

TA-01

**ENVIRONMENTAL RESTORATION PROJECT
SPILL PREVENTION, CONTROL AND COUNTERMEASURES
IMPLEMENTATION PLAN**

TA-1, PRS 1-001(s) and PRS 1-007(I)

**WESTERN SANITARY WASTE LINE INTERIM ACTION
AND
PHASE 1 SOIL SAMPLING BENEATH TRINITY DRIVE**

**LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO**

REVISION 0

APRIL 1996

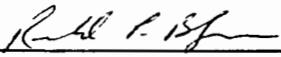


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**SPILL PREVENTION, CONTROL AND COUNTERMEASURES
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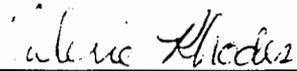
Prepared By
Ron Blegen
ERM/Golder



Signature

5/9/96
Date

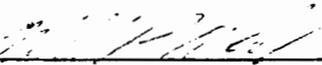
Reviewed By
Valerie Rhodes
ERM/Golder



Signature

5/13/96
Date

Reviewed By
Mike Alexander
ESH-18



Signature

5/15/96
Date

Approved By
Garry Allen, FPL
or His Designee
Field Unit 1



Signature

16 May 96
Date

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1.0 INTRODUCTION

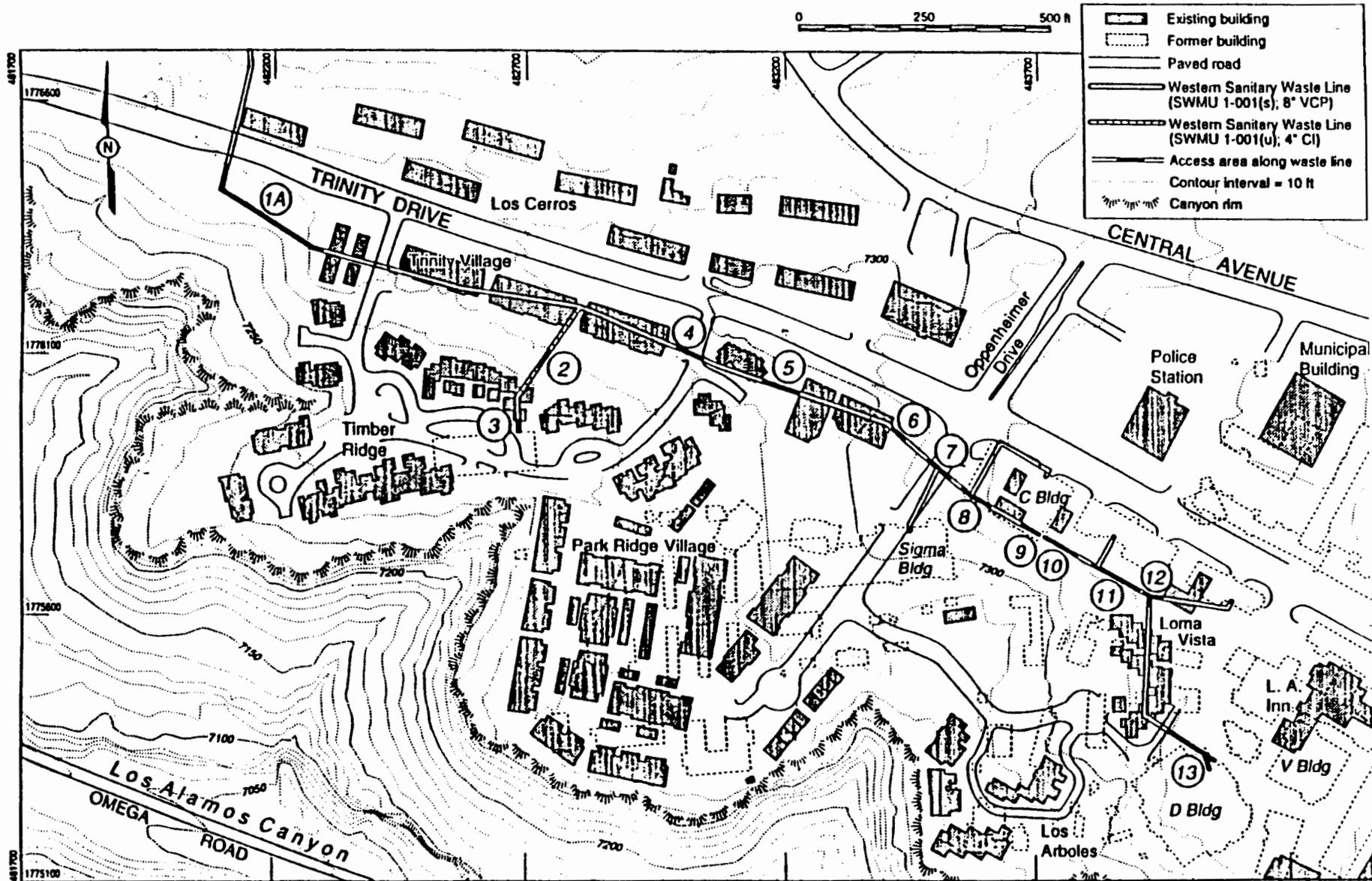
This Spill Prevention, Control, and Countermeasures Implementation Plan (SPCCIP) is written in accordance with requirements specified in LANL-AR-9-4 *Accidental Oil, Chemical, and Airborne Releases*. This plan will be updated accordingly and applied to Environmental Restoration Project activities. The SPCCIP presented herein will be implemented during Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project field activities at Technical Area 1 (TA-1), Potential Release Site (PRS) 1-001(s) and PRS 1-007(l).

PRS 1-001(s) is comprised of several sections of the Western Sanitary Waste Line (WSWL) which served several laboratory buildings located south of Trinity Drive in TA-1 from 1943 to the late 1940s (Figure 1). Approximately 300 feet of the WSWL will be excavated and removed as part of an interim action. While it is believed that the WSWL handled nonprocess-related sanitary waste, several buildings that handled hazardous and radioactive materials were connected to the WSWL. Following TA-1 decommissioning in the late 1950s and early 1960s, most of the sanitary waste lines were left in place. Knowledge of the operations performed in TA-1 buildings and recent investigations related to the WSWL have shown that hazardous and radioactive constituents (namely metals, uranium, plutonium, and cesium) were discharged into at least a portion of the WSWL.

There are 13 locations along the WSWL that are considered physically accessible for field investigation (Figure 1). This 1996 interim action field activity will focus on Locations 9, 10, and 11. In addition, this investigation may include work at Locations 1A, 8, and 12. While there is no evidence that hazardous and/or radioactive constituents were released from the WSWL at these locations, it is possible that releases may have occurred through structural failure and/or leaks at pipe section joints or at building or manhole connections. If releases occurred in areas where future excavation may expose potential contamination, there is a possibility for both human exposure and constituent migration. The interim action will consist of four tasks: locating and exposing the WSWL; sampling the surrounding soil and interior materials; removing and disposing the WSWL; and restoring the disturbed areas. Additional project details may be found in the summary of field activities located in Appendix A.

PRS 1-007(l) is an area of potential soil contamination beneath Trinity Drive. The potential contamination is associated with fill material that originated at a potentially contaminated area and was used during road construction. These soils will be sampled as part of a Phase I Resource Conservation and Recovery Act (RCRA) facility investigation (RFI). The objective of the sampling program is to characterize the soil associated with PRS 1-007(l) by collecting data necessary to determine the presence and concentrations of inorganic and radiological constituents. Soil samples will be collected from beneath Trinity Drive at three locations (Figure 2). It is anticipated that a backhoe, or other similar equipment, will be required to cut through the pavement and excavate a small portion of the underlying base course to gain access to the potentially contaminated soils. Samples will then be collected with a hand auger. Additional project details may be found in the "Sampling and Analysis Plan for Potential Release Site 1-007(l)" located in Appendix B.

It is anticipated that intrusive field work associated with the 1-001(s) interim action and the 1-007(l) RFI will begin in early- to mid-May, 1996. Heavy equipment, such as a backhoe, trackhoe, and/or front-end loader will be used to expose and remove the WSWL and any of the surrounding soils found to be contaminated. Dump trucks may be used to transport pipe sections and contaminated soil off site. The same equipment will be used to expose the fill material beneath Trinity Drive. Similar equipment will be used to restore the sites to their original condition.



Source: FIMAD 3/4/94, G101
 Modified by: CARTography by A. Kwon 2/1

Figure 1. Location of Western Sanitary Waste Line (WSWL). Numbers Refer to Access Areas Along the Waste Line.

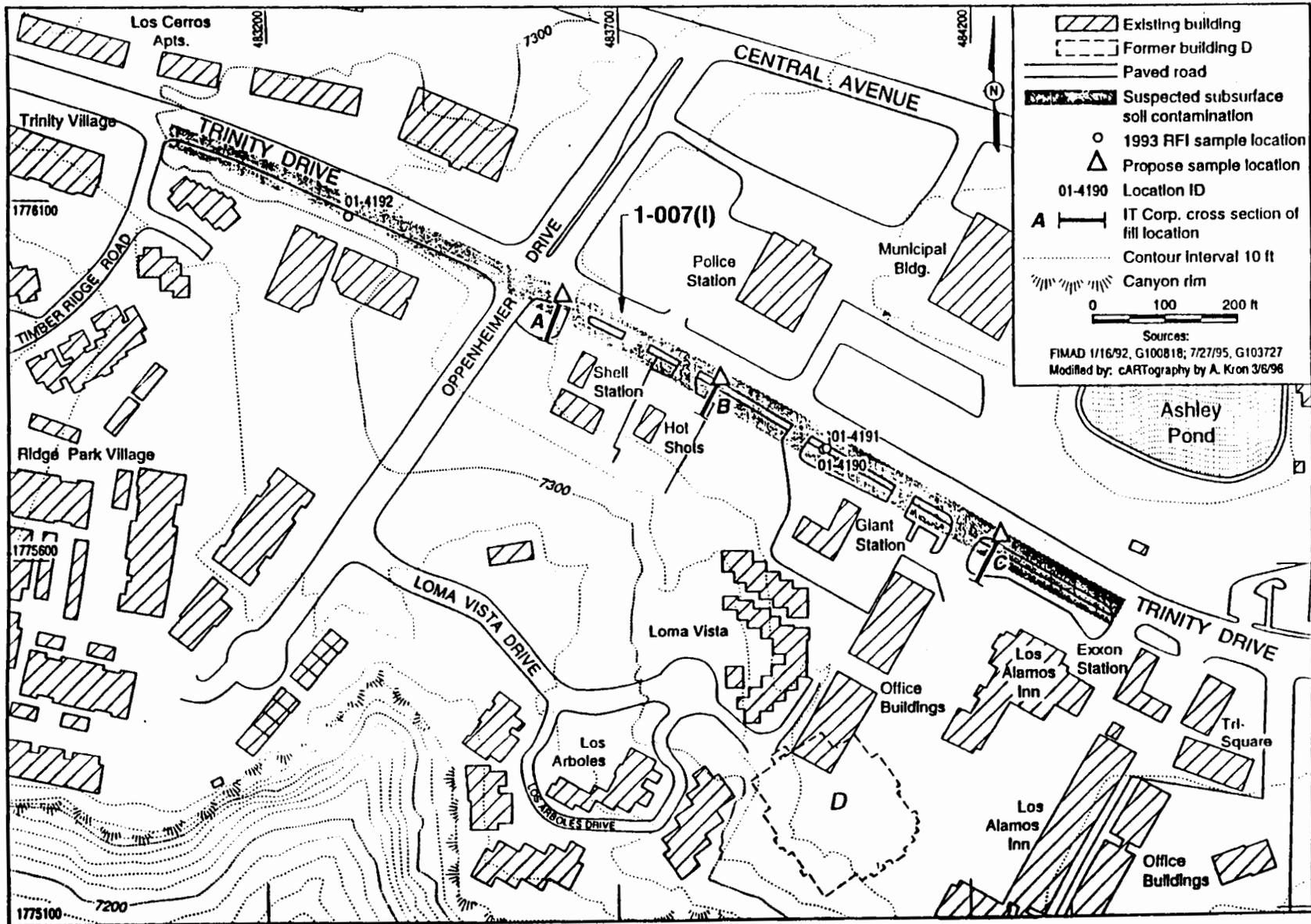


Figure 2. PRS 1-007(I) 1993 RFI Sample Locations and Proposed 1996 Sample Locations.

2.0 POTENTIAL RELEASE MATERIALS

The following materials may be present on-site, and may have the potential for release:

- **Hydraulic Fluid** used in the backhoe and other heavy equipment hydraulic systems;
- **Diesel Fuel** used in heavy equipment;
- **Gasoline** used to fuel excavation equipment and personnel vehicles;
- **Steam-Cleaning/Decontamination Fluids** (Alconox, potable water, deionized water, and contaminated soil/water mixture) generated during on-site decontamination and steam-cleaning of equipment.

2.1 HYDRAULIC FLUID

Hydraulic fluids contained within the equipment hydraulic systems will not be transferred or handled during the site activities. The equipment will be inspected prior to the start of excavation activities, including all hydraulic lines. As a precautionary measure, plastic sheeting will be placed beneath heavy equipment during excavation activities, and during on-site storage if small leaks are noticed. In the event of a hydraulic line leak, the following procedures will be implemented:

- All excavation operations will cease and the hydraulic lines shall be repaired and inspected before operations resume;
- Absorbent materials will be applied to the spill with shovels;
- Upon sufficient spill containment, the absorbent materials will be collected, drummed, and held in an on-site temporary drum staging area. Forms (WPFs) will be completed to characterize the materials, and appropriate waste disposal request forms will be submitted specifying transportation of drummed waste to appropriate LANL waste management areas;
- The Emergency Management and Response (EM&R) Group will be contacted at 667-6211 (after hours 667-7080) for further instructions; and
- A spill report will be completed and submitted to ESH-18, Mailstop K497, to the attention of Mike Alexander.

It is not anticipated that any hydraulic line leak will release more than five gallons of hydraulic fluid. Visibly stained materials will be cleaned or removed and drummed.

2.2 DIESEL FUEL

Diesel equipment operated on-site may need refueling. Prior to fuel transfer, all caps, hoses, and nozzles will be inspected for breakage and proper functioning. If a hand pump is used to transfer diesel fuel, one person will service the pump and a second person will monitor the discharge of fuel into the fuel tank. The fuel hose nozzle will be carried with the outlet facing up until the nozzle is over the receiving tank. In the event of a diesel fuel spill during handling or storage of fuel cans, or during the re-fueling process, the following procedures will be implemented:

- Absorbent materials will be applied to the spill with shovels;
- Upon sufficient spill containment, the absorbent materials will be collected, drummed, and held in an on-site temporary drum staging area. Forms (WPFs) will be completed to

characterize the materials, and appropriate waste disposal request forms will be submitted specifying transportation of drummed waste to appropriate LANL waste management areas;

- The EM&R Group will be contacted at 667-6211 (after hours 667-7080) for further instructions; and
- A spill report will be completed and submitted to ESH-18, Mailstop K497, to the attention of Mike Alexander.

Should a quantity exceeding five gallons be released, the area affected by the spill will be sampled. Visibly stained materials will be cleaned or removed and drummed. All equipment storage and fuel transfers will be completed in areas outside a watercourse, storm drain, barr ditch, etc.

2.3 GASOLINE

Gasoline-powered equipment may be used at the site and require refueling. Prior to dispensing gasoline, all caps, hoses, and nozzles will be inspected for breakage and proper functioning. The gas can hose nozzle will be carried with the outlet facing up until the nozzle is over the receiving tank. In the event of a gasoline spill during handling or storage of gas cans, or during the re-fueling process, the following procedures will be implemented:

- Absorbent materials will be applied to the spill with shovels;
- Upon sufficient spill containment, the absorbent materials will be collected, drummed, and held in an on-site temporary drum staging area. Forms (WPFs) will be completed to characterize the materials, and appropriate waste disposal request forms will be submitted specifying transportation of drummed waste to appropriate LANL waste management areas;
- The EM&R Group will be contacted at 667-6211 (after hours 667-7080) for further instructions; and
- A spill report will be completed and submitted to ESH-18, Mailstop K497, to the attention of Mike Alexander.

Should a quantity exceeding five gallons be released, the area affected by the spill will be sampled. Visibly stained materials will be cleaned or removed and drummed. All equipment storage and fuel transfers will be completed in areas outside a watercourse, storm drain, barr ditch, etc.

2.4 STEAM CLEANING / DECONTAMINATION FLUIDS

If on-site heavy equipment decontamination is required or found to be necessary, temporary on-site waste management equipment will be utilized for the equipment decontamination. When equipment decontamination is necessary, a decontamination pad, bermed on four sides using lumber (or equivalent materials) will be set up and utilized. The floor and berms of the holding pen will be lined with heavy-gauge plastic sheeting prior to any decontamination/steam-cleaning operations being performed. In addition, the decontamination area will be used to store the steam-cleaning unit, sampling equipment decontamination tubs, and any recently decontaminated equipment.

Fifty-five gallon drums will be utilized to containerize disposable items (gloves, plastic scoops, Tyvek coveralls, etc.), decontamination/steam-cleaning fluids, and other wastes generated during site activities. These drums will be transported and stored at a pre-approved temporary drum storage area. All drums will be staged on wooden pallets and labeled appropriately.

Throughout the duration of activities, precipitation may result in storm water collecting in the lined, bermed area associated with the equipment decontamination area. If the volume of captured storm water approaches the storage capacity of the bermed area, the storm water will be pumped to a drum, designated as containing storm water, transported, and stored in the pre-approved drum storage area. The contents of the drums will be sampled at the completion of field activities for waste characterization and disposal purposes. In order to minimize the possibility of storm water accumulation, the bermed area will be kept covered with plastic sheeting when not in use.

On a weekly basis, and upon demobilization from the field site, the integrity of the heavy-gauge plastic sheeting and the berms will be inspected. The results of site inspections will be recorded in a field notebook or on an inspection form. Surface soil samples may be collected beneath the sheeting and outside of the berms if the inspections reveals that containment integrity has been compromised. These samples will be submitted to a mobile chemical laboratory for analysis.

To assure sample quality, all non-disposable sampling equipment used to collect soil samples (stainless steel bowls, stainless steel hand augers, sampling scoops, etc.) will be cleaned by a series of washes and rinses in the decontamination area. The decontamination wash series will include the removal of all coarse soil present on the equipment with a wire brush, followed by a detergent wash with an Alconox/water solution, and rinses with potable water and deionized water. Each wash and rinse sequence will be performed in a five-gallon bucket that, in turn, will be enclosed in an aluminum or plastic wash tub. Equipment will then be allowed to air dry. Decontamination fluids consisting of water and/or an Alconox detergent solution, and generated during near-surface and surface soil sampling will be discharged to the ground surface as a non-stormwater discharge, using best management practices. All other decontamination fluids will be transferred to appropriate containers, labeled, and stored in a temporary waste storage area.

Potential releases of decontamination/steam-cleaning fluids during cleaning operations, or while transferring decontamination/steam-cleaning fluids into drums, will initially be handled as follows:

- Initial containment will be provided by the plastic sheeting and runoff control berms of the decontamination area;
- Absorbent materials will be applied to the spill with shovels;
- Upon sufficient spill containment, the absorbent materials will be collected, drummed, and held in an on-site temporary drum staging area. Forms (WPFs) will be completed to characterize the materials, and appropriate waste disposal request forms will be submitted specifying transportation of drummed waste to appropriate LANL waste management areas;
- The EM&R Group will be contacted at 667-6211 (after hours 667-7080) for further instructions; and
- A spill report will be completed and submitted to ESH-18, Mailstop K497, to the attention of Mike Alexander.

APPENDIX A

**SUMMARY OF FIELD ACTIVITIES
FIELD UNIT 1, TA-01, PRS 1-001(s)
WESTERN SANITARY WASTE LINE
LOCATIONS 9, 10, AND 11**

**SUMMARY OF FIELD ACTIVITIES
FIELD UNIT 1, TA-01, SWMU 1-001(S)
WESTERN SANITARY WASTE LINE
LOCATIONS 9, 10, and 11**

1.0 SITE HISTORY AND DESCRIPTION

Solid Waste Management Units (SWMUs) 1-001(s) and 1-001(u) encompass the Western Sanitary Waste Line (WSWL) which served several laboratory buildings located south of Trinity Drive in Technical Area 1 (TA-1) from 1943 to the late 1940s (Figure 1). While it is believed that the WSWL handled nonprocess-related sanitary waste, several buildings that handled hazardous and radioactive materials were connected to the WSWL. Following TA-1 decommissioning in the late 1950s and early 1960s, most of the sanitary waste lines were left in place. Knowledge of the operations performed in TA-1 buildings and recent investigations related to the WSWL have shown that hazardous and radioactive constituents (namely metals, uranium, plutonium, and cesium) were discharged into at least a portion of the WSWL.

There are 13 locations along the WSWL that are considered physically accessible for field investigation (Figure 1). However, this 1996 interim action field activity focuses on Locations 9, 10, and 11 (Figure 2). Additionally, this investigation may extend westward to Location 8 and eastward Location 12. Brief descriptions of all possible interim action locations are provided below:

- Location 8 consists of an accessible section of the WSWL east of Oppenheimer Drive and extending approximately 70 ft eastward to the Shell Station.
- Location 9 consists of an accessible section of the WSWL east of the Shell Station and extending eastward approximately 30 ft toward the former Hot Shots Restaurant.
- Location 10 consists of an accessible section of the WSWL behind the former Hot Shots Restaurant extending approximately 110 ft across the parking lot.
- Location 11 consists of an accessible section of the WSWL extending approximately 110 ft across the south side of the vacant lot between the former Hot Shots Restaurant and the Giant (Stop N Go) Service Station; physical access may be restricted at this location because of the amount of fill and overgrowth.
- Location 12 consists of an accessible section of the WSWL extending approximately 25 ft west of the Giant (Stop N Go) Service Station; physical access may be restricted at this location because of existence of a concrete retaining wall.

2.0 RATIONALE AND PURPOSE

While there is no evidence that hazardous and/or radioactive constituents were released from the WSWL other than to a septic tank, it is possible that releases may have occurred through structural failure and/or leaks at pipe section joints or at building or manhole connections. If releases occurred in areas where future excavation may expose potential contamination, there is possibility for both human exposure and constituent migration.

The purpose of the interim action at Locations 9, 10, and 11 is to 1) remove and dispose of the WSWL (and contaminated soil, if any) and 2) collect samples to evaluate whether hazardous and/or radioactive constituents have been released to the surrounding soil or are present in the WSWL.

3.0 FIELD ACTIVITIES

In general, the approach of interim action activities at Location 9, 10, and 11 involves four tasks: locating and exposing the WSWL; sampling the surrounding soil and interior material(s); removing and disposing the WSWL; and restoring the disturbed areas. All field work will be performed in accordance with applicable ER Project Standard Operating Procedures (SOPs), and applicable federal, state, and local regulations.

3.1 Locate and Excavate

Field activities associated with this phase of the WSWL investigation consist of researching the WSWL through the use of available engineering drawings, historical data, and existing surface features. Geophysical methods (electromagnetic induction and/or ground penetrating radar) may be used at each location (if applicable) to provide more precise location of the WSWL and associated subsurface features (e.g., manholes). In addition, each location will also be scanned with a radiodetection unit to identify active power and communication lines to avoid during excavation activities. Once the WSWL has been sufficiently located using maps and/or geophysical methods, trenches will be excavated using a backhoe or similar excavator to physically locate the WSWL.

3.2 Sampling Activities

Once sections (and associated features) of the WSWL are exposed, samples will be collected from materials within the WSWL and from materials underlying the WSWL. Selection of sample locations will be biased by professional judgment, visual indicators, and field measurements to increase the probability of detecting contaminants (if present) within the WSWL or the surrounding soil. All excavations and soil samples will be field-screened using gross alpha and beta/gamma instruments. Samples will be submitted to a mobile chemistry analytical laboratory (MCAL) and a mobile radiochemical analytical laboratory (MRAL) for screening and to fixed analytical laboratory for analysis. Samples

will be analyzed for isotopic plutonium and isotopic uranium using alpha spectroscopy, cesium-137 using gamma spectroscopy, semivolatile organic compounds (SVOCs) using EPA SW 846 Method 8270, and target analyte list (TAL) metals using EPA SW 846 Methods 6010 and 7470 (Hg).

3.3 Removal and Disposal

Subsequent to sampling the materials within and surrounding the WSWL, pipe sections will be labeled, photographed, and potentially sampled for waste characterization purposes. The pipe sections will then be wrapped in plastic, sealed with duct tape, and placed in a plastic-lined dump truck or an appropriate containers (e.g., B-25 boxes) and transported to an appropriate storage area. In the event that constituents are detected above specified cleanup levels in soils surrounding the WSWL, soil will be removed, (containerized and transported to an appropriate storage area) and replaced by clean fill material.

3.4 Restoration

Following interim action field activities, all disturbed areas will be restored to original conditions. Excavations will be backfilled and compacted using the excavated soil (or clean fill in the event contaminated soils are detected and removed). Disturbed areas will be landscaped as necessary, and asphalt and concrete will be repaired as needed. Every attempt will be made to restore each location to the original condition and to the satisfaction of the property owner.

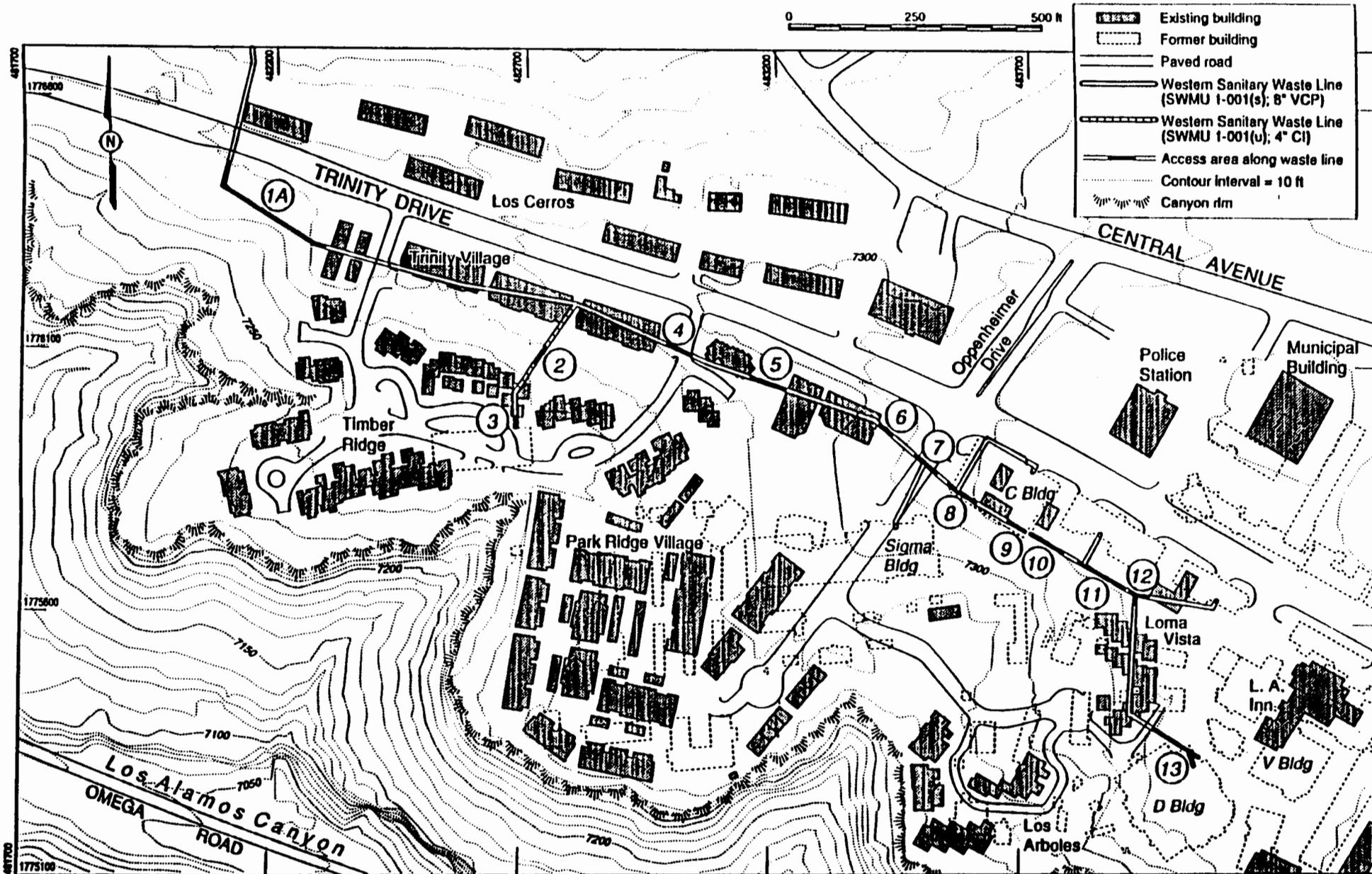


Figure 1. Location of Western Sanitary Waste Line (WSWL). Numbers refer to access areas along the waste line.

Source: FMAD 3494, G101967
 Modified by: cARTography by A. Kran 2/1/95

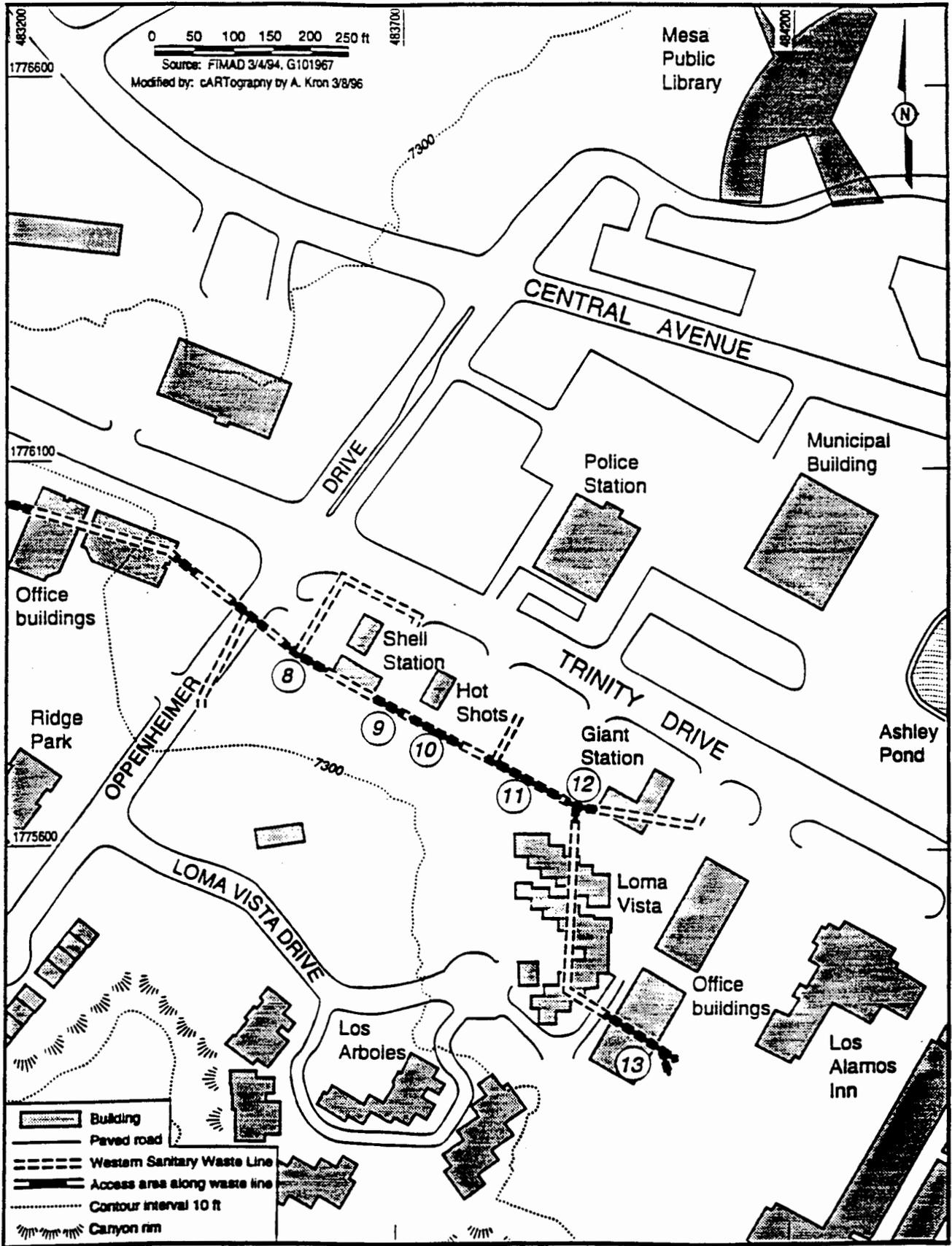


Figure 2. Location of Western Sanitary Waste Line (WSWL) at access areas 8, 9, 10, 11 and 12.

APPENDIX B
SAMPLING AND ANALYSIS PLAN
FOR
POTENTIAL RELEASE SITE 1-007(I)

The Sampling and Analysis Plan has been omitted
as PRS 1-007(1) is not part of the Interim Action presented herein.

**INTERIM ACTION PLAN
APPROVAL/DISAPPROVAL FORM**

PRS(s) 1-001(S)

The undersigned have reviewed the Interim Action Plan and believe that an Interim Action is appropriate.

FPL *BR Allen*

Date *2 July 96*

FPC *a. Koch*

Date *7/3/96*

.....

I, Theodore J. Taylor, DOE-LAAO, **APPROVE** the accompanying Interim Action Plan for PRS(s) 1-001(S), TA-1.

I, Theodore J. Taylor, DOE-LAAO, **DO NOT APPROVE** the accompanying Interim Action Plan for PRS(s) 1-001(S), TA-1.

The following reasons reflect the decision for disapproval:

Signed: *Bonnie Koch*
Ted Taylor

Date: *7/3/96*

MATERIAL INVENTORY

Worksheet #2

Completed by: Ron Blegen

Title: Field Team Leader

Date: 26-Apr-96

Instructions: List all materials used, stored, or produced onsite. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff. Also complete Worksheet 2A if the material has been exposed during the last three years.

Material	Purpose/Location	Quantity (units)			Quantity Exposed In Last 3 Years	Likelihood of contact with storm water. If yes, describe reason.	Significant spill or release?	
		Used	Produced	Stored			Yes	No
Diesel Fuel, Hydraulic Fluid, Grease and Oil.	Heavy Equipment	50 gal.			none	Unlikely. Equipment will be inspected daily prior to starting work. Equipment maintenance will be performed off site. Fueling operations will be performed per the SPCC Plan.		x
Pipeline material and contents	PRS-1-001(s) Western Sanitary Waste Line			To be determined	none	Unlikely. Pipeline is currently buried. Pipeline will be excavated and removed in small (<30 feet) sections and immediately wrapped in plastic and placed in appropriate containers.		x
Decon. Fluids (Alconox & Water)	Decon. of sampling and excavation equipment. Bermed decon area.		To be determined (est. <20 gal.)		none	No		x
Contaminated soils	Soil around and below damaged or leaking sections of the pipe			To be determined (est. max. of 1.5 yds.)	none	Unlikely. Soils known or suspected to be contaminated will be excavated and immediately placed in appropriate containers.		x

POLLUTANT SOURCE IDENTIFICATION

Worksheet #4

Completed by: Ron Blegen

Title: Field Team Leader

Date: 24-Apr-96

Instructions:

List all identified storm water pollutant sources and describe existing management practices that address those sources.

In the third column, list BMP options that can be incorporated into the plan to address remaining sources of pollutants.

Storm Water Pollutant Sources	Existing Management Practices	Description of New BMP Options
Diesel fuel, hydraulic fluid, motor oil	N/A	Visual inspections, preventive maintenance, SPCCP
Potential for erosion and transport of excavated clean and potentially-contaminated soils	N/A	Visual inspections, sediment and erosion control, management of run-off and storage of excavated materials in appropriate containers.
Decontamination fluids	N/A	Bermed waste storage area, visual inspections, SPCCP, good housekeeping. Will preferentially use a "dry-decon." process.
Potentially-contaminated pipeline material, pipeline contents, and surrounding soils	N/A	Visual inspections, immediate removal and packaging of materials and storage in appropriate containers.
Dust- or particulate-generating activities	N/A	Visual inspections, good housekeeping, dust suppression measures when needed.

BMP IDENTIFICATION

Worksheet #5

Completed by: Ron Blegen

Title: Field Team Leader

Date: 4/26/96

Instructions: Describe the best management practices (BMPs) that you have selected to include in your plan. For each of the baseline BMP's, describe actions that will be incorporated into facility operations. Also describe any additional Bmps (activity-specific and site-specific BMP's) that you have selected. Attach additional sheets if necessary.

BMP's	Brief Description of Activities
Good Housekeeping	See text Section 4.1
Preventive Maintenance	See text Section 4.2
Sediment and Erosion Control	See text Section 4.3
Stabilization Practices	See text Section 4.4
Structural Practices	See text Section 4.5
Storm Water Runoff Management	See text Section 4.6
Additional BMPs (Activity-Specific and Site-Specific)	See text Section 4.7
Spill Prevention and Response Procedures	See text Section 4.8

IMPLEMENTATION

Worksheet #6

Completed by: Ron Blegen

Title: Field Team Leader

Date: 24-Apr-96

Instructions: Develop a schedule for implementing each (BMP). Provide a brief description of the BMP, the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person (s) responsible for implementation.

BMPs	Description of Actions(s) Required for Implementation	Scheduled Completion Date(s) for Req.'d Action	Person Responsible for Action	Notes
Good Housekeeping	1. Develop training program	1-Apr-96	FTL	
	2. Conduct training	1-Apr-96	FTL	
Preventive Maintenance *	1. Service heavy equipment as necessary	During interim action activities	Equipment operator	
	2. Inspect waste storage area	Until transport and disposal is completed.	FTL	
	3. Perform maintenance on control measures if necessary	As needed	FTL	
Inspections **	1. Pre-job/daily inspection of heavy equipment	During VCA and drilling operations	Equipment operator	
	2. Inspection of waste storage area	Until disposal	FTL	
	3. Inspection of erosion control measures	Until site restoration	FTL	
Spill Prevention and Response	1. Spill plan training	During all field operations	FTL	
	2. Implement spill plan if necessary	During all field operations	FTL	
Sediment and Erosion Control	1. Plastic sheeting over excavation site	During VCA	FTL	
	2. Erect berms as necessary	During VCA	FTL	
	3. Reseed after remediation activities	After VCA	FTL	
Management of Runoff	1. Stormwater runoff diversions constructed as necessary	During VCA	FTL	
* Subcontractors will be responsible for maintenance on their equipment				
** All inspections to be performed by qualified personnel				

EMPLOYEE TRAINING

Worksheet #7

Completed by: Ron Blegen

Title: Field Team Leader

Date: 24-Apr-96

Instructions: Describe the employee training program for your facility below. The program should, at a minimum, address spill prevention and response, good housekeeping, and material management practices. Provide a schedule for the training program and list the employees who attend training sessions.

Training Topics	Brief Description of Training Program/Materials (e.g., film, newsletter, course)	Schedule for Training (list dates)	Attendees
Spill Prevention and Responses	Read and understand the SPCC Implementation Plan and SWPP Plan	May-96	All employees
Good Housekeeping	Proper procedures for maintaining a clean and orderly work site	May-96	All employees
Material Management Practices	Read and understand the SPCCP and SWPPP. Proper procedures for handling and labeling of waste containers. Attend MSDS overview.	May-96	All employees
Other Topics			

**NONSTORM WATER DISCHARGE
ASSESSMENT AND CERTIFICATION**

Worksheet #8

Completed by: Ron Blegen

Title: Field Team Leader

Date: 4/24/96

Date of Test or Evaluation	Outfall Directly Observed During the Test (Identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation.
4/24/96	N/A. No known outfalls on site. Pipeline is buried and does not discharge to the ground surface.	Visual	No discharge observed. No non-stormwater discharge outfalls observed.	N/A	Ron Blegen
TBD		Visual	Decon. water associated with surface and near surface sampling		Authorized personnel during field operations.

CERTIFICATION

I, Garry Allen (responsible official), certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (Type or Print)
Garry Allen, FPL

B. Area Code and Telephone No. (505) 667-3394

C. Signature

GR Allen

D. Date Signed

15 May 96

Storm Water Pollution Prevention Plan

Storm Water Pollution Prevention Plan	
Emergency Contact: Ron Blegen	Work Phone: (505) 662-1306
Title: Field Team Manager	Cellular Phone: (505) 470-0882; Pager: (505) 820-4440
Secondary Contact: TBD	Work Phone: (208) 662-3700
Title: Field Team Leader	Emergency Phone:
Type of Facility:	Private property. Knights of Columbus Hall. Former Lab fuel and lubricant storage area.
Operating Schedule:	0700 hrs to 1700 hrs (Monday through Friday).
Number of Employees:	2 to 7 workers
Average Wastewater Discharge:	None Planned
NPDES Permit Number:	

Definitions

Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Final Stabilization means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

Waters of the United States means:

- a. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- b. All interstate waters, including interstate "wetlands";
- c. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 1. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 2. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 3. Which are used or could be used for industrial purposes by industries in interstate commerce;
- d. All impoundments of waters otherwise defined as waters of the United States under this definition;
- e. Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- f. The territorial sea; and
- g. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Inspection and Maintenance Report Form

TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORES

PROJECT NAME: _____

INSPECTOR: _____ DATE: _____

INSPECTOR QUALIFICATIONS: _____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL _____ INCHES

AREA	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

Storm Water Pollution Prevention (SWPP) Plan

Inspection and Maintenance Report Form

STRUCTURAL CONTROLS

DRAFT

DATE: _____

FROM	TO	INSTALLED CORRECTLY	EVIDENCE OF WASHOUT OR EROSION

MAINTENANCE REQUIRED: _____

FROM	TO	INSTALLED CORRECTLY	EVIDENCE OF WASHOUT OR EROSION

MAINTENANCE REQUIRED: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

Storm Water Pollution Prevention (SWPP) Plan

Inspection and Maintenance Report Form

DRAFT

STRUCTURAL CONTROLS

DATE: _____

FROM	TO	INSTALLED CORRECTLY	EVIDENCE OF WASHOUT OR EROSION

MAINTENANCE REQUIRED: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

FROM	TO	INSTALLED CORRECTLY	EVIDENCE OF WASHOUT OR EROSION

MAINTENANCE REQUIRED: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

Storm Water Pollution Prevention (SWPP) Plan

Inspection and Maintenance Report Form

DRAFT

CHANGES REQUIRED TO THE SWPP PLAN: _____

REASONS FOR CHANGES: _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

SIGNATURE: _____ DATE: _____

Storm Water Pollution Prevention Plan

Certification

I am certifying that a Storm Water Pollution Prevention Plan has been prepared for the investigation and remediation project of PRS 1-001(s) and 1-007(l) in accordance with Part IV of the NPDES General Permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:  Date: 22 May 96

Garry R. Allen
Field Project Leader, Field Unit 1
Environmental Restoration Project

ANNEX 10.3

Spill Prevention Control and Countermeasures Implementation Plan

4.2 Preventive Maintenance

Heavy equipment will be inspected daily by qualified personnel (SSO and/or equipment operator) for leaks/spills and will be serviced as necessary. The inspections will be documented in a bound notebook and/or on a equipment inspection checklist.

All containers will be inspected by the SSO and/or Waste Manager for stability prior to movement, or daily, whichever is more frequent. The inspections will be documented in a bound notebook.

All storm water control measures (i.e., waste storage secondary containment, silt fencing, tarps, etc.) will be inspected weekly by the FTL, or his/her designee, and within 24 hours of a precipitation event of 0.5 inches or greater. The inspections will be documented in a logbook and on SWPPP inspection forms. Deficiencies found during inspections will be corrected immediately.

4.3 Sediment and Erosion Control

The majority of the proposed excavation areas are on relatively flat ground. Locations 9, 10, and 11 are located primarily within flat parking areas behind and to the east of the former Hot Shots Restaurant. Location 8 is a paved surface behind and to the west of the Shell Service Station at the corner of Trinity Drive and Oppenheimer Drive. A portion of location 12 is under a paved driveway/parking area adjacent to the Giant (Stop N Go) Service Station. Approximately one-quarter to one-third of the total area is paved while the remainder is compacted soil and fill material. The topography drops off steeply at the southern edge of the properties. Distinct drainage channels bisect the proposed east-west trending excavation areas and are incised into the steeper southern slopes. Location 1A lies near the edge of Los Alamos Canyon under relatively flat ground. However, the terrain slopes steeply to the south toward the canyon edge.

The WSWL at each of these locations underlies the relatively flat terrain of the parking lots and other paved or undeveloped areas, making it unlikely that interim action activities will directly result in significant erosion or sedimentation. There are no known point-sources of storm water runoff onto Locations 1A, 8, 9, 10, 11, and 12, but the relatively large paved and compacted areas present the potential for the capture of precipitation and sheet flow during major storm events. Runoff from such an event will drain to the south, toward the proposed excavation areas. Runoff may coalesce into a single distinct drainage channel located between Locations 10 and 11 prior to entering the proposed excavation area. Storm water runoff from the paved parking lot at Location 12 drains to the southwest corner of the lot before discharging through pipes constructed within the concrete retaining wall. Drainage from this discharge point is to the southwest. Whenever possible, storm water runoff will be controlled by constructing earth berms, sandbag berms, or temporary drainage channels designed to divert runoff around the excavation areas and major drainage channels which bisect the excavations. Trenches will be excavated and backfilled in relatively short intervals (approximately 25 to 30 feet) in order to minimize the areas requiring active stormwater runoff/runoff control. The pipes which drain storm water through the retaining wall at Location 12 will be temporarily plugged (if permission is granted by the property owner) to prevent runoff into active excavation areas.

Any excavated material will be staged away from discernible drainage channels, and covered with plastic. If an excavation needs to be left open overnight, it will be covered with plastic sheeting or tarps to prevent precipitation from directly entering the excavation area. A silt fence (or straw bale fence) will be constructed and maintained downgradient of each excavation area. Berms and drainage channels may also be constructed if additional stormwater runoff and erosion control measures are needed.

Equipment and personnel movement through any identified drainage channels will be controlled. Entry and exit to and from each location will be limited to the paved entrances off

of Trinity Drive. Personnel and equipment movement will be directed around the known drainages.

Excavation and sampling activities at PRS 1-007(l) will be conducted over a very short time span (less than 2 hours) at each of the three designated sampling sites. Activities will not take place during a precipitation event. Excavated materials will not be staged next to the curb or at any other location where obvious storm water runoff accumulates. The asphalt roadway will be patched immediately following sampling operations at each location.

4.4 Stabilization Practices

Interim soil stabilization techniques will be used on site if significant areas of soil and vegetation are disturbed during the interim action activities. Disturbed areas of the current ground surface will be temporarily paved, graveled, or re-seeded if the disturbing activity has temporarily ceased for at least 14 days and the area is not within a commonly used route of traffic. A record of the dates when major soil-disturbing activities occur, when investigation processes have temporarily or permanently ceased, and when stabilization measures are initiated will be kept by the FTL, or his designee.

Every attempt will be made to stabilize and restore the site to its previous condition. Existing vegetation will be preserved where attainable. Excavated areas will be filled with clean fill and compacted. Excavated and disturbed areas will be re-seeded with an appropriate mixture of vegetation, covered with a layer of gravel, or paved, whichever is appropriate for that portion of the site. ESH-20 will be contacted to determine an appropriate seed content and method of application.

4.5 Structural Practices

If an excavation or borehole site needs to be left open overnight, it will be covered to prevent storm water from directly entering the excavated area. If the excavation or borehole lies within a drainage, berms, silt fences and temporary drainage channels, or sandbag berms may be constructed, as needed, to prevent storm water from entering the excavation or causing significant erosion or sedimentation.

Silt fences and/or straw bale fences will be installed downgradient of the excavation areas at PRS 1-001(s) to control erosion and sediment runoff from the site (Figures 4 and 5). The structures will be inspected and properly maintained until site stabilization practices have been finalized and a Notice of Termination (NOT) has been submitted and approved by ESH-18.

No structural practices are planned for the PRS 1-007(l) sampling beneath Trinity Drive. The location of the sampling points will require rapid mobilization, sampling, and site restoration.

4.6 Storm Water Runoff Management

Storm water runoff draining from buildings and parking lot areas will be diverted around work areas whenever necessary. Sandbag berms, earth berms, or drainage channels will be constructed to divert the flow around excavation areas. If possible, efforts will be made to divert the water to a relatively flat area of the site to enhance infiltration and evaporation. Storm water management structures will be maintained and inspected until final stabilization has been achieved and a NOT has been submitted and approved by ESH-18.

4.7 Other Controls

No solid materials will be discharged into any watercourse. The off-site tracking of sediments and the generation of dust will be kept to a minimum. Equipment used in the work areas will be decontaminated (including tires and wheels, if necessary) prior to exiting the work zone. Sanitary facilities, in the form of a portable toilet, or access nearby buildings, will be emplaced

on site. Personnel vehicles will be parked well away from the work zone. Dust suppression measures, consisting of a fine water spray, will be implemented when necessary to control dust generation.

4.8 Spill Prevention and Response Procedures

All loading and unloading of waste materials will be conducted away from drainage channels and during periods without storm water-producing events. Decontamination water will be transferred into containers within secondary containment areas that will block direct discharge on to the site. Spill prevention response will be implemented according to the site-specific SPCCIP and LANL SPCC Plan by qualified personnel.

5.0 Implementation

5.1 Inspections

Weekly waste storage area inspections will be conducted to detect spills, leaks, and potential sources of storm water pollution. Waste area inspections will be documented in a bound field notebook and noted in SWPPP inspection forms.

Inspections of erosion control devices and drainages will be performed weekly or within 24 hours of a storm event in excess of 0.5 inch (or the following Monday after a weekend storm event). Inspections will be documented to ensure proper operation of storm water control devices. Deficiencies found during inspections will be immediately corrected.

Heavy equipment inspections will be performed and documented daily. Any leaks will be repaired before work is resumed.

The site will be inspected to ensure that measures intended to reduce pollutant loading are functioning properly. A visual inspection of equipment needed to implement the provisions of this plan shall be made. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected to determine if they serve as a source of pollutants entering the drainage system. Discharge locations shall be inspected to determine if erosion control measures are functioning properly.

All inspections will be performed by the FTL and documented in SWPPP inspection forms. Inspections will continue until the NOT. A report summarizing the scope of the inspections, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this plan, and actions taken in accordance with this plan shall be made and retained as a part of this plan for a period of at least three years after final stabilization of this site. Copies of the inspection reports will be provided to ESH-18 at the end of each week that inspections are being conducted. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the project is in compliance with the SWPPP and the LANL's General Permit. The report shall be signed by the owner of the SWPPP (FPL).

Based on the results of the inspection, the Site Description section of the plan and the Pollution Prevention Measures section of this plan shall be revised as appropriate, but in no case later than seven calendar days following the inspection that shows deficiencies in the plan.

5.2 Employee Training

All personnel responsible for implementing activities outlined in this SWPPP shall be trained and informed of the components and goals of the SWPPP. Qualified personnel will receive training during the site preparation phase of this project. This training will enable site personnel to properly inspect heavy equipment, waste storage areas, run-on/runoff controls, and erosion and sediment control measures. All site employees will also be trained in good housekeeping

techniques, drum handling techniques, and spill response actions at the daily tailgate briefings prior to field activities.

5.3 Recordkeeping and Internal Reporting Procedures

Detailed records will be maintained for SWPPP training, spills, storm water events, and preventative maintenance inspections. Training, inspection, precipitation event, and storm water event records will be maintained in the project files and submitted upon request. Spill documentation will be handled in accordance with the approved SPCCIP.

A record of the dates when major grading activities occur, when soil disturbing activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included.

5.4 Non-Storm Water Discharges

Decontamination fluids associated with surface and near-surface soil sampling, and consisting of an Alconox®/potable water/deionized water mix will be discharged to the site in accordance with best management practices and the ER Project Draft Decontamination Water Discharge Procedure (Appendix A).

Decontamination fluids will be discharged to the ground surface on a daily basis where surface soil and near surface soil (hand-augered) sampling is taking place. However, if field screening, analytical results, or professional judgment suggest the sampling equipment and equipment decontamination rinsate may contain gross quantities of contaminants, the fluids will be containerized in 55-gallon drums. Steam-cleaning fluids possibly generated during the decontamination of excavating equipment, will be captured and contained in appropriate containers. Containerized decontamination fluids will be characterized and disposed of in accordance with the site-specific WCSF.

If a non-storm water discharge occurs, other than a planned discharge of decontamination waters, a spill report will be completed and submitted to Mike Alexander of ESH-18, Mail Stop K497, in accordance with the approved site-specific SPCCIP.

5.5 Consistency With Other Plans

This SWPPP may reflect requirements from LANL's SPCCIP, the site-specific SPCCIP, the site-specific WCSF, and other documents developed for the project as long as the requirements are incorporated into this SWPPP.

5.6 Keeping Plans Current

The FPL shall amend the plan whenever there is a change in design, project activity, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the potential pollutant sources of this plan, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges. Amendments to this plan should be reviewed by ESH-18.

6.0 Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Certified By:

G. Allen 15 May 96
Date
Garry Allen, FU-1 FPL, or His Designee
(505) 667-3394

Prepared By:

Ron P. Blegen 5/15/96
Date
Ron Blegen, ERM/Golder
(505) 662-1366

Reviewed By:

Valerie Rhodes 5/15/96
Date
Valerie Rhodes, ERM/Golder
(505) 662-1306

Reviewed By:

Mike Alexander 5/20/96
Date
Mike Alexander, LANL, ESH-18
(505) 665-4752

APPENDIX A
LANL ER Project
Draft Decontamination Water
Discharge Procedure

**DECONTAMINATION WATER DISCHARGE PROCEDURE
SURFACE-SOIL AND NEAR SURFACE-SOIL HAND SAMPLING**

ESH-18 Policy, Revision 1, 2/13/96

Type of Discharge:

DRAFT

This non-storm water discharge consists of small quantities of deionized or potable water with or without a 1% detergent (Alconox, Liqui-Nox) solution, used as rinsate. This rinsate is used to remove superficial amounts of sediment off of the surface of plastic gloves, personal protective equipment (PPE), stainless steel scoops and hand augers, and plastic sheeting utilized during the collection of soil samples.

The majority of areas to be sampled are not expected to have contaminants present. In the areas where the potential for contamination exists, the rinsate will be used to remove small quantities of sediment attached to gloves, sampling scoops and hand augers, with very low part per million (ppm) concentrations of metals, semi-volatile organics, volatile organics, radionuclides, or high-explosive residues.

Location of Discharge:

Spent rinsate (decon water) will be discharged to the ground at sampling locations on the mesa tops, canyon sides, and canyon bottoms where surface-soil and near surface-soil sampling is taking place. The decon water will be discharged directly on the sampling site to ensure that no additional contaminants are added to the area. The discharge will be conducted to facilitate immediate evaporation. There will be no decon water discharged into a watercourse, barr ditch, storm drain or to any other area where the potential exists to enter one of these areas. Spent rinseate cannot move directly or indirectly to groundwater.

Best Management Practices (BMPs):

Good Housekeeping:

- Maintain all work areas in a clean and orderly manner .
- Provide proper receptacles for all generated wastes.
- Insure that all processes and equipment are in working order.
- Store all materials in a neat and orderly manner.

Preventative Maintenance:

- In order to minimize waste generation a water squeeze bottle or spray bottle containing rinsate will be used to spray small quantities on the PPE or sampling equipment used to sample the site.
- The rinsing operation will be performed directly over the area disturbed from soil sampling, except in areas described above.
- The rinsing of equipment will not take place during or immediately prior to or after a rain event. Conditions must exist for surface evaporation.
- The amount of decon water shall not exceed 6 gallons per day, with a maximum of 100 gallons total for the individual decon site.

Spill Prevention and Response:

- All materials stored, used and generated must meet the requirements of the Laboratory's Spill Prevention Control and Countermeasure (SPCC) Plan.
- All other water discharges that are not in accordance with these procedures must be reported immediately to ESH-18 at 665-0453.
- All spill or releases must be reported immediately to the Laboratory's Emergency Management and Response Office at 667-6211

DECONTAMINATION WATER DISCHARGE PROCEDURE SURFACE-SOIL AND NEAR SURFACE-SOIL HAND SAMPLING

ESH-18 Policy, Revision 1, 2/13/96

Visual Inspections:

- DRAFT
- Prior to any discharge, where field screening instruments, previous analytical or professional judgment (for instance, observation of evidence of stained soils, odors, etc.) indicate gross quantities of contaminants may be on the sampling equipment, the material will not be discharged to the ground, but containerized and treated as suspect hazardous waste.

Employee Training:

- All employees involved in this activity must be trained, and the training documented, on these BMPs, the components and goals of the SWPP Plan.

Record Keeping and Reporting:

- Records will be kept on the decon water discharged for three years.
- The record will include the location, date, field screening data, volume discharged and a signature that these BMPs were followed.
- This record will be included as part of the sites Storm Water Pollution Prevention (SWPP) Plan and a copy provided to Mike Alexander, ESH-18, MS K497 after the sampling activities have been completed.

APPENDIX B

**Storm Water Pollution Prevention Plan
Development Worksheets**

POLLUTION PREVENTION TEAM MEMBER ROSTER	Worksheet #1	
	Completed by:	Ron Blegen
	Title:	Field Team Leader
	Date:	24-Apr-96
Leader: <u>Garry Allen</u> Title: FPL Office Phone: (505) 667-3394 Responsibilities: <u>Signatory Authority; Keeps records and ensures submission of reports.</u>		
Members: 1 <u>Carl Newton</u> Title: FOM Office Phone: (505) 665-8339 Responsibilities: <u>Coordinate plan development, oversee inspections.</u>		
2 <u>Valerie Rhodes</u> Title: FTM Office Phone: (505) 662-1307 Responsibilities: <u>Coordinate plan implementation, coordinate employee training, help conduct inspections</u>		
3 <u>Ron Blegen</u> Title: FTL / Waste Manager Office Phone: (505) 662-1306 Responsibilities: <u>Spill response coordinator, oversee's good housekeeping, performs inspections</u>		
4 <u>Kevin Hyde</u> Title: SSO / RCT / Sampler Office Phone: (505) 662-1349 Responsibilities: <u>Performs inspections</u>		

TABLE 4

13	Nov/Dec 94	confirmation	ref 57	AAC2087	Uranium-235		0.079	PCI/G
13	Nov/Dec 94	confirmation	ref 57	AAC2087R	Uranium-235		0.088	PCI/G
13	Nov/Dec 94	outside pipe	ref 52	AAC2090	Uranium-235		0.07	PCI/G
13	Feb/Mar 94	outside pipe	01-4105	AAA8267	Uranium-238		0.788	PCI/G
13	Feb/Mar 94	outside pipe	01-4105	AAA8269	Uranium-238		0.802	PCI/G
13	Nov/Dec 94	outside pipe	ref 35	AAB6069	Uranium-238		1.06	PCI/G
13	Nov/Dec 94	outside pipe	ref 35	AAB6069	Uranium-238		0.87	PCI/G
13	Nov/Dec 94	outside pipe	ref 34	AAB6070	Uranium-238		3.18	PCI/G
13	Nov/Dec 94	confirmation	ref 40	AAB6071	Uranium-238		1.5	PCI/G
13	Nov/Dec 94	outside pipe	ref 33	AAB6073	Uranium-238		1.385	PCI/G
13	Nov/Dec 94	outside pipe	ref 24	AAB7438	Uranium-238		1.097	PCI/G
13	Nov/Dec 94	outside pipe	ref 8	AAB7440	Uranium-238		1.25	PCI/G
13	Nov/Dec 94	outside pipe	ref 23	AAB7450	Uranium-238		1.414	PCI/G
13	Nov/Dec 94	outside pipe	01-4323		Uranium-238		1.167	PCI/G
13	Nov/Dec 94	confirmation	ref 19	AAC0514	Uranium-238		2.288	PCI/G
13	Nov/Dec 94	outside pipe	ref 31	AAC0515	Uranium-238		1.153	PCI/G
13	Nov/Dec 94	outside pipe	ref 20	AAC0516	Uranium-238		10.261	PCI/G
13	Nov/Dec 94	outside pipe	ref 9	AAC0517	Uranium-238		0.973	PCI/G
13	Nov/Dec 94	outside pipe	ref 45	AAC2078	Uranium-238		0.89	PCI/G
13	Nov/Dec 94	outside pipe	ref 55	AAC2079	Uranium-238		1.092	PCI/G
13	Nov/Dec 94	outside pipe	ref 48	AAC2080	Uranium-238		1.162	PCI/G
13	Nov/Dec 94	confirmation	ref 47	AAC2082	Uranium-238		1.016	PCI/G
13	Nov/Dec 94	confirmation	ref 50	AAC2085	Uranium-238		0.966	PCI/G
13	Nov/Dec 94	confirmation	ref 57	AAC2087R	Uranium-238		1.063	PCI/G
13	Nov/Dec 94	confirmation	ref 57	AAC2087	Uranium-238		1.234	PCI/G
13	Nov/Dec 94	outside pipe	ref 52	AAC2090	Uranium-238		1.187	PCI/G
13	Nov/Dec 94	outside pipe	ref 35	AAB6069R	Vanadium		11.1	MG/KG
13	Nov/Dec 94	outside pipe	ref 35	AAB6069	Vanadium		14	MG/KG
13	Nov/Dec 94	outside pipe	ref 34	AAB6070	Vanadium		19	MG/KG
13	Nov/Dec 94	confirmation	ref 40	AAB6071	Vanadium		16	MG/KG
13	Nov/Dec 94	outside pipe	ref 33	AAB6073	Vanadium		26.6	MG/KG
13	Nov/Dec 94	outside pipe	ref 8	AAB7440	Vanadium		10.8	MG/KG
13	Nov/Dec 94	outside pipe	01-4323		Vanadium		14.8	MG/KG
13	Nov/Dec 94	outside pipe	01-4323		Vanadium		18.5	MG/KG
13	Nov/Dec 94	outside pipe	ref 31	AAC0515	Vanadium		18.1	MG/KG
13	Nov/Dec 94	outside pipe	ref 20	AAC0516	Vanadium		11.8	MG/KG

TABLE 4

13	Nov/Dec 94	outside pipe	ref 9	AAC0517	Vanadium		13.5	MG/KG
13	Nov/Dec 94	outside pipe	ref 45	AAC2078	Vanadium		11.5	MG/KG
13	Nov/Dec 94	outside pipe	ref 55	AAC2079	Vanadium		12.1	MG/KG
13	Nov/Dec 94	outside pipe	ref 48	AAC2080	Vanadium		12.7	MG/KG
13	Nov/Dec 94	confirmation	ref 47	AAC2082	Vanadium		12.6	MG/KG
13	Nov/Dec 94	confirmation	ref 50	AAC2085	Vanadium		15.5	MG/KG
13	Nov/Dec 94	confirmation	ref 57	AAC2087	Vanadium		13.7	MG/KG
13	Nov/Dec 94	outside pipe	ref 52	AAC2090	Vanadium		11.5	MG/KG
13	Nov/Dec 94	outside pipe	ref 33	AAB6073	Water (Unbound)		11.2	%
13	Nov/Dec 94	outside pipe	ref 24	AAB7438	Water (Unbound)		7.66	%
13	Nov/Dec 94	outside pipe	ref 8	AAB7440	Water (Unbound)		14.9	%
13	Nov/Dec 94	outside pipe	ref 23	AAB7450	Water (Unbound)		7.59	%
13	Nov/Dec 94	outside pipe	01-4323	AAC0513	Water (Unbound)		5.64	%
13	Nov/Dec 94	outside pipe	01-4323	AAC0513R	Water (Unbound)		11.05	%
13	Nov/Dec 94	confirmation	ref 19	AAC0514	Water (Unbound)		6.02	%
13	Nov/Dec 94	outside pipe	ref 31	AAC0515	Water (Unbound)		10.2	%
13	Nov/Dec 94	outside pipe	ref 20	AAC0516	Water (Unbound)		15.7	%
13	Nov/Dec 94	outside pipe	ref 9	AAC0517	Water (Unbound)		15.4	%
13	Nov/Dec 94	outside pipe	ref 9	AAC0517R	Water (Unbound)		15.4	%
13	Nov/Dec 94	outside pipe	ref 45	AAC2078	Water (Unbound)		10.7	%
13	Nov/Dec 94	outside pipe	ref 55	AAC2079	Water (Unbound)		10.3	%
13	Nov/Dec 94	outside pipe	ref 48	AAC2080	Water (Unbound)		10.5	%
13	Nov/Dec 94	outside pipe	ref 35	AAB6069R	Zinc		38.9	MG/KG
13	Nov/Dec 94	outside pipe	ref 35	AAB6069	Zinc		49.1	MG/KG
13	Nov/Dec 94	outside pipe	ref 34	AAB6070	Zinc		45.2	MG/KG
13	Nov/Dec 94	confirmation	ref 40	AAB6071	Zinc		33.4	MG/KG
13	Nov/Dec 94	outside pipe	ref 33	AAB6073	Zinc		60.3	MG/KG
13	Nov/Dec 94	outside pipe	ref 24	AAB7438	Zinc		45.7	MG/KG
13	Nov/Dec 94	outside pipe	ref 8	AAB7440	Zinc		38.1	MG/KG
13	Nov/Dec 94	outside pipe	ref 23	AAB7450	Zinc		144	MG/KG
13	Nov/Dec 94	outside pipe	01-4323		Zinc		20.8	MG/KG
13	Nov/Dec 94	outside pipe	01-4323		Zinc		26.5	MG/KG
13	Nov/Dec 94	confirmation	ref 19	AAC0514	Zinc		44.3	MG/KG
13	Nov/Dec 94	outside pipe	ref 31	AAC0515	Zinc		28.7	MG/KG
13	Nov/Dec 94	outside pipe	ref 20	AAC0516	Zinc		33.9	MG/KG
13	Nov/Dec 94	outside pipe	ref 9	AAC0517	Zinc		37.1	MG/KG

TABLE 4

13	Nov/Dec 94	outside pipe	ref 45	AAC2078	Zinc		35.5	MG/KG
13	Nov/Dec 94	outside pipe	ref 55	AAC2079	Zinc		39.8	MG/KG
13	Nov/Dec 94	outside pipe	ref 48	AAC2080	Zinc		49.5	MG/KG
13	Nov/Dec 94	confirmation	ref 47	AAC2082	Zinc		36.9	MG/KG
13	Nov/Dec 94	confirmation	ref 50	AAC2085	Zinc		42	MG/KG
13	Nov/Dec 94	confirmation	ref 57	AAC2087	Zinc		70.4	MG/KG
13	Nov/Dec 94	outside pipe	ref 52	AAC2090	Zinc		61.1	MG/KG

6.0 EXPOSURE MONITORING AND CORRESPONDING ACTIONS

In accordance with Section 6 of the HASP, personnel exposure monitoring requirements, action levels, and the corresponding actions to be taken are specified in the tables in this section (Tables 6-1, 6-2, and 6-3) for each task or group of tasks having different requirements.

I. 6.1 DIRECT-READING INSTRUMENTS

Requirements for exposure monitoring using direct-reading instruments and the corresponding action levels and response actions are specified in Table 6-1 for each task or group of tasks having different requirements, action levels or responses. These requirements, levels, and actions are set in accordance with Section 6 of the HASP. Any exceptions or deviations from requirements of the HASP are noted where applicable.

TABLE 6-1 DIRECT-READING INSTRUMENT REQUIREMENTS							
Hazardous Condition/ Substance	Task(s)	Instrument	Procedure	Location and Frequency of Monitoring	Action Level(s)	Response Action(s)	Action Level Rationale
HEALTH PHYSICS							
Radiation Gross α , gross- β/γ (specific radio-isotopes listed in SSHASP)		β/γ Eberline ESP-1 with HP-260 probe or equiv. α -Ludlum 139 with air proportional probe or equiv. Ludlum Model 19 μ R meter or equiv. dose rate meter.	Per LANL RadCon Manual and training ESH-1 Procedures Manual Per LANL RadCon Manual and training	Surface Sampling/Excavations/Drilling: Intermittent RCT coverage (see table 4-1 Excavated soil, cores, ground surface, and water samples will be screened prior to disturbance.	Background	Field team member trained in ESH-1 procedures performs surveys (soil, core, personnel, etc.). Intermittent ESH-1 coverage. Large area swipes for a (2000 cm ²) counted using field alpha screening instrument; direct frisk for b/g.	Standard levels set by ESH-1.
				Non-intrusive Activities: Ground surface near source (as applicable based on potential for soil contamination) Personnel: Prior to exiting EZ, CRZ (task 4).	Action Level I: > Background α < 500 cpm/probe area β/γ < 5,000 cpm/probe area	Notify ESH-1 of elevated readings. Dedicated field team member trained in ESH-1 procedures performs surveys (soil, core, personnel, etc.). Increased intermittent ESH-1 coverage. a swipes counted using Ludlum 2000 tray counter or equiv.; direct frisk for b/g.	Standard levels set by ESH-1.
				Equipment: Prior to decon and for release Other: Initially to determine pre-job conditions, prior to sampling, intermittently during rad survey walkover	Action Level II: Any smearable contamination on equipment or any detectable activity on personnel. α > 500 cpm/probe area β/γ > 5,000 cpm/probe area Dose rate >5 μ R/hr.	Work may only proceed according to approved RWP and with continuous coverage by an onsite ESH-1 technician (or equiv.) in accordance with Sections 3.2.4 and 3.3.4 of the HASP.	Standard levels set by ESH-1.

PHYSICAL CONDITION

Noise	3	Sound level meter	Appendix F of the HASP An initial survey will be performed to establish zones requiring hearing protection. Other :	Only monitor non-LANL employees: contact Field Unit HS Rep. if LANL employees need monitoring. Noise measurements required when voice must be raised to communicate between two persons located ≤ 3 feet from each other; monitor hearing zone(s) of employees affected by excessive noise. 1 st day of occurrence & whenever operations change warrant monitoring: Sound Level Meter initial measurement and at 30 minute intervals while excessive noise condition persists.	85 dBA (Non-LANL employees only). 80 dBA (Hearing Conservation Program LANL employees only). 84 dBA (Hearing protection required LANL employees only). 90 dBA (Hearing protection required non-LANL employees only).	\geq Action Level: Implement appropriate engineering control(s) per Table 4-3; if unable to lower noise levels below AL, demarcate/post zones of excessive noise and limit access only to employees having sufficient hearing protection training, medical surveillance, and hearing protection per this SSHASP.	OSHA 29 CFR 1910.95 for non-LANL employees. Per DOE and LANL requirements for LANL employees.
VOCs	pipe excavation	Model 580 B OVM 10.6 eV lamp or higher	Per manufacturer's recommendation and per the LANL ER Project Manual for Site H&S Activities	Subsurface soil sampling and during removal of buried sanitary waste line. Periodically in employee's breathing zones, & downwind/upwind to characterize source/dispersion	\Rightarrow 0.5 ppm above bkgd. for 5 minutes in breathing zone	Allow area(s) of concern to vent naturally or by implementing mechanical means. If condition continues to exceed action level, limit EZ access to exposure monitoring personnel only	Refer to Table 2 of the HASP
Heat Stress	All	Thermometer	Refer to ACGIH heat stress guidelines (pages 84 - 90; 1994-1995 TLV booklet).	In shaded area at work site.	Refer to ACGIH heat stress guidelines (pages 84 - 90; 1994-1995 TLV booklet).	Frequent breaks if temperatures are above 85° F. Cooling of skin by water and moving person to shaded area.	Refer to ACGIH heat stress guidelines (pages 84 - 90; 1994-1995 TLV booklet).

ANNEX 10.2

Storm Water Pollution Prevention Plan