x	x	located in former storage area stk ID#5-103-23
AAB1860	x	x		x	x	x		x	x	x	z		x			x	x	x	located in current storage area stk ID#5-104-24
AAB1861	x	x		x	x	x		x	x	x	z		x			x	x	x	On boneyard, randomized location
AAB1862	x		x	x	x	x		x	x	x	z		x			x	x	x	duplicate of AAB1861
AAB1863	x	x		x	x	x			x	x	z		x			x	x	x	On boneyard, randomized location
AAB1864	x	x		x	x	x		x	x	x	z		x			x	x	x	On boneyard, randomized location
AAB1865	x	x		x	x	x			x	x	z		x			x	x	x	On boneyard, randomized location
AAB1866	x	x		x	x	x			x	x	z		x			x	x	x	On boneyard, randomized location
AAB1867	x	x		x	x	x			x	x	z		x			x	x	x	On boneyard, randomized location
AAB1868	x	x		x	x	x		x	x	x	z		x			x	x	x	On boneyard, randomized location
AAB1869	x	x		x	x	x		x	x	x	z		x			x	x	x	On boneyard, randomized location

The samples to be field analyzed for explosives were determined randomly (as per the work plan) by assigning integer numbers to each sample AAA number and then generating random integers with a hand held calculator.

Isotopic uranium analysis will be conducted on those samples that exceed the screening action level for total uranium. In most cases this can be performed by rerunning the total uranium aliquot and additional sample material will not be needed.
Note: Additional samples may be taken based on field surveys and observations.
* : Applicable EPA SW 846 methods.

Description	Sampled Media	Samples		Field Screening					Laboratory Analyses										
	soil/sediments	Surface		Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)*	Mercury	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
		primary	duplicate																
AAB1870	x	x		x	x	x		x	x	x	z		x			x	x	x	Off bnyrd, but w/in meanie/minie haz radii (rand)
AAB1871	x		x	x	x	x		x	x	x	z		x			x	x	x	Duplicate of AAB1870
AAB1872	x	x		x	x	x			x	x	z		x			x	x	x	Off bnyrd, but w/in meanie/minie haz radii (rand)

x : All samples

The samples to be field analyzed for explosives were determined randomly (as per the work plan) by assigning integer numbers to each sample AAB number and then generating random integers with a hand held calculator.

Isotopic uranium analysis will be conducted on those samples that excede the screeneing action level for total uranium. In most cases this can be performed by rerunning the total uranium aliquot and additional sample material will not be needed.

Note: Additional samples may be taken based on field surveys and observations.
* : Applicable EPA SW 846 methods.

	Sample type							Field Screening					Laboratory Analyses							
	Sampled Media			Structure		Subsurface														
Sample #	Soil	sludge	fluid	primary	duplicate	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Total uranium	Isotopic uranium	Metals (SW 6010/7000)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1873		x		x				x	x	x	x				x	x	x	x		Sludge sample from tank bottom
AAB1874		x		x				x	x	x	x				x	x	x	x		Sludge sample from tank bottom
AAB1875		x			x			x	x	x	x				x	x	x	x		duplicate of 1874 sludge sample
AAB1876			x	x				x	x	x	x				x	x	x	x		liquid sample from within tank
AAB1877			x	x				x	x	x	x				x	x	x	x		liquid sample from within tank
AAB1878			x		x			x	x	x	x				x	x	x	x		duplicate of 1877 liquid sample

* : Applicable EPA SW 846 methods.

	Sample type							Field Screening					Laboratory Analyses							
	Sampled Media			Structure		Subsurface														
Sample #	Soil	sludge	fluid	primary	duplicate	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Total uranium	Isotopic uranium	Metals (SW 6010/7000)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1879		x		x				x	x	x	x	x	x		x		x	x	x	Sludge sample from tank bottom
AAB1880		x		x				x	x	x	x	x	x		x		x	x	x	Sludge sample from tank bottom
AAB1881		x			x			x	x	x	x	x	x		x		x	x	x	duplicate of 1880 sludge sample
AAB1882			x	x				x	x	x	x	x	x		x		x	x	x	liquid sample from within tank
AAB1883			x	x				x	x	x	x	x	x		x		x	x	x	liquid sample from within tank
AAB1884			x		x			x	x	x	x	x	x		x		x	x	x	duplicate of 1883 liquid sample

Additional samples will be taken and analyzed for isotopic uranium if uranium is detected in any of these phase 1 samples. This may be performed as a follow on to phase 1 or as part of a phase 2 investigation. Alternatively, we may request isotopic uranium analysis of the samples that total uranium is found in.

* : Applicable EPA SW 846 methods.

36-003(b) OUTFALL SAMPLES

	Sample type							Field Screening					Laboratory Analyses							
	Sampled Media			Structure		Surface														
Sample #	Soil	sludge	fluid	primary	duplicate	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Total uranium	Isotopic uranium	Metals (SW 6010/7000)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1885	x					x		x	x	x		x	x		x		x	x	x	surf. sample at s.tank outfall (0-6 in.)
AAB1886	x						x	x	x	x		x	x		x		x	x	x	duplicate of AAB1885
AAB1887	x					x		x	x	x		x	x		x		x	x	x	surf. samp in drnage channel sed catch
AAB1888	x					x		x	x	x		x	x		x		x	x	x	surf. samp in drnage channel sed catch
AAB1889	x					x		x	x	x		x	x		x		x	x	x	surf. samp in drnage channel sed catch

It has been determind that the outfall discharges below the ground surface; therefore, a GPR survey will be conducted to locate the outfall prior to sampling. Since the outfall dischrges below the ground surface, only 3 samples will be taken. 1 sample and the duplicate will be taken at the outfall and the other sample will be taken 1 foot downgradient and 6 inches below the first sample.

* : Applicable EPA SW 846 methods.

36-003(a) LEACHFIELD SAMPLES

	Sample type							Field Screening					Laboratory Analyses							
	Sampled Media			Structure		Subsurface														
Sample #	Soil	sludge	fluid	primary	duplicate	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Total uranium	Isotopic uranium	Metals (SW 6010/7000)*	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1890	X					X		X	X	X		X			X	X	X	X	X	BH1 at s.tank outfall smpl at tile depth
AAB1891	X						X	X	X	X					X	X	X	X	X	duplicate of AAB1890
AAB1892	X					X		X	X	X					X	X	X	X	X	BH1 at s.tank o.fall-smpl soil/tuff int.
AAB1893	X						X	X	X	X					X	X	X	X	X	duplicate of AAB1892
AAB1894	X					X		X	X	X		X			X	X	X	X	X	BH1 at s.tank o.fall-smpl 2ft. into tuff
AAB1895	X					X	X	X	X	X					X	X	X	X	X	duplicate of AAB1894
AAB1896	X					X		X	X	X					X	X	X	X	X	BH2-rndm location-smpl at tile depth
AAB1897	X					X		X	X	X		X			X	X	X	X	X	BH2-rndm location-smpl soil tuff int.
AAB1898	X					X		X	X	X					X	X	X	X	X	BH2-rndm location-smpl 2ft. into tuff
AAB1899	X					X		X	X	X		X			X	X	X	X	X	BH3-rndm location-smpl at tile depth
AAB1900	X					X		X	X	X					X	X	X	X	X	BH3-rndm location-smpl soil tuff int.
AAB1901	X					X		X	X	X		X			X	X	X	X	X	BH3-rndm location-smpl 2ft. into tuff
AAB1902	X					X		X	X	X					X	X	X	X	X	BH4-rndm location-smpl at tile depth
AAB1903	X					X		X	X	X		X			X	X	X	X	X	BH4-rndm location-smpl soil tuff int.
AAB1904	X					X		X	X	X					X	X	X	X	X	BH4-rndm location-smpl 2ft. into tuff
AAB1905	X					X		X	X	X		X			X	X	X	X	X	BH5-rndm location-smpl at tile depth
AAB1906	X					X		X	X	X					X	X	X	X	X	BH5-rndm location-smpl soil tuff int.
AAB1907	X					X		X	X	X		X			X	X	X	X	X	BH5-rndm location-smpl 2ft. into tuff
AAB1908	X					X		X	X	X					X	X	X	X	X	BH6-rndm location-smpl at tile depth
AAB1909	X					X		X	X	X		X			X	X	X	X	X	BH6-rndm location-smpl soil tuff int.
AAB1910	X					X		X	X	X					X	X	X	X	X	BH6-rndm location-smpl 2ft. into tuff

Borehole 1 is to be located where the septic tank outfall enters the leachfield. All other boreholes will be located randomly within the leachfield.

*: Applicable EPA SW 846 methods.

	Samples				Field Screening				Laboratory Analyses										
	Sampled Media		Surface																
Description	soil/sediments	water	primary	duplicate	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gamma spectroscopy	Total uranium	Isotopic uranium	Metals (SW 6010/7000)*	Mercury (SW 7470)*	Mercury (SW 7471)	Cyanides	VOCs (SW 8260)*	SVOCs (SW 8270)*	Explosives (SW 8330)*	Comments
AAB1911	¤		x		x	x						x			x		x		Sample in sed trap directly below outfall
AAB1912	¤			¤	x	x						x			x		x		Duplicate of AAB1911
AAB1913	¤		x		x	x						x			x		x		Sample in sed trap dn drainage from AAB1911
AAB1914	¤		x		x	x						x			x		x		Sample in sed trap dn drainage from AAB1913
AAB1915	¤		x		x	x						x			x		x		Sample in sed trap dn drainage from AAB1914
AAB1916	¤		x		x	x						x			x		x		Sample in sed trap dn drainage from AAB1915
AAB1917	¤		x		x	x						x			x		x		Sample in sed trap dn drainage from AAB1916
AAB1918		¤	x		x	x						x			x		x		Sample water in pool directly below outfall
AAB1919		¤		¤	x	x						x			x		x		Duplicate of AAB1918

Water samples will be collected if water is present. Samples will be taken from small pool directly below outfall or water will be collected directly as dischjarge from the outfall. If water is not present either in the pool or as direct discharge a pool down drainage will be sampled if available.

* : Applicable EPA SW 846 methods.

	Sample type					Field Screening					Laboratory Analyses											
	Sampled Media			Subsurface																		
Sample #	soil/tuff	sludge	fill	primary	duplicate	Beta-gamma	Alpha	Organic Vapor	Combustible gas/oxygen	Explosives (Spot Test)	Gross Gamma	Gamma spectroscopy	Total uranium	Isotopic uranium	Plutonium	Metals (SW 6010/7000)	Mercury	Cyanides	VOCs (SW 8260)	SVOCs (SW 8270)	Explosives (SW 8330)	Comments
AAB1920	x			x		x	x	x	x	x			x			x			x	x	x	BH1 0-6 in. blw smp in smp perim.
AAB1921	x			x		x	x	x	x	x			x			x			x	x	x	duplicate of AAB1920
AAB1922	x			x		x	x	x	x				x			x			x	x	x	BH1 2ft. blw smp
AAB1923	x			x		x	x	x	x	x			x			x			x	x	x	BH2 0-6 in. blw smp in smp perim.
AAB1924	x			x		x	x	x	x				x			x			x	x	x	BH2 2ft. blw smp
AAB1925	x			x		x	x	x	x	x			x			x			x	x	x	BH3 0-6 in. blw smp in smp perim.
AAB1926	x			x		x	x	x	x				x			x			x	x	x	BH3 2ft. blw smp
AAB1927	x			x		x	x	x	x	x			x			x			x	x	x	BH4 0-6 in. blw smp (up gradient)
AAB1928	x			x		x	x	x	x				x			x			x	x	x	BH4 2ft. blw smp
AAB1929	x			x		x	x	x	x	x			x			x			x	x	x	BH5 0-6 in. blw smp (dwn gradient
AAB1930	x			x		x	x	x	x				x			x			x	x	x	BH5 2ft. blw smp
AAB1931	x			x		x	x	x	x	x			x			x			x	x	x	BH6 0-6 in. blw smp (dwn gradient
AAB1932	x			x		x	x	x	x				x			x			x	x	x	BH6 2ft. blw smp

These sump samples are to be taken after the removal of the sump and fill material. All samples are taken from boreholes
and will be collected only if pcocs are detected at concentrations above screening action levels in the fill material.
Therefore, these samples will necessarily be collected after we receive analytical results from the VCA.

OU 1130 FIELD IMPLEMENTATION PLAN ADDENDUM I 8/5/94

OU 1130 Field Implementation Plan page 7, states that we will conform to LANL-ER-SOP-06.15, Coliwasa Sampler for Liquids and Slurries.

LANL-ER-SOP-06.15 R0, page 2 of 8 state in part:
Coliwasa Limitations - not suitable for sampling in a container over 5 feet deep.

The sumps being sampled at OU 1130 are all more than 5 feet to their bottoms, where a sludge sample would be taken.
Coliwasa samplers are difficult to decontaminate, difficult to dispose of because of their length, difficult to use for the type of sludge samples we are taking at OU 1130, and they are expensive. Coliwasa samplers are well suited to taking samples at discrete depths; however this is not a requirement for samples at OU 1130.

At OU 1130 we will use a device that holds a 500ml poly bottle with the top cut off, to form a cylindrical sampling container. The device mounts to an extendable handle, allowing up to an 8 foot reach. The poly bottle is disposed of after collecting each sample and replaced with a clean bottle for each new sample. Extension handles are easily decontaminated, but are cheap and easily disposed of if they can't be decontaminated.

Appendix 8

APPENDIX 8

ATTACHMENT 1

Site-Specific Waste Management Plan

ENVIRONMENTAL RESTORATION PROGRAM

RCRA FIELD INVESTIGATION

OPERABLE UNIT 1130
TA-36

SITE-SPECIFIC WASTE MANAGEMENT PLAN

Los Alamos National Laboratory
ENVIRONMENTAL RESTORATION PROGRAM

SITE-SPECIFIC WASTE MANAGEMENT PLAN
OPERABLE UNIT 1130
TA-36

Prepared by: _____ 5/23/94
Kristi Aamodt
ICF Kaiser
Date

Approved by: _____ 5/20/94
Bob Catherwood
Waste Management Coordinator
Date

Approved by: _____ 5/23/94
Manuel Gonzales
CST-7
Date

Approved by: _____ 5/20/94
Pat Shanley
ESH-8
Date

1 Waste should be characterized to Section 10 of Table 1
2 Drum labels should reflect contents of Stacks; if pending analysis indicate waste contents

Approved by: _____ 5/20/94
T. E. Gene Gould
OU 1130 Project Leader
Date

Table of Contents

Page

1.0 Introduction 1

2.0 Background 1
2.1 Site History 1
2.2 Solid Waste Management Areas 2
2.2.1 The Sump 2
2.2.2 Aggregate Septic Systems 2
2.2.3 Aggregate Firing Sites 3
2.2.4 Boneyard 3
2.2.5 Photo Outfall 4
2.3 Personnel Responsibilities and Training 4

3.0 RFI-Generated Waste Types 5

4.0 Waste Minimization 6
4.1 Waste Characterization 6
4.2 Waste Segregation 6
4.3 Sampling Techniques 7
4.4 Return of Materials to Site 7

5.0 Waste Storage 8
5.1 Temporary Storage 8
5.2 Satellite Accumulation Area 8
5.3 Less-Than-90-Day Storage Area 8
5.4 Drum Labeling 9

6.0 Waste Disposal 10
6.1 Non-Hazardous/Non-Radioactive Waste 10
6.2 Radioactive Waste 10
6.3 RCRA-Hazardous and Low-Level Mixed Waste 10
6.4 Packaging and Transportation 10

7.0 Documentation 11

8.0 References 11

1.0 INTRODUCTION

This Waste Management Plan describes the proper management of waste materials derived from the site characterization activities at Operable Unit (OU) 1130, Technical Area-36(TA-36). Site characterization activities will include sampling of surface soils, subsurface soils, and sediments. Soil and sediment samples will be collected using hand tools, such as stainless steel trowels, shovels, posthole diggers, hand augers, and drill rigs. A back hoe will be used to excavate trenches for sump and berm sampling. A mechanical auger will be used to conduct drilling activities.

The purpose of this phase of the RFI for OU 1130 is to identify if potential release sites (PRS) contain contaminants above the screening action levels (SAL). Field work at OU 1130 is scheduled to begin May 23, 1994.

The purpose of this plan is to manage the RFI-generated waste in accordance with all Laboratory waste management requirements--without harming the environment, or jeopardizing human health. This plan includes a description of: waste-generating activities; waste types and constituents; waste minimization practices; waste disposal practices; and waste documentation procedures. All waste generated onsite will be handled in accordance with the Radiological Materials Management Area (RMMA) Plan and, as applicable, the following requirements and procedures:

- AR 10-1, Radioactive Liquid Waste
- AR 10-2, Low-Level Radioactive Solid Waste
- AR 10-3, Non radioactive Chemical Waste
- AR 10-8, Waste Minimization
- AR 10-9, Waste Profile Form

All decontamination activities that generate waste will comply with the approved site-specific Health and Safety Plan for OU 1130.

2.0 BACKGROUND

The following sections describe the past operational activities at OU 1130, the sites to be investigated, and the potential contaminants of concern at each site.

2.1 Site History

OU 1130 encompasses TA-36, TA-69, and TA-71. TA-36 consists of five firing sites: Eenie, Meenie, Minie, Lower Slobbovia, and I-J Site. TA-68 and TA-71 have never been used throughout the Laboratory's history. Also known as Kappa Site, TA-36 was established in 1950 as an explosives-testing site by the group known as GMX-8. The explosives tests that were conducted at TA-36 can be grouped into two categories: stationary tests and penetration tests. Shot assemblies typically contained explosives, and various amounts of diverse metals and plastics. The resulting shot waste products may very widely from fine dust to shrapnel.

The kind of explosives used through the years at TA-36 include: 2,4,6-trinitrotoluene, baratol, boracitol, hexanitrosol, cyclotetramethylene, tetranitramine, plastic-bonded explosives, and triaminotrinitrobenzene. A variety of metals have also been used including steel, copper, aluminum, cadmium, mercury, zinc, and depleted and natural uranium.

Current activities are centered primarily at Eenie, Meenie, Minie, Lower Slobbovia, and I-J firing sites. M-8 conducts a total of approximately 1,500 explosives tests annually.

Past waste management practices at TA-36 included burning of firing site debris in pits located near the Lower Slobbovia firing site bunker. Photo wastes were diluted and poured into the sanitary drain in building TA-36-1, which was served by the septic system for that building.

Currently, firing site debris is treated at an open-air burn site on the soil surface near the old burn pits. Depleted-uranium-contaminated metals remaining from firing site experiments are monitored for radiation contamination and then shipped to TA-54 for disposal. Explosives-contaminated materials are either flash-burned or detonated at the Minie firing site, or at TA-16. Solvents and photochemical wastes are stored in satellite accumulation storage areas until they are collected and properly disposed of by CST-7.

The sites discussed in this Waste Management Plan are the sump, aggregate septic systems, Eenie, Meenie, Minie, Lower Slobbovia, and I-J firing sites, the Boneyard, and the photo outfall.

2.2 Solid Waste Management Areas

TA-36 may contain sites contaminated by radioactive and/or hazardous constituents. Residual contamination may remain in or beneath the sump, the septic systems, in surface soils around firing sites, or in outfall drainage channel sediments. Projectiles may also be present in soils around the firing sites.

2.2.1 Sump PRS 36-002

There has been no reported sampling of the sump, so it is not known whether it is contaminated. However, contaminants might have been discharged to the sump through the laboratory sinks. The fact that the sinks were designed to handle chemicals supports the idea that the sump was designed to handle industrial wastes.

Potential contaminants of concern (PCOC) at the Sump include:

- High explosives
- Acetone
- Zinc chloride
- Acids
- Depleted uranium

2.2.2 Aggregate Septic Systems

Two septic systems have been constructed at TA-36, 36-003(a) and 36-003(b). 36-003(a) is comprised of six components: the septic tank, two manholes, a seepage pit, a distribution box, and leach field, as well as the associated drain lines connecting the various parts. Samples will be taken from the tank and the leach field. PCOCs are likely to be in this septic system because, spent photochemicals were discharged to the system for many years.

PCOCs for Septic System 36-003(a) include:

- Photo processing chemicals
- Thiosulfates

- Silver cyanides
- Organic compounds
- High explosives

36-003(b) is a holding tank that was built to handle sanitary wastes from a bathroom and an additional sink in bunker TA-36-55. The bunker houses electronics and instrumentation for the firing site; no explosives assembly is conducted in this bunker. There is no evidence of hazardous or radioactive materials or other PCOCs being discharged to this system. Samples will be collected from the tank and the associated outfall.

PCOCs for Septic System 36-003(b) include:

- Organic compounds
- High explosives
- Depleted uranium
- Metals

2.2.3 Aggregate Firing Sites

The aggregate firing sites are composed of five active firing sites: Eenie, Meenie, Minie, Lower Slobbovia, and I-J sites. All firing sites were put into operation by 1951. The types of explosives experiments conducted at the firing sites include: firing of shoulder-mounted projectiles into targets, firing of shots into embankments, armor-piercing experiments involving metal penetrators shot into canyon walls, underground tests, drop tests, and liquid explosives tests. A radiological survey was conducted at Eenie Site in 1991. Sediment samples from the stream channel that travels from Eenie firing site contained total uranium concentrations ranging from 1.3 to 60.9 ppm, with a mean of 15.1 ppm. A surface radiological survey at I-J Site gave results ranging from 40,000 to 255,000 counts per minute.

PCOCs for the Firing Sites include:

- Asbestos
- Barium
- Beryllium
- Depleted uranium
- Solid and liquid explosives residues
- Lead
- Mercury

2.2.4 The Boneyard

The Boneyard is a surface storage area located near the Minie firing site. Until the 1970s the area was used as a parking area for trailers and large non-waste items. From the late 1970s to the 1980s the area was used as a surface storage area for large waste items that had been exposed to explosives tests. The Boneyard underwent a major cleanup in 1986, and is currently used for storing usable non-waste items. A radiological survey was conducted in 1988, and four locations in the Boneyard had above-background levels of radioactivity ranging from 31 to 100 mR/h.
PCOCs for the Boneyard include:

- Asbestos
- Beryllium

- Chromium
- Copper
- Gamma emitters
- Lead
- Silver
- Uranium-238/236
- Zinc
- Explosives and explosives residues
- Organic compounds

2.2.5 Photo Outfall

The Photo Outfall is a permitted outfall located north of office and laboratory building TA-36-1. The outfall extends out a few feet over the steeply sloping edge of Threemile Canyon. It is believed that at one time spent photo processing fluids were discharged to this outfall. Water sampling performed in support of the NPDES permit indicated very low levels of cyanide at 0.125 ppm. The levels of silver have ranged from 0.004 ppm to 0.119 ppm.

PCOCs at the Photo Outfall include:

- Photo processing chemicals
- Cyanide
- Silver
- Thiosulfate
- Organic compounds

It is assumed that RFI-generated waste will be contaminated at a level no greater than that contained in any field sample taken during waste generation activities. Should field sample analyses indicate the presence of contaminants, waste samples may be submitted for laboratory analysis to better characterize the waste.

2.3 Personnel Responsibilities and Training

All field personnel have completed HAZWOPER training. Personnel responsible for managing RFI-generated waste at OU 1130, their waste management responsibilities and necessary training are listed in Table 1:

TABLE 1 OU 1130 Personnel Responsible for RFI-Generated Wastes

Name/Group	Title	Waste Management Responsibilities	Training
T. E. Gene Gould (ESA-4)	Waste Generator (OUPL or designee)	Ensure that all Laboratory waste management policies and procedures are followed. Assist in the identification of the waste generated per waste acceptance criteria. Will sign Waste Profile Form (WPF), Chemical Waste Disposal Request (CWDR), and Radioactive Solid Waste Disposal (RSWD) forms, as appropriate.	Waste Gen. Overview (#8477); Waste Doc. Forms (#8503 #8506)
Bob Catherwood (ESA-4)	Waste Management/Spill Coordinator	Serves as a technical liaison for site documentation between OU 1130 and ESH-8. Knowledgeable about waste contents and disposal requirements. Will sign WPF, CWDR, or RSWD forms.	Waste Gen. Overview (#8477); Waste Doc. Forms (#8504-6); RCRA Personnel Training (#7488)
Mike Henke (ESA-4) Peter Oram (ICF KE)	Field Team Leader	Ensure that field team implements the Waste Management Plan, including waste minimization practices. Ensure that proper storage containers are used and properly labeled. Ensure that temporary storage area is regularly inspected and safe. Ensure storage inspection records are complete and correct. Submit necessary transportation and disposal records to CST-7.	No training requirement for waste management. Recommended training includes RCRA Personnel Training and DOT training requirements.
John Taylor (EDI)	Radiological Control Technician	Perform field screening for gross alpha, beta/gamma radiation.	No waste training requirements

3.0 RFI-GENERATED WASTE TYPES

Types of waste generated through the RFI field activities are listed below:

- Soil Cuttings
- Disposable equipment
- Decontamination waste
- Administrative waste

Soil cuttings are generated during drilling activities. Soil cuttings will be non-hazardous/non-radioactive, radioactive, hazardous, or mixed waste.

Disposable equipment includes used PPE, such as Tyvek™ coveralls, gloves, booties, and filter cartridges. Sampling spoons, bowls, tarps, and cloth coveralls will not be considered waste until they become unserviceable. Disposables will be non-hazardous/non-radioactive, radioactive, hazardous, or mixed wastes.

Decontamination wastes are generated by the washing and rinsing of PPE and sampling equipment. Decontamination wastes will be non-hazardous/non-radioactive, radioactive, hazardous, or mixed wastes.

Administrative wastes include office trash from support activities, and any other wastes that have not come in contact with potentially contaminated materials. Administrative wastes will be non-hazardous and non-radioactive.

4.0 WASTE MINIMIZATION

Within the constraints demanded by worker health and safety and project quality assurance/quality control, the generation of RFI-generated waste will be minimized, as required in the LANL AR-10-8. Each aspect of the site investigation will be continuously evaluated to identify areas where waste generation can be minimized. Techniques to minimize waste generation through characterization and segregation are described in the following sections.

4.1 Waste Characterization

Radioactive, RCRA-hazardous, and mixed waste will be minimized by using the waste characterization techniques listed below:

- Field screening of personnel
- Analytical results of associated samples
- Knowledge of process

If the RFI-generated waste meets the criteria of a hazardous waste under 40 CFR 261.3, RCRA requirements for packaging, labeling, transporting, storing, training, and record keeping will be followed.

Radiological screening of wastes with the potential for surface contamination will be conducted before they are removed from the exclusion zone will help to characterize PPE and equipment as radioactive or non-radioactive. These potentially-contaminated wastes (other than fluids or soil) will be characterized as radioactive or non-radioactive using knowledge of process (KOP), field screening and laboratory analyses, or equivalent methods based on the waste samples or environmental samples associated with the wastes. KOP can be used to determine if the wastes are potentially radioactive based on the types and properties of the PCOCs and the site history.

Laboratory analyses will be used to classify soil and fluid wastes (bulk wastes) as radioactive, non-radioactive, hazardous, non-hazardous, or mixed using techniques described in LANL-ER-SOP-01.06 (3/92).

Knowledge of process will also be used to characterize wastes by considering the potential for wastes to be contaminated. Factors such as PCOCs present at the site, the exposure potential, and the exposure time will be considered.

4.2 Waste Segregation

RFI-generated waste will be segregated by non-hazardous/non-radioactive, radioactive, hazardous, mixed, suspect radioactive, suspect hazardous, or suspect mixed, and by waste type. Solid wastes (except bulk wastes) associated with distinct sampling activities, will be placed in plastic bag(s) before placement into storage drums. All wastes will be labeled with the corresponding sample numbers.

Waste segregation will be conducted using the following criteria:

- Radiological screening

- Visual inspection
- Sample and sample site screening
- Analytical results of associated samples

PPE and sampling equipment will be screened for gross alpha, beta, and gamma activity, as described in Section 4.1, for waste characterization. Once characterized, radioactive wastes will be segregated from other wastes.

Visual inspection of wastes will be conducted before they are removed from the exclusion zone. If the waste is obviously contaminated with soil or liquid, it may be segregated from waste that is not visually contaminated.

Screening of the samples and sample locations will be conducted with an organic vapor analyzer (OVA) and radiological monitoring instruments. Screening will be conducted before the sample is collected, after the sample is collected, before decontamination of sample containers, and after decontamination has occurred. Radiological screening instruments include a Ludlum 43-10 Alpha Tray counter, which has a detection limit of less-than-20 disintegrations per minute (dpm), and a Ludlum 44-9 Pancake GM model probe attached to a Ludlum 2221 portable scaler/rate meter, which has a detection limit of less-than-1,000 dpm. If sample screening indicates the presence of these types of contamination, the associated waste may also be segregated. Wastes are classified as radioactive or non-radioactive on-site. Isotopic analysis will be conducted once wastes or associated samples are confirmed to be radioactive.

Once laboratory analytical results are received confirming the presence or absence of contamination, suspect wastes will be further classified and segregated accordingly.

4.3 Sampling Techniques

The following sampling techniques will be used to help minimize the generation of decontamination and disposable wastes.

Sampling will be conducted to minimize excess sampled material and to ensure that only the amount of sample media requested by CST-9 will be sent to the Sample Coordination Facility (SCF).

Only materials needed for the sampling activity will be brought into the exclusion zone.

Only one sampler will take samples while the team is in the exclusion zone. All others will avoid contact with potentially contaminated materials. Contamination avoidance is the best way to prevent the spread of contaminants. Direct contact with contaminants will be minimized by not leaning against objects and not kneeling or sitting on the ground.

During all field activities, measures will be taken to minimize waste generation by maximizing the use of reusable equipment and materials. To minimize the amount of solid wastes generated during decontamination activities, reusable tarps will be used for decontamination. Cloth coveralls, which can be laundered rather than disposed, will be used instead of Tyvek™. Obviously contaminated coveralls will not be laundered, but will be held pending analysis of the associated samples. Chemical-resistant boots that can be decontaminated with soap and water (rather than disposable booties) will be used during sampling. However, disposable booties may be worn during sampling activities in radioactively contaminated areas, and by occasional site workers or observers.

To minimize the generation of liquid waste during decontamination activities, decontamination techniques such as brushing, scraping, or the use of CO_2 pellets may be used. Drip or squirt bottles will be used for washes and rinses whenever possible.

4.4 Return of Materials to Site

In accordance with LANL-ER-SOP-1.06 (3/92), borehole cuttings and sample residues may be returned to the SWMU from which the sample was taken immediately upon completion of sampling, with approval of the OUPL and the FTL. Borehole cuttings and other wastes may be returned to the SWMU if the OUPL and the FTL jointly determine that the sampling area is unlikely to be contaminated, or if returning the borehole cuttings or other wastes will not increase the likelihood of contaminant migration or increase the cost of eventual corrective action. This method of disposal will be used whenever possible to minimize the amount of wastes needing storage and disposal.

Decontamination liquids will be handled under a Notice of Intent (NOI) agreement with the State of New Mexico to discharge less than 100 gallons/day for non-radioactive and non-hazardous liquid waste.

5.0 WASTE STORAGE

Waste management will conform to the Laboratory's Spill Prevention Control and Countermeasure (SPCC) Plan, and to RCRA storage requirements specified in 40 CFR.262, Subtitle C. Any additional RCRA requirements specified in 40 CFR 260-270, including training and a contingency plan, will be followed.

Solid waste will be stored in DOT-approved 55-gallon open-head steel drums secured by a bolt ring. The drums will be good condition and compatible with the waste. Liquid waste will be stored in DOT-approved 55-gallon steel "bung-type" drums or open-head steel drums with plastic liners. Liquid and solid wastes will not be mixed. Waste storage areas will be designated to hold wastes until site activities are completed. Waste storage areas include:

- Temporary storage areas
- Satellite accumulation areas
- Less-than-90-day storage areas

Storage areas will have secondary containment consisting of heavy-duty plastic sheeting spread on the ground and berms using timbers, piping, or similar materials around the entire area. Pallets will be used to hold 55-gallon drums. Drums will be placed on pallets before they are filled and the drums sealed with lids and bolt-rings after they are filled. A minimum of two feet of aisle space will allow for inspection of the drums and labels. The waste drums will be covered with tarps or plastic sheeting and maintained to protect them from weather during the storage period. The entire storage area will be free of obstacles and ignition sources.

5.1 Temporary Storage

A temporary storage area will be designated to provide a secure and controlled storage for drums of non-hazardous waste. Radioactively-contaminated waste drums, if any, will be segregated from the other storage drums.

5.2 Satellite Accumulation Area

A satellite accumulation area may be used for collecting RCRA-hazardous or mixed wastes until a total volume of 55 gallons is reached, or until site activities are completed. If a volume of 55-gallons is reached prior to the completion of field activities, the field team has a limit of three days before the drum must be moved to the less-than-90-day storage area. The Laboratory's Environmental Protection Group, (ESH-8) will be consulted for assistance in setting up such areas.

5.3 Less-Than-90-Day Storage

If RCRA hazardous or mixed waste is generated at a volume greater than 55-gallons, ESH-8 and ESH-1 will be notified and a less-than-90-day storage area will be established at the site. Refer to Figure 1 for the location of the less-than-90-day storage area. Management of the less-than-90-day storage area will include the following procedures.

- Drums will be labeled "Hazardous Waste" and the hazardous constituents will be included on the label. If drums contain mixed waste, they must also be labeled as "Radioactive Waste" in accordance with AR 3-7, "Radiation Exposure Control."
- An accumulation start date will be marked on all drums.
- Warning signs with the legend "Danger - Unauthorized Personnel Keep Out" will be legible and prominently posted.
- The storage area will be identified by a sign that reads "Hazardous Waste Less-than-90 Days Storage Area." In addition, signs warning of radiation hazard will also be posted, if appropriate.
- The storage area will be inspected weekly, as required in 40 CFR.262.
- Hazardous waste leaks or spills will be cleaned up immediately and any spill residue handled as a hazardous waste, until classified as non-hazardous. All spills or leaks will be handled in accordance with the LANL SPCC Plan.

Inspections will be conducted weekly, and spilled or leaked waste will be cleaned up immediately. For information on preventing and handling leaks or spills, AR 9-4, "Accidental Oil, Chemical, and Airborne Releases," will be referred to. If a spill occurs, the following actions will be taken:

- The SSO or FTL will be notified immediately
- Immediate measures will be taken to control and contain the spill within site boundaries
- Unnecessary personnel will not be allowed in the area
- Personnel should stay upwind and keep out of low-lying areas
- No flares, smoking, or flames will be allowed in the area
- Liquids and combustibles will be kept away from the spilled material

5.4 Drum Labeling

In addition to the labeling requirements identified in Section 5.3, waste containers will be identified with site-specific labels (Appendix A) containing the following information:

- OU 1130, TA-36 and date of sampling
- "Wastes in this container are pending analysis" for proper disposal
- Contents of the container (soil, water, mud, PPE, etc.)
- Sample numbers associated with sampling activities from which the waste was generated
- Name and phone number of the OUPL and the Field Team Manager
- Copy of the Chain of Custody Forms associated with the waste

The site-specific label will be placed in a waterproof, sealable pouch and affixed to the outside of the drum. Each drum will be numbered sequentially with a permanent marker or stenciled on the drum itself (not on drum lids).

All drums stored on site that are empty will be labeled with "Empty" labels with lettering at least 2 inches high and visible against the background of the drum.

6.0 WASTE DISPOSAL

Procedures for disposal of non-hazardous/non-radioactive, radioactive, hazardous, and low-level mixed waste are detailed in the following sections.

6.1 Non-Hazardous/Non-Radioactive Waste

Waste that is not RCRA-hazardous or radioactive will be handled and disposed of following CST-7's guidance and procedures or returned to the site.

Administrative wastes (that have never been in contact with potential contaminants) will be handled and disposed of in county dumpsters as sanitary waste. Estimated volume of waste does not include administrative waste.

Arrangements will be made with CST-7 for disposal of non-hazardous/non-radioactive PPE. A waste profile form (WPF) will be signed by the OUPL or designee and the Waste Management Coordinator and submitted to ESH-8 for review and approval.

Estimated Volume: A maximum of two 55-gallon drums.

6.2 Radioactive Waste

Containers holding liquid or solid radioactive wastes will be handled in accordance with AR 10-1, and AR 10-2. WPF will be completed for each distinct waste stream. The Radioactive Solid Waste Disposal (RSWD) form will be completed, signed by the OUPL or designee, and submitted to CST-7. The Radioactive Materials Transfer Form (RMTF) will then be sent to BUS-6.

Estimated Volume: A maximum of 2 drums of liquids, and 1 drum of solids.

6.3 RCRA Hazardous Waste or Low-Level Mixed Waste

Containers holding RCRA hazardous wastes or mixed waste will be handled according to AR 10-3. All applicable procedures (i.e., DOE Orders) identified in AR 10-3, will be followed. WPFs will be completed for each distinct waste stream. The WPF will be signed by the OUPL or designee and the Waste Management Coordinator and submitted to ESH-8 for review and approval. The Chemical Waste Disposal Request (CWDR) will be

completed, signed by the OUPL or designee, and submitted to CST-7. The HMTF and RMTF will then be sent to BUS-6.

For known or suspect mixed waste drums, the dose rate will be monitored by the Laboratory's Health Physics Operations Group (ESH-1) prior to transporting for disposal.

Estimated Volume: No hazardous or low-level mixed wastes are expected to be generated at this site. A maximum of 1 drum each.

6.4 Packaging and Transportation

Bags and drums holding RFI-generated waste may be moved within TA-36 without shipping papers, labels, or special containers. All radioactive or mixed waste will be transported offsite by JCI, and hazardous waste will be transported by CST-7. Radioactive, hazardous or mixed waste packaging and transportation will comply with applicable DOT regulations.

The HMTF and RMTF for radioactive and hazardous shipments will be completed before transporting the waste. For packaging and transportation requirements, BUS-6 (667-4127) will be consulted for information regarding packaging and transportation of radioactive and hazardous materials. Shipment will not proceed until BUS-6 has reviewed and returned the shipping papers. When all the paperwork is complete and correct, arrangements will be made to remove the waste.

7.0 DOCUMENTATION

The following forms will be used for waste management purposes:

Waste Profile Form
Chemical Waste Disposal Request
Radioactive Solid Waste Disposal
Hazardous Materials Transfer Form
Radioactive Materials Transfer Form
Weekly inspection records
ER Waste Generation Certification
Shipping Manifests

8.0 REFERENCES

Los Alamos National Laboratory Environmental (LANL), Safety, and Health AR Manual

Los Alamos National Laboratory Administrative Requirements (AR)

AR 3-5 Shipment of Radioactive Materials
AR 3-7 Radiation Exposure Control
AR 3-8 ALARA Program
AR 9-4 Accidental Oil, Chemical, and Airborne Releases
AR 10-1 Radioactive Liquid Waste
AR 10-2 Low-Level Radioactive Solid Waste
AR 10-3 Hazardous and Mixed Waste
AR 10-8 Waste Minimization
AR 10-9 Waste Profile Form

Environmental Restoration Program, Standard Operating Procedures

LANL-ER-SOP-1.06 (3/92), Management of RFI-Generated Wastes

TB 302 ALARA Guide

Los Alamos National Laboratory, "RFI Work Plan for Operable Unit 1130," Environmental Restoration Program

Los Alamos National Laboratory, "LANL Radiological Control Manual," LM107-01

Los Alamos National Laboratory, " Environmental Restoration Program, Standard Operating Procedures (SOP)"

Los Alamos National Laboratory, Waste Acceptance Criteria

Los Alamos National Laboratory, Site Specific Health & Safety Plan for OU1130

Los Alamos National Laboratory, "Spill Prevention Control and Countermeasure Plan"

40 CFR (Code of Federal Regulations for the Protection of the Environment) 260-270

Appendices:

APPENDIX A - Waste Container Label

Figures:

FIGURE 1 - Location of the Less-than-90-Day Storage Area

Appendix A

SITE SPECIFIC LABEL
(Sample)

OU 1130, TA 33, RCRA Field Investigation
THE WASTE IN THIS CONTAINER IS: PPE, USED OR BROKEN SAMPLING EQUIPMENT, GLASSWARE OR OTHER SOLID WASTE. THE WASTE IS AWAITING DISPOSAL OR CHARACTERIZATION OF SAMPLES TAKEN ON THE DATE THIS WASTE WAS GENERATED. THE WASTE IS THE RESPONSIBILITY OF T. E. GENE GOULD, CST-6, 667-0402.

(Unique Sample Numbers) (Date Sampled)

APPENDIX 8

ATTACHMENT 2

Drum Labels

SITE-SPECIFIC LABEL

OU1130, TA36, RCRA Field Investigation

THE WASTE IN THIS CONTAINER IS: PPE, USED OR BROKEN SAMPLING EQUIPMENT, GLASSWARE OR OTHER SOLID WASTE. THE WASTE IS AWAITING DISPOSAL OR CHARACTERIZATION OF SAMPLES TAKEN ON THE DATE THIS WASTE WAS GENERATED. THE WASTE IS THE RESPONSIBILITY OF:

Lynn Kidman
ICF KE, MS M703
(505) 661-5227

Drum: _____

Unique Sample ID	Sample Collection Date
AAB1801	9/13/94
AAB1802	9/14/94
AAB1803	9/14/94
AAB1804	9/14/94
AAB1805	9/14/94
AAB1806	9/14/94
AAB1808	8/22/94
AAB1809	8/22/94
AAB1810	8/22/94
AAB1811	8/22/94
AAB1812	8/11/94
AAB1813	8/11/94
AAB1814	8/11/94
AAB1815	8/11/94
AAB1816	8/12/94
AAB1817	8/12/94
AAB1818	8/12/94
AAB1819	8/12/94
AAB1820	8/12/94
AAB1821	10/17/94
AAB1822	10/17/94
AAB1834	8/3/94
AAB1835	8/3/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1836	8/3/94
AAB1837	8/3/94
AAB1838	8/3/94
AAB1839	8/3/94
AAB1840	8/3/94
AAB1841	8/3/94
AAB1842	8/3/94
AAB1843	8/4/94
AAB1852	7/28/94
AAB1853	7/28/94
AAB1854	7/28/94
AAB1855	7/28/94
AAB1856	7/28/94
AAB1857	7/28/94
AAB1858	7/28/94
AAB1859	7/28/94
AAB1860	7/28/94
AAB1861	8/4/94
AAB1862	8/4/94
AAB1863	8/4/94
AAB1864	8/4/94
AAB1865	8/4/94
AAB1866	8/4/94
AAB1867	8/4/94
AAB1868	8/4/94
AAB1869	8/4/94
AAB1870	8/4/94
AAB1871	8/4/94
AAB1872	8/4/94
AAB1873	7/21/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1874	7/21/94
AAB1875	7/21/94
AAB1876	7/21/94
AAB1877	7/21/94
AAB1878	7/21/94
AAB1879	8/5/94
AAB1880	8/5/94
AAB1881	8/5/94
AAB1882	8/5/94
AAB1883	8/5/94
AAB1884	8/5/94
AAB1885	8/8/94
AAB1886	8/8/94
AAB1887	8/8/94
AAB1888	8/8/94
AAB1889	8/8/94
AAB1890	11/18/94
AAB1891	11/18/94
AAB1892	11/18/94
AAB1893	11/14/94
AAB1894	11/18/94
AAB1895	11/15/94
AAB1896	11/14/94
AAB1897	11/14/94
AAB1898	11/14/94
AAB1899	11/15/94
AAB1900	11/15/94
AAB1901	11/15/94
AAB1902	11/15/94
AAB1903	11/15/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1904	11/15/94
AAB1905	11/15/94
AAB1906	11/17/94
AAB1907	11/17/94
AAB1909	11/18/94
AAB1910	11/18/94
AAB1911	7/14/94
AAB1912	7/14/94
AAB1913	7/14/94
AAB1914	7/14/94
AAB1915	7/14/94
AAB1916	11/21/94
AAB1917	11/21/94
AAB1918	7/25/94
AAB1919	7/25/94
AAB1933	8/8/94
AAB1934	8/12/94
AAB1935	9/20/94
AAB1936	9/27/94
AAB1939	8/16/94
AAB1940	8/16/94
AAB1941	8/16/94
AAB1942	8/16/94
AAB1950	10/6/94
AAB1951	10/6/94
AAB1952	9/30/94
AAB1953	10/3/94
AAB1954	10/3/94
AAB1955	10/6/94
AAB1956	10/11/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1957	10/11/94
AAB1958	10/12/94
AAB1959	10/12/94
AAB1960	10/12/94
AAB2109	9/28/94
AAB2115	10/14/94
AAB2140	11/21/94
AAB2141	12/2/94
AAB2142	12/5/94

SITE-SPECIFIC LABEL

OU1130, TA36, RCRA Field Investigation

THE WASTE IN THIS CONTAINER IS: DECONTAMINATION LIQUID WASTE. THE WASTE IS AWAITING DISPOSAL OR CHARACTERIZATION OF SAMPLES TAKEN ON THE DATE THIS WASTE WAS GENERATED. THE WASTE IS THE RESPONSIBILITY OF:

Lynn Kidman
ICF KE, MS M703
(505) 661-5227

Drum: _____

Unique Sample ID	Sample Collection Date
AAB1801	9/13/94
AAB1802	9/14/94
AAB1803	9/14/94
AAB1804	9/14/94
AAB1805	9/14/94
AAB1806	9/14/94
AAB1808	8/22/94
AAB1809	8/22/94
AAB1810	8/22/94
AAB1811	8/22/94
AAB1812	8/11/94
AAB1813	8/11/94
AAB1814	8/11/94
AAB1815	8/11/94
AAB1816	8/12/94
AAB1817	8/12/94
AAB1818	8/12/94
AAB1819	8/12/94
AAB1820	8/12/94
AAB1821	10/17/94
AAB1822	10/17/94
AAB1834	8/3/94
AAB1835	8/3/94
AAB1836	8/3/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1837	8/3/94
AAB1838	8/3/94
AAB1839	8/3/94
AAB1840	8/3/94
AAB1841	8/3/94
AAB1842	8/3/94
AAB1843	8/4/94
AAB1852	7/28/94
AAB1853	7/28/94
AAB1854	7/28/94
AAB1855	7/28/94
AAB1856	7/28/94
AAB1857	7/28/94
AAB1858	7/28/94
AAB1859	7/28/94
AAB1860	7/28/94
AAB1861	8/4/94
AAB1862	8/4/94
AAB1863	8/4/94
AAB1864	8/4/94
AAB1865	8/4/94
AAB1866	8/4/94
AAB1867	8/4/94
AAB1868	8/4/94
AAB1869	8/4/94
AAB1870	8/4/94
AAB1871	8/4/94
AAB1872	8/4/94
AAB1873	7/21/94
AAB1874	7/21/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1875	7/21/94
AAB1876	7/21/94
AAB1877	7/21/94
AAB1878	7/21/94
AAB1879	8/5/94
AAB1880	8/5/94
AAB1881	8/5/94
AAB1882	8/5/94
AAB1883	8/5/94
AAB1884	8/5/94
AAB1885	8/8/94
AAB1886	8/8/94
AAB1887	8/8/94
AAB1888	8/8/94
AAB1889	8/8/94
AAB1890	11/18/94
AAB1891	11/18/94
AAB1892	11/18/94
AAB1893	11/14/94
AAB1894	11/18/94
AAB1895	11/15/94
AAB1896	11/14/94
AAB1897	11/14/94
AAB1898	11/14/94
AAB1899	11/15/94
AAB1900	11/15/94
AAB1901	11/15/94
AAB1902	11/15/94
AAB1903	11/15/94
AAB1904	11/15/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1905	11/15/94
AAB1906	11/17/94
AAB1907	11/17/94
AAB1909	11/18/94
AAB1910	11/18/94
AAB1911	7/14/94
AAB1912	7/14/94
AAB1913	7/14/94
AAB1914	7/14/94
AAB1915	7/14/94
AAB1916	11/21/94
AAB1917	11/21/94
AAB1918	7/25/94
AAB1919	7/25/94
AAB1933	8/8/94
AAB1934	8/12/94
AAB1935	9/20/94
AAB1936	9/27/94
AAB1939	8/16/94
AAB1940	8/16/94
AAB1941	8/16/94
AAB1942	8/16/94
AAB1950	10/6/94
AAB1951	10/6/94
AAB1952	9/30/94
AAB1953	10/3/94
AAB1954	10/3/94
AAB1955	10/6/94
AAB1956	10/11/94
AAB1957	10/11/94

SITE-SPECIFIC LABEL

Unique Sample ID	Sample Collection Date
AAB1958	10/12/94
AAB1959	10/12/94
AAB1960	10/12/94
AAB2109	9/28/94
AAB2115	10/14/94
AAB2140	11/21/94
AAB2141	12/2/94
AAB2142	12/5/94