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LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT

SPILL PREVENTION, CONTROL, AND COUNTERMEASURES IMPLEMENTATION PLAN

PRSs 49-001(b, c, d, & g)
Technical Area 49

Field Unit 5

Revision 0

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1.0 INTRODUCTION

Potential Release Sites (PRSs) 49-001(b, c, d, & g) are Areas 2, 2A, and 2B in Material Disposal Area (MDA) AB at Los Alamos National Laboratory (LANL) Technical Area (TA) 49. PRSs 49-001(b, c, d, & g) is an area where underground nuclear safety tests involving high explosives (HE) and special nuclear materials (SNM) were conducted. These activities where responsible for depositing significant amounts of plutonium, uranium, lead, and beryllium in the underground shafts. A map is attached (Figure 1) showing the locations of the following PRSs 49-001(b, c, d, & g) at TA-49:

PRSs 49-001(b)	Shaft area under Area 2
PRSs 49-001(c)	Shaft area under Area 2A
PRSs 49-001(d)	Shaft area under Area 2B
PRSs 49-001(g)	Surface soil contamination associated with Areas 2, 2A, and 2B

PRSs 49-001 (b, c, d & g) are listed as Solid Waste Management Units (SWMUs) in the Hazardous and Solid Waste Amendments (HSWA) Module of LANL's Resource Conservation and Recovery Act (RCRA) Part B operating permit. PRSs 49-001 (b, c, & d) comprise the contaminants left beneath the original ground surface at the time of the nuclear safety tests. Because of their similar history and close proximity (they are contiguous), these three PRSs will be treated as a single unit when implementing the recommended Best Management Practices (BMP) Plan. PRS 49-001 (b) has an asphalt pad at the surface. PRSs 49-001 (g) includes the soil contamination on or above the original ground surface within and adjacent to Areas 2, 2A, and 2B. Information on the moisture content of the fill, soil, and tuff beneath the Area 2 asphalt pad was obtained from the RFI core holes and found to be clearly elevated above moisture levels in adjacent holes that were not drilled through the pad.

The work proposed in the BMP plan will improve moisture conditions at Areas 2, 2A, and 2B and provide improved stabilization of the site. The BMP plan will involve:

- Removal of the asphalt pad to eliminate the moisture buildup that presently occurs beneath it;
- Excavate, dry, and replace the fill materials underlying the asphalt pad to reduce the moisture levels at the site;
- Construct a trench and berm upgradient of the site to divert surface and subsurface runon from the site;
- Regrade the fill materials and soils to eliminate ponding and improve drainage at the site;
- Cover the regraded site with a clean layer of crushed tuff, armored with gravel to resist erosion; and
- Monitor the site to determine the effectiveness of the BMPs

The excavation will be performed using a backhoe(s), trackhoe(s), front end loader(s), motor grader, haul trucks, compactor, crusher, and possibly a small to medium sized dozer

2.0 POTENTIAL RELEASES

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

- **Hydraulic fluid** used in the hydraulic systems of heavy equipment;

- **Diesel fuel** and/or gasoline used in the trucks, heavy equipment, and steam-cleaning generator;

- **Decontamination fluids** generated during on-site steam-cleaning of equipment fluids include deionized water, potable water, soil/water mixtures, and an Alconox/water mixture

2.1 Hydraulic Fluid

Hydraulic fluid contained within the hydraulic systems of heavy equipment will not be transferred or handled during the site excavation activities. During and prior to the start of excavation activities equipment, including all hydraulic lines, will be inspected by the Site Safety Officer (SSO). In the event of a hydraulic line leak, the following procedures will be implemented:

- All operations will cease and the hydraulic lines will be repaired and inspected before operations resume;

- The Emergency Management and Response Group (EM&R) will be contacted at 667-6211 (after hours 667-7080) for further instructions;

- Absorbent materials will be applied to the spill;

  Absorbent materials will be collected, drummed, and held in an on-site, temporary drum storage area; Waste Profile Request (WPR) forms will be completed to characterize the materials, and appropriate waste disposal request forms will be submitted for transportation of drummed waste to appropriate LANL waste management areas; and

- A spill report will be completed and submitted to ESH-18, mail stop K497, to the attention of Mike Alexander (spill report form 9-4A)

It is not anticipated that any hydraulic line leak will release more than 5 gallons of hydraulic fluid. Visibly stained materials will be cleaned or removed and drummed.

2.2 Diesel Fuel

Because of the anticipated duration of the clean-up activities, approximately one week, it is likely that the equipment will need to be refueled on-site. Prior to fuel transfer, all caps, hoses, and nozzles will be inspected for breakage and proper functioning by the SSO. If a hand pump is used to transfer diesel fuel, one person will operate the pump and a second person will monitor the discharge. 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, the following procedures will be implemented:

- Absorbent materials will be applied to the spill;

- The EM&R will be contacted at 667-6211 (after hours at 667-7080) for further instructions.

- Absorbent materials will be collected, drummed and held in an on-site, temporary drum storage area; WPR forms will be completed to characterize the materials; and appropriate waste disposal request forms will be submitted for transportation of drummed waste to appropriate LANL waste management areas; and

- A spill report will be completed and submitted to ESH-18, Mail stop K497, to the attention of Mike Alexander (spill report form 9-4A).

It is not anticipated that any fuel line leak will release more than 5 gallons of fluid. Visibly stained materials will be cleaned or removed and drummed.

2.3 Gasoline

Gasoline-powered equipment may be used during clean-up activities. Because of the anticipated duration of the clean-up activities, approximately one week, it is likely that the equipment will need to be refueled on-site. Prior to dispensing gasoline, all caps, hoses, and nozzles will be inspected for breakage and proper functioning. The gas dispensing nozzle will be carried with the outlet facing up until the nozzle is over the receiving tank. In the event of a gasoline spill, the following procedures will be implemented:

- Absorbent materials will be applied to the spill.
- The EM&R group will be contacted at 667-6211 (after hours 667-7080) for further instructions;
- Absorbent materials will be collected, drummed, and held in an on-site, temporary drum storage area; WPR forms will be completed to characterize the materials, and appropriate waste disposal request forms will be submitted requesting transportation of drummed waste to appropriate LANL waste management areas.
- A spill report will be completed and submitted to ESH-18, Mail stop K497, to the attention of Mike Alexander (spill report form 9-4A)

It is not anticipated that any gasoline leak will release more than 5 gallons of fluid. Visibly stained materials will be cleaned or removed and drummed.

2.4 Steam-cleaning Fluids

A bermed decontamination pad may be required. The pad may be constructed of heavy-gauge plastic sheeting bermed on four sides with lumber or other suitable material. The decontamination pad will be in the vicinity of a steam-cleaning unit and will be large enough to fit a tracknoe. In the event of a steam cleaning decontamination water spill, the following procedures will be implemented.

- Initial containment will be provided by the plastic sheeting and control berms.
- The EM&R will be contacted at 667-6211 (after hours 667-7080) for further instructions;
- Absorbent materials will be applied to the spill.
- Absorbent materials will be collected in 55-gallon drums and held in the on-site, temporary drum storage area; WPR forms will be completed to characterize the materials; and appropriate waste disposal request forms will be submitted requesting transportation of drummed waste to appropriate LANL waste management areas; and
- A spill report will be completed and submitted to ESH-18, Mail stop K497, to the attention of Mike Alexander (spill report form 9-4A)

3.0 DRUM STORAGE AREA

A drum/container storage area will be constructed on-site. Disposable items (gloves, plastic sampling scoops, coveralls), steam-cleaning fluids, and other solid or liquid wastes generated by site activities will be containerized and stored in this area. Only containers holding liquids will be surrounded with a secondary containment berm. Both the floor and berm will be covered with heavy-gauge plastic sheeting. All containers will be staged on wooden pallets, labeled, and covered with heavy-gauge plastic sheeting.

Precipitation may result in storm water collecting in lined, bermed areas. If significant amounts of standing water are present within the bermed areas, the storm water will be pumped to a container designated for storm water and held in the temporary container storage area. The storm water container will be sampled for waste characterization if acceptable knowledge, analytical results or field screening indicates the presence of contamination.

The bermed container storage area will be inspected weekly until all containers are removed. Inspections will be documented by the waste manager. If inspections indicate that the containment area leaked, and site soil sample analyses indicate the decontamination fluid is contaminated then surface soil samples may be collected from beneath the sheeting and outside of the berms and analyzed. If sample analyses indicate that the soil beneath the containment area is contaminated then all soil likely to be contaminated with the decontamination fluid will be removed and disposed of properly.

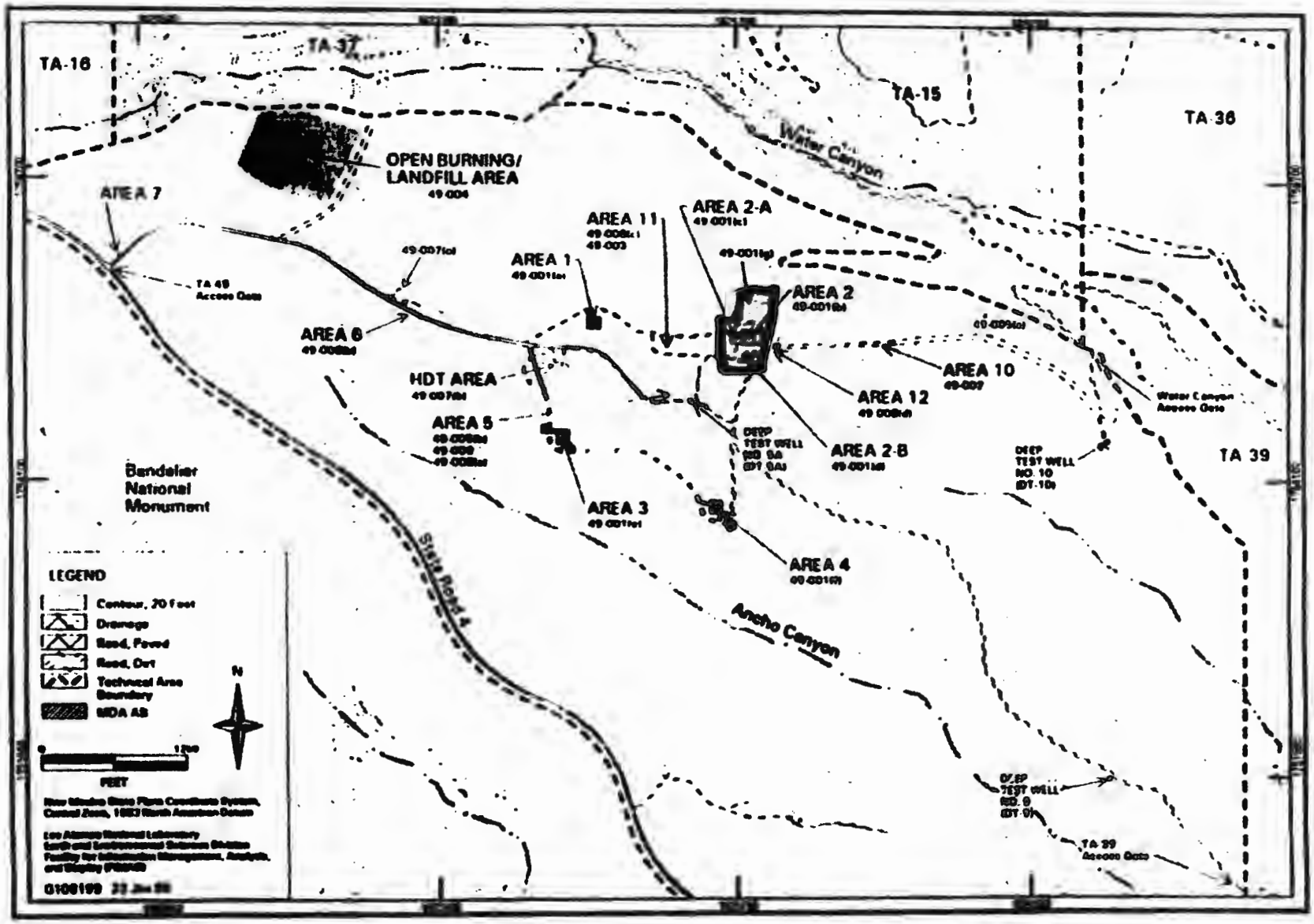

Figure 1.0 Location Map of PRSs 49-001 (b, c, d & g)