

STORM WATER POLLUTION

PREVENTION PLAN



TECHNICAL AREA 49 MATERIAL DISPOSAL AREA AB

LOS ALAMOS NATIONAL LABORATORY



a requirement of the

NPDES GENERAL PERMIT

prepared by
ERM/Golder Los Alamos Project Team
2237 Trinity Drive, Bldg. 2
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Rev. 2, April 1998



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**STORM WATER POLLUTION PREVENTION PLAN ,
TECHNICAL AREA 49, MATERIAL DISPOSAL AREA AB
LOS ALAMOS NATIONAL LABORATORY**

PREFACE

This storm water pollution prevention (SWPP) plan was developed in accordance with the provisions of the Clean Water Act (33 U.S.C. §§1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4) and the regulations established by the US Environmental Protection Agency (EPA) for National Pollutant Discharge Elimination System general permits for storm water discharges associated with industrial activity (US EPA, 1992c at 41235). The applicable storm water discharge permit is EPA General Permit Number NMR00A384 (US EPA, 1992c at 41299-41300). The SWPP plan is also intended to meet the requirements of applicable US Department of Energy (DOE) orders, as follows:

- DOE 5400.1, General Environmental Protection Program
- DOE 5400.5, Radiation Protection of the Public and the Environment
- DOE 5480.1B, Environment, Safety, and Health Program for Department of Energy Operations
- DOE 5480.4, Environmental Protection, Safety, and Health Protection Standards
- DOE 5820.2A, Radioactive Waste Management

This SWPP plan applies to discharges of storm water from the construction activities employed to implement the best management practices (BMPs) plan at Material Disposal Area AB located in Technical Area 49. The BMP is designed to improve adverse moisture conditions at Areas 2, 2A, and 2B and will include installation of an interceptor trench, removal of the asphalt pad, redistribution and contouring of the existing fill material, and covering the site with clean fill and gravel mulch.

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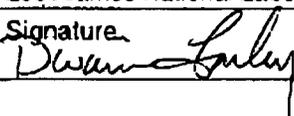
**STORM WATER POLLUTION PREVENTION PLAN
CERTIFICATION STATEMENT OF AUTHORIZATION**

"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 submitted, 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."

Dwain Farley
Dwain Farley, EES-1
MDA AB Project Leader
Los Alamos National Laboratory

6/5/98

Signature Date

NONSTORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION			Completed by: ERM/Golder Los Alamos Project Team		
			Title: Nonstorm Water Discharges at TA-49, MDA AB		
			Date: April 1998		
Date of Test or Evaluation	Outfall Directly Observed During the Test (Location)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Nonstorm Water Discharge	Identify Potential Significant Sources	Name the Person Conducting the Test or Evaluation
1997	Dust suppression	Knowledge of process	Not expected to result in runoff	Dirt roads and possibly excavated fill; no runoff is anticipated	ER Project
1998	Decontamination water	Knowledge of process	Nonhazardous detergent solution (max. of 6 gals./day)	Sampling activities; will not be discharged unless clean	ER Project
					ER Project
					ER Project
					ER Project
CERTIFICATION					
<p>I, <u>Dwain Farley</u>, certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure 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 completed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p>					
<p>A. Name and Official Title Dwain Farley MDA AB Project Leader Los Alamos National Laboratory</p>			<p>B. Area Code and Telephone No. (505) 667-2415</p>		
<p>C. Signature </p>			<p>D. Date Signed 6/5/98</p>		

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1.0 POLLUTION PREVENTION TEAM

This storm water pollution prevention (SWPP) plan applies to operations at Los Alamos National Laboratory (the Laboratory), Technical Area (TA) 49, Material Disposal Area (MDA) AB, on the Frijoles Mesa Site in Los Alamos County, New Mexico. The ERM/Golder Los Alamos Project Team at the Laboratory has established a Pollution Prevention Team whose members are responsible for developing and implementing the SWPP plan.

1.1 Designation and Pollution Prevention Team

The MDA AB project leader appoints at least three members to the Pollution Prevention Team. The members are selected because of their familiarity with facility activities at MDA AB and with the potential impact of these activities on storm water runoff. The Pollution Prevention Team also includes a representative of the Laboratory's Water Quality and Hydrology Group (ESH-18). Each member of the team must receive the annual training described in Section 3.5. A list of current Pollution Prevention Team members is included in Appendix A.

1.2 Duties of Pollution Prevention Team Members

The Pollution Prevention Team will select individual team members to perform specific duties applicable to the implementation of the SWPP plan. These individuals will include

- *Pollution Prevention Team Leader.* One of the Pollution Prevention Team members is designated as the team leader. He or she is responsible for revising and updating the SWPP plan, as required under Section 5.4. The team leader, or qualified designee, will perform the annual comprehensive site compliance evaluation described in Section 5.0. The team leader will also ensure that all team personnel receive the training specified in Section 3.5.
- *Team Members.* Other members of the team are responsible for periodic inspections of MDA AB, as described in Section 3.4. In the event of a spill or release, a team member will also incorporate documentation of the spill and cleanup procedures into Appendix B. Any team member may perform the annual comprehensive site compliance evaluation of MDA AB.

Team members may also be called upon to assist the team leader, especially in the event of a spill or a runoff event that requires a greater than usual level of effort for a short period of time.

1.3 Appointment of New Team Members

The Pollution Prevention Team members are appointed by the MDA AB project leader, and the representative of ESH-18 is appointed by the ESH-18 group leader. Each representative will serve until removed or replaced by the appropriate manager. The list will be revised whenever a member is added to or removed from the team or when the SWPP plan duties of an existing team member are changed.

2.0 SITE ACTIVITIES AND POTENTIAL POLLUTION SOURCES

TA-49, the Frijoles Mesa Site, occupies approximately 1280 acres along the southwestern boundary of the Laboratory. The potential release sites (PRSs) covered under this plan include 49-001 (b, c, d, and g) and 49-003. The PRSs addressed in this SWPP plan are located on the mesa top at an elevation of approximately 7140 feet. These sites are approximately 1650 feet

from an ephemeral stream in the bottom of Water Canyon. The distance to the nearest mesa edge, above a tributary to Water Canyon, is approximately 700 feet. The layout of MDA AB is shown in Appendix C.

TA-49 has been used from the mid-1940s to the present as a buffer zone for firing sites in adjacent TA-15 and TA-39. A period of intense experimental activity at TA-49 took place from late 1959 through mid-1961, during which nuclear safety and related experiments deposited significant amounts of plutonium, uranium, lead, and beryllium in underground shafts. These activities were responsible for almost all of the radioactive and hazardous materials currently present at TA-49.

2.1 Site Activities at MDA AB

A stabilization plan has been prepared as a best management practice (BMP) for MDA AB; the plan includes the following site activities:

- remove the asphalt pad to reduce the moisture buildup that presently occurs beneath it,
- expose and regrade the fill materials underlying the asphalt pad to promote drying and surface runoff,
- construct a diversion channel upgradient of the site to divert surface water run-on from the site,
- complete regrading of the site to eliminate ponding and improve drainage,
- cover the regraded site with a clean layer of crushed tuff,
- cover the clean crushed tuff surface with a layer of soil,
- revegetate the soil layer with shallow-rooting grasses and armor it with gravel to resist erosion,
- locate and remove, or stabilize, surface contaminants that could affect worker health and safety in work areas near the site, and
- monitor the site to determine the effectiveness of the BMPs.

2.1.1 Surface Water Runoff

The site is approximately 1650 feet from an ephemeral stream in the bottom of Water Canyon. The distance to the nearest mesa edge, above a tributary to Water Canyon, is approximately 700 feet. The estimated two-year 24-hour rainfall for the Los Alamos area, including MDA AB, is 1.5 inches. Therefore, the potential runoff from this approximately 4-acre site is 0.5 acre feet of storm water. Additional runoff prevention measures may include, but are not limited to, covering the excavated area during anticipated storm water events and construction of a silt fence downgradient of the construction activities.

2.1.2 Surface Water Run-on

Surface run-on water will be controlled by constructing a diversion channel upgradient of the site to the west to temporarily divert surface storm water run-on during construction. The approximate location is shown in Appendix C.

2.2 Inventory of Exposed Materials

Significant materials, as defined in 40 CFR 122.26(b)(12), are substances related to industrial activities such as process chemicals, raw materials, fuels, and pesticides. When these substances are exposed to storm water runoff, they may be carried to a receiving stream with the

surface water flow. To address this contamination potential, a brief description of materials known to have been disposed at MDA AB is provided below.

The largest potential pollutant sources will be the soils exposed during excavation. The contaminants of potential concern at this site include plutonium, uranium, beryllium, and lead. As contaminated materials are excavated, the loosened soil and debris will become more vulnerable to transport by storm water.

2.2.1 Other Potential Sources

There are several other potential sources of pollutants located at the site that should be mentioned. Exposure of these sources to storm water exists primarily during transfers or if an accidental spill occurs.

Laydown, Stockpile, Parking, and Waste Storage Areas

- Areas free of cultural and other resource conflicts will be identified for material laydown and stockpiling, vehicle parking, and waste asphalt storage areas. The laydown areas have been sited outside the boundaries of any PRSs and will be used for temporary storage of construction supplies and equipment, material processing, and material assembly. The stockpile areas will be used to store such materials as clean fill, soil, and gravel. The parking areas will be used for construction equipment, vehicles, and trailer offices. Waste storage areas would be used primarily for waste asphalt if the asphalt is found to be contaminated. Contaminated asphalt would be stockpiled or stored in rolloff bins. It is anticipated that most of these activities will be conducted in areas already disturbed by past activities along the road leading east from the site toward Area 10.

Heavy Equipment Use

- Heavy equipment will also be in use during construction activities. The possibility of leaks of diesel fuel, hydraulic fluid, gasoline and motor oil from heavy equipment will be mitigated by weekly inspections for worn parts, leaking hoses, and other problems before the equipment is allowed on site.

2.3 Nonstorm Water Discharges

There are few potential sources for nonstorm water discharges at MDA AB, and the discharge of these sources is limited in both quantity and frequency. Known potential sources of nonstorm water discharges include the following:

- During dry periods, unpaved roads are sprinkled with water on a regular basis. On a monthly basis, the contractor may also choose to apply a solution of a commercial dust suppressant, Dust-Ban 8806M Dust Control, consisting mainly of magnesium salts or an approved equivalent. This dust suppressant is not hazardous to human health or the environment but could cause elevated concentrations of magnesium in storm water runoff from areas where it is applied.
- In the case that sampling is performed, the sampling equipment will be decontaminated by washing with a nonhazardous detergent solution and discharged up to 6 gallons per day under the Laboratory notice of intent for decontamination water.

As stated in the Environmental Protection Agency's general permit for storm water discharges associated with industrial activity (EPA, 1992c), the SWPP plan must include a certification that

all storm water outfalls have been evaluated for the presence of nonstorm water discharges. The nonstorm water discharge assessment and certification form (p. vi) meets this requirement.

2.4 Documented Spills and Leaks

No spills or leaks appear to have occurred in this area since October 1, 1989, which may have had the potential to affect the chemical or radiological quality of runoff and sediments. In the event of a future spill, a member of the Pollution Prevention Team will document the spill and associated cleanup activities for inclusion in Appendix B of this SWPP plan.

2.5 Site Drainage Maps

The site drainage maps illustrate the overall site location and indicate property boundaries, buildings, and operation or process areas. They also provide information on drainage, storm water control structures, and receiving streams. These features are located on maps to help assess where potential storm water pollutants are located on the site, where they mix with storm water, and where storm water leaves the site. All of this information is essential in identifying the best opportunities for storm water pollution prevention or control. The site maps include the following features:

- an outline of the drainage area for each storm water outfall and a prediction of the direction of flow, including topography;
- each existing structural control measure to reduce pollutants in storm water runoff (e.g., diversion ditches);
- surface water bodies (e.g., canyon name);
- locations of areas of soil disturbance and areas that will not be disturbed; and
- locations of the following activities where such activities are exposed to precipitation, laydown areas, construction areas, parking areas, stockpile areas, and waste storage areas.

Please consult the MDA AB site drainage map in Appendix C.

2.6 Drainage Patterns

A list of the significant activities occurring at MDA AB and the drainage areas potentially affected by these activities are included in Table 1. The activity locations are also shown on the map in Appendix C.

TABLE 1
DESCRIPTION OF DRAINAGE PATTERNS AND FLOW DIRECTIONS

Drainage Area	Activity Area	Flow Direction	Activities and Potential Contaminants
A	Construction	North	Asphalt removal, fill excavation, soil drying/stockpiling, site regrading plutonium, uranium, beryllium, lead
B	Construction	East	Diversion channel construction, site regrading No contaminants

2.7 Sampling and Analysis of Storm Water Events

In addition to the required sampling of storm water runoff, the Laboratory has implemented an ongoing sampling and analytical program to identify potential radiological and chemical contamination of other media. This program includes sampling and analysis of soils, stream sediment, vegetation, and the atmosphere at various locations throughout TA-49 and adjacent areas. Data collected in this program are available in annual reports prepared and distributed by the Laboratory's Water Quality and Hydrology Group (ESH-18). The pollution prevention team leader will review all environmental data collected in and around MDA AB to identify any potential issues of concern not already addressed in the SWPP plan. Any future data collected for storm water runoff will be included as Appendix D to this plan.

2.8 Risk Identification and Summary of Potential Pollution Sources in MDA AB

The site activities that may contribute to potential storm water pollution are the construction of the trench and berm, removal of the asphalt pad, excavation and redistribution of fill material, the storage of waste, stockpiling of materials, and the refueling of heavy equipment during construction activities. Debris loading will be conducted away from drainage pathways. Heavy equipment will be refueled in a manner that prevents fuel discharge to the environment.

- **Waste Storage Area.** No hazardous substances will be used during the construction activities. It is anticipated that all equipment will be dry decontaminated. In the case that wet decontamination becomes necessary, a decontamination area will be set up including secondary containment for liquids. All liquids would be containerized and stored in the waste storage area awaiting disposal. All waste will be managed in accordance with the approved Waste Characterization Strategy form for these activities (Environmental Restoration Project 1998, 57587). This area will be inspected and documented weekly until all containers are removed.
- **Vehicle and Equipment Parking, Fueling and Maintaining Areas.** Vehicles and equipment used at MDA AB are regularly parked outdoors in both paved and unpaved areas. Fueling and routine maintenance of vehicles also occur in these areas. The possibility that oil, diesel fuel, antifreeze, or other materials could be spilled in these areas cannot be completely eliminated. BMPs have been implemented to minimize the possibility of such a spill. These BMPs may include inspection of all caps, hoses, and nozzles on equipment before fuel transfer. On-site vehicles will receive regular preventive maintenance to reduce the chance of leaks; petroleum products will be stored in tightly sealed containers that are clearly labeled; a spill kit containing absorbent materials will be maintained on site; and a spotter will be used to prevent an overfill when refueling equipment.
- **Roads Used for Transport.** Waste and other materials are moved throughout MDA AB on both paved and unpaved roads. Administrative control practices, including speed limits, warning signs, and personnel training have been implemented to minimize the risk of a spill or release because of a transportation accident. In the event of such an accident, appropriate cleanup procedures will be implemented immediately by on-site personnel. The Emergency Management and Response Group (EM&R) will be contacted at 667-6211 (after hours 667-7080) for further instructions.

If a nonstorm water discharge occurs other than planned decontamination waters, the spill will be reported to the Water Quality & Hydrology Group, ESH-18, Mail Stop K497, or phone 665-0453.

3.0 BMPs TO PREVENT STORM WATER POLLUTION

Standard operating and maintenance procedures for the MDA AB construction activities are designed to minimize the potential for spills, releases, exposure of materials, or any other events that could adversely affect the quality of water and sediment that may be transported out of the area by storm water runoff. Procedures comply with the Laboratory's BMP Program; its Spill Prevention Control and Countermeasure (SPCC) plan; the Environment, Safety and Health section of the Laboratory Manual; and applicable Department of Energy (DOE) directives and orders (see Preface).

3.1 Good Housekeeping

The following good housekeeping practices will be followed on site during the BMP construction operations:

- All materials stored on site will be stored in a neat, orderly manner in accordance with all applicable Laboratory policies and procedures. Appropriate containers will be used and they will be stored (if possible) under a roof, tarpaulin, or other enclosure.
- The on-site waste manager will perform weekly inspections to ensure proper use and disposal of materials on site and will train all site personnel on good housekeeping BMPs and the requirements of this SWPP plan.
- All excavated asphalt will immediately be placed in bulk containers or stockpiled and staged at the waste storage area.
- All containers in the waste storage area will be sealed after operational hours or when full, whichever comes first.
- All containers and control areas will be properly labeled and posted.

3.2 Preventative Maintenance Program

This current plan includes requirements for weekly inspection and documentation that on-site heavy equipment is in good working order and free from leaks or spills. All operations involving heavy equipment (materials handling, decontamination, refueling, parking) will be conducted away from potential drainage pathways to minimize the possibility for leak or spill contamination to leave the site. Problems identified during weekly inspections will be documented and will receive immediate corrective action. A weekly inspection form for MDA AB is provided in Appendix E.

- All containers will be inspected and documented weekly for structural integrity and for stability before movement.
- All storm water control measures, such as diversionary ditches, silt fences, secondary containment, and berms, will be inspected weekly and after significant storm water events for structural integrity. All deficiencies found during inspections will be corrected and documented immediately.
- Records of all equipment inspections and corrective actions will be maintained as part of the permanent project file and will be available upon request.

3.3 Spill Prevention and Response Procedures

Although the probability of spills and releases is minimized by the application of good housekeeping procedures and appropriate operational methods, a spill is conceivable at MDA AB. Specific spill response and cleanup procedures will depend on the nature of the spilled material and the location of the release. In the event of a liquid spill, absorbent materials will be applied to the spill, drummed, and held on site in the waste storage area awaiting characterization. The EM&R Group will be contacted at 667-6211 (after hours 667-7080) for further instructions. A spill report will be completed and submitted to ESH-18.

All loading and unloading of materials will be conducted away from storm water channels and during periods without storm-water-producing events. Drummed liquid wastes (such as decontamination water) will be transferred into containers within secondary containment areas that will block direct discharge from the site.

3.4 Inspections

Qualified personnel shall inspect weekly, while on site, disturbed areas of the project site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been finally stabilized, such inspection shall be conducted at least once every month for arid months. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. Inspections should include the following:

- Measures to reduce pollutant loading shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed.
- Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.
- Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system.
- Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly.
- Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

3.5 Employee Training

Employees will be trained on proper decontamination procedures; storage, handling and disposal of generated liquid site wastes; inspection of heavy equipment; secondary containment and erosion control devices; BMPs, including good housekeeping practices; spill response actions; and proper implementation of the SWPP plan and SPCC implementation plan during prefield

work briefings and daily tailgate safety meetings before the start of each day's site activities. Training records are kept in Appendix F.

3.6 Recordkeeping and Documentation

The pollution prevention team leader is responsible for keeping the SWPP plan current so that it accurately reflects present conditions and practices for the MDA AB closure project. The pollution prevention team leader will initiate revision of the SWPP plan whenever changes in operations or other conditions require it. It is the responsibility of each member of the Pollution Prevention Team to bring to the attention of the pollution prevention team leader any changes in conditions or operations at the site that require the revision or incorporation of new material to the SWPP plan. Some conditions that may require revision to the SWPP plan are described in Section 5.3. This SWPP plan will be kept on site during the implementation of the BMP plan, and the original will be sent to the Environmental Restoration (ER) Project's Records Processing Facility (RPF).

Other items that must be documented to ensure adequacy of the SWPP plan include

- results of inspections, including the annual comprehensive site compliance evaluation;
- all MDA AB sampling and analytical data for storm water, soils, and sediment;
- additions to and changes in operational areas and any exposed materials;
- land surface modifications or other structural changes affecting the directions of drainage during storm events;
- the occurrence and cleanup of any spills or releases;
- areas that are susceptible to erosion or sedimentation by storm water runoff; and
- any other factors that may influence the quality of storm water runoff from MDA AB.

Documents relating to these items are quality records, managed according to the DOE's "Records Management System" and the RPF. In general, records related to the SWPP plan and storm water pollution control measures should be retained for at least six years, unless another period is specified in this SWPP plan.

4.0 CONTROLS TO REDUCE POLLUTANTS

Although sediment discharge to the canyons cannot be entirely eliminated, structural controls will be installed, as necessary in areas that are prone to erosion. These controls include diversion ditches, channels, or swales; constructed berms; slope or surface stabilization; and other structures as necessary.

4.1 Sediment and Erosion Controls

Before construction activities begin at MDA AB, a silt fence will be constructed below the construction area. This structure should capture any sediment transfer because of sheet flow runoff. There is currently a drainage channel upgradient of the site to help control run-on. Additional run-on and runoff ditches will be constructed as needed to control erosion and sediment transport.

Upon completion of the construction activities, boundary areas and remaining disturbed soils will be backfilled and revegetated to prevent sheet flow erosion. Specifically, the revegetation process will be as follows.

- Subsoil will be prepared to eliminate uneven surfaces and low spots, while maintaining profiles and contours and blending slopes into level areas. Foreign materials and undesirable plants and weeds will be removed by hand or with an herbicide.
- Topsoil will be added to a minimum depth of four inches, raked smooth, and applied during dry weather on a dry, unfrozen subgrade. Topsoil will be graded to ensure positive drainage. Terry Fox (667-3024) of Ecology Group (ESH-20) should be contacted for a determination of seed content and applications rules.

If evidence of extensive erosion is encountered, the pollution prevention team leader will be notified. The team leader will then examine the affected area to identify the source or sources of the sediment discharge and will recommend the appropriate actions to minimize future erosion and sediment transport.

Specific actions that may be used to control erosion and sediment transport include reshaping contours to eliminate steep slopes, construction of berms, installation of silt fences, riprap or other appropriate water control structures, revegetation of exposed areas, and, if feasible, laying asphalt paving over areas prone to erosion. Tuff that is excavated during the closure activities for use as fill material will be placed in stable piles and surrounded by silt fences or bermed, if necessary, to prevent erosion.

4.2 Management of Storm Water Run-on and Runoff

At this time, the existing controls used for storm water management and the minimization of erosion and sedimentation at MDA AB include an upgradient drainage channel and associated culvert and a downgradient culvert running under the road and draining into the canyon. There is also dense vegetation with a flat terrain to help minimize run-on and runoff.

The plan to manage storm water run-on and runoff at this site includes

- placement of silt fences downgradient to the north and east of the construction area;
- regrade of the fill area to prevent ponding;
- placement of a surface run-on diversion channel upgradient to the south and west of the site;
- placement of riprap, if needed, at the end of discharge points to prevent erosion;
- construction of flow dissipation devices, if needed, within the downstream drainage channels to lessen flow velocities; and
- implementation of site monitoring and maintenance plans.

Site runoff water will be periodically sampled and analyzed for constituents that may have migrated from the site or from upgradient PRSs as part of the Laboratory's National Pollutant Discharge Elimination System general permit.

4.3 Other Controls

In general, the following controls will be implemented under this SWPP plan:

- no solid materials, including building materials, shall be discharged to a watercourse;
- off-site vehicle tracking of sediment and the generation of dust shall be minimized; and
- the plan shall ensure and demonstrate compliance with the Laboratory's permits and requirements for waste disposal sanitary sewer or septic system regulations.

4.4 Documentation of Runoff Control Activities

The BMP field team leader (FTL) is responsible for inspection, maintenance, and repair of the storm water pollution controls described in this plan. This FTL will also produce and maintain inspection, maintenance, and repair records. Original records will be submitted to the ER Project RPF, and copies will be maintained in the ERM/Golder Los Alamos Project office. Additionally, the MDA AB project leader (Dwain Farloy) will maintain copies of these records, which are received from ERM/Golder on a weekly basis.

5.0 COMPREHENSIVE SITE COMPLIANCE EVALUATION

A comprehensive site compliance evaluation inspection of the BMP at MDA AB will be performed annually during August or September by the pollution prevention team leader. This time frame was selected for the annual inspection because it falls at the end of the period when intense thunderstorms are common in the Los Alamos area and, therefore, is the time of year when any problems related to precipitation and runoff are most likely to be apparent. Additionally, any problems that may be identified during an inspection in August or early September can be corrected within 12 weeks with a relatively low probability of delay because of snow or ice accumulation because heavy snowfall is infrequent before December.

5.1 Evaluation Procedures

During the comprehensive site compliance evaluation, the pollution prevention team leader will examine all operational areas of MDA AB for any conditions that may contribute to the presence of contaminants in runoff from MDA AB. The pollution prevention team leader will use a Site Compliance Evaluation Checklist to ensure that significant operational areas and relevant conditions are not overlooked during the inspection.

Areas inspected in detail will include all outdoor waste storage areas, material storage areas, equipment and vehicle storage and maintenance areas where sources of nonstorm water runoff are located. Specific items that will be evaluated during the inspection of each area will include

- exposed materials or wastes that may contribute to contamination of storm water runoff,
- any evidence of spills that may have occurred in the operational areas and their potential for contributing contamination to runoff,
- gullies or other evidence of erosion and sediment transport,
- areas that may have been altered by construction or other activities so as to change the direction of storm water runoff, and
- any other factors that may require modification of either operating procedures or the contents of the SWPP plan.

In addition, the pollution team leader will examine all structural features designed to convey runoff and minimize erosion, including culverts, drains, and open channels, to ensure that they are in good working condition and are serving their intended purpose. All observations made during the inspection will be documented on the Site Compliance Evaluation Checklist.

5.2 Report on Results of the Comprehensive Site Compliance Evaluation

Within two weeks after performance of the comprehensive site compliance evaluation, the pollution prevention team leader will prepare a report describing the results of the inspection and

any irregularities that were encountered during the evaluation. The report will include, as a minimum, the following items:

- date(s) on which the inspection was performed;
- the personnel who performed the inspection;
- a copy of the Site Compliance Evaluation Checklist;
- a written summary of major observations relating to implementation of the SWPP plan;
- a summary of all changes made to the SWPP plan, in accordance with Section 5.3; and
- a description of any incidents of noncompliance with SWPP plan that were noted during the inspection and the actions that were taken to correct them.

All reports describing results of the annual Comprehensive Site Compliance Evaluation will be incorporated into Appendix G of the SWPP plan. These reports will be retained as part of the SWPP plan for as long as the SWPP plan remains in effect.

5.3 Implementation of Corrective Actions

This SWPP plan will be amended whenever there is a change in the design, construction, operation, or maintenance procedures at MDA AB that has a significant effect on the potential for discharge of contaminants in storm water runoff from the area. Examples of such a change could include changes in the types of operations performed in any of the facilities or significant change in the direction of runoff because of construction or modification of roads, paved pads, buildings, or other structural features. The SWPP plan will also be amended whenever a comprehensive site compliance evaluation or other inspection identifies any significant changes in operational areas, procedures, or materials handled that may affect the potential for contaminant migration from the site in storm water or sediment.

Any required changes to the SWPP plan sections describing potential pollution sources (Section 2.2 and Appendix G) must be made within two weeks after the need for the change is reported to the Pollution Prevention Team. If the modification of the SWPP plan requires any changes in operational procedures, inspections, or structural features for the control of runoff and sediment, those changes must be implemented within 12 weeks after the modification is incorporated into the SWPP plan.

5.4 Revision of SWPP Plan

This SWPP plan will be amended annually within 60 days after completion of the comprehensive site compliance evaluation. It should also be amended whenever there is a change in the design, construction, operation, or maintenance procedures at MDA AB that has a significant effect on the potential for discharge of contaminants in storm water runoff from the area. Examples of such a change could include changes in the types of operations performed at MDA AB or significant changes in the direction of runoff because of construction or modification of roads, paved pads, buildings, or other structural features. The SWPP plan will also be amended whenever a comprehensive site compliance evaluation or other inspection identifies any significant changes in operational areas, procedures or materials handled that may affect the potential for contaminant migration from the site in storm water or sediment.

Certain specific events trigger requirements for modification of the SWPP plan either by revision of existing sections or by incorporation of new material into the document. Some events requiring modification of the SWPP plan and sections of the SWPP plan that typically would be modified following the event are listed in Table 2. However, Table 2 is not exhaustive, and any event that

has the potential for significantly affecting storm water runoff or sediment transport from MDA AB may require modification of the SWPP plan, whether or not it is listed in Table 2.

The Pollution Prevention Team is responsible for timely amendment of the SWPP plan, whenever required, and is also responsible for evaluating changes in procedures, activities, or other conditions at MDA AB that may require amendment of the SWPP plan. The Pollution Prevention Team will make any required changes to the SWPP plan sections describing potential pollution sources (Section 2.2) within two weeks of being notified of the need for the change.

Amendments to the existing contents of the SWPP plan must be reviewed and approved by both the MDA AB project leader and ESH-18, the same organizations that reviewed and approved the original SWPP plan. Incorporation of new information into Appendixes C and E does not require formal review of the entire SWPP plan. However, all members of the Pollution Prevention Team must review and approve the information before incorporating.

TABLE 2
EVENTS REQUIRING MODIFICATION OF THE SWPP PLAN FOR MDA AB

Event Leading to Modification of the SWPP Plan	Actions Required to Modify the SWPP Plan	Portions of the SWPP Plan Affected by Changes
Change in members or duties of the MDA AB Pollution Prevention Team	Amend the list of team members and their duties in SWPP plan	Appendix A
Significant changes in MDA AB operational procedures or locations of operations	Modify map and text sections of the SWPP plan to reflect the changes	Sections 2.2 and 2.8
Significant changes in the types of materials handled at MDA AB	Review to determine whether changes in SWPP plan procedures are required, add the new materials to the inventory list in the SWPP plan	Sections 2.2 and 2.8
Spill or leak of waste, water, or other materials at MDA AB	Document the release and cleanup procedures, incorporate the documentation in the SWPP plan	Section 2.4, Appendix B
Receipt of laboratory analytical results for storm water discharge, soil, sediment, or other environmental sampling	Review to determine whether there are abnormal values for any constituent, take corrective action if appropriate, incorporate the analytical results in the SWPP plan	Appendix D
Completion of comprehensive site compliance evaluation	Review the entire SWPP plan to ensure that it is still accurate and complete, correct any deficiencies found during the site compliance evaluation, document the evaluation and any follow-up actions	Appendix G, other parts of the SWPP plan as appropriate

REFERENCES

Environmental Restoration Project, March 6, 1998. "Waste Characterization Strategy Form, MDA Focus Area, TA-49, RFI Sampling, BMP Activities, and Asphalt Pad Removal, Material Disposal Area AB - Areas 2, 2A, and 2B," Los Alamos National Laboratory, Los Alamos, New Mexico. (Environmental Restoration Project 1998, ER ID 57587)

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LANL (Los Alamos National Laboratory), November 1990. "Solid Waste Management Units Report," Volume I through IV, Los Alamos National Laboratory Report LA-UR-90-3400, prepared by International Technology Corporation under Contract 9-XS8-0062R-1, Los Alamos, New Mexico. (LANL 1990, ER IDs 07511 through 07514)

LANL 1997a. "Spill Prevention Control & Countermeasure Plan," Rev. 4. (Merrick Engineers & Architects)