

Winn
~~ANNOUNCED~~ TA16

TA16 401/402
CLOSURE

Lee Winn

From: Ann Sherrard [sherrard@lanl.gov]
Sent: Wednesday, May 04, 2005 9:33 AM
To: david_cobrain@nmenv.state.nm.us
Cc: lee_winn@nmenv.state.nm.us
Subject: TA-16 SWPPP



TA-16 SWPPP
urnGrd Dec04 FINA.

David

Attached is the TA-16 Burn Ground SWPPP. Unfortunately, the schematic isn't electronic (and, unfortunately, its cluttered) but I'll fax it to you. I Because its going to be hard to read when I shrink it, I've circled and noted the units and the nearby controls. I'll also send a map I haven't done that to. My phone is 665-7226. Thanks for your help in determining what to do. Would you like to come up and look at the site?

Thanks
Ann



STORM WATER POLLUTION PREVENTION PLAN

TECHNICAL AREA 16 BURN GROUND UNIT

Los Alamos National Laboratory

A requirement of the
NPDES GENERAL PERMIT
for Storm Water Discharges Associated with Industrial Activities

December 2004

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STORM WATER POLLUTION PREVENTION PLAN
FOR
Engineering Sciences and Applications
TA-16 Burn Ground
LOS ALAMOS NATIONAL LABORATORY

PREFACE

This Storm Water Pollution Prevention Plan (SWPPP) was developed in accordance with the provisions of the Clean Water Act (33 U.S.C. §§1251 et seq.) and regulations established by the U.S. Environmental Protection Agency (U.S. EPA) for National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activity (U.S. EPA, Oct 2000). This Plan complies with the industry specific permit requirements for Hazardous Waste Treatment Storage or Disposal, Section XI subpart K. The applicable Storm Water Discharge Permits are EPA Multi-Sector General Permit Number NMR05A734 (UC) and NMR05A735 (DOE) (U.S. EPA, Jan. 10, 2001).

This SWPPP is applicable to discharges of storm water associated with operations at the Engineering Sciences and Applications (ESA) Division TA-16 Burn Ground at Los Alamos National Laboratory.

STORM WATER POLLUTION PREVENTION PLAN
CERTIFICATION STATEMENT

"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."

David Hayden
ESA-MEE Acting Group Leader

Date

1.0 INTRODUCTION

Los Alamos National Laboratory (LANL) operates under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities. This permit governs storm water discharges from industrial activities. Under the Permit, the Environmental Protection Agency (EPA) requires the development and implementation of Storm Water Pollution Prevention Plans (SWPPPs). These plans must be developed in accordance with the provisions of the Clean Water Act (33 U.S.C. 1251 et seq.) and the regulations established by the U.S. EPA for the NPDES Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activity (U.S. EPA, 1992c at 41235). The applicable Storm Water Discharge Permits are EPA Multi-Sector General Permit Number NMR05A734 (UC) and NMR05A735 (DOE).

The purpose of a SWPP Plan is to ensure that a documented, implementable process is in place to reduce pollution sources. Through potential pollutant reduction, environmental problems that result in lost resources and costly restoration activities may be averted. SWPP Plans define and describe materials and facility activities that are potential sources of pollution. They also discuss the Best Management Practices (BMPs) that have been selected and implemented to prevent pollution. BMPs include maintenance activities, formalized work practice reviews, the prohibition of practices, training, activity scheduling, stabilization, structural controls, and additional applicable management practices.

One of the industrial sectors covered by the MSGP is treatment, storage, or disposal facilities (TSDFs) permitted under the Resource Conservation and Recovery Act (RCRA). This SWPPP applies to the hazardous waste treatment facilities at the Technical Area (TA) 16 Burn Ground, Los Alamos National Laboratory, Los Alamos County, New Mexico. The Burn Ground is under the control of Engineering Sciences and Applications Division, Materials Explosives Engineering Group (ESA-MEE), which is responsible for the safe treatment and handling of high-explosives (HE) and HE-contaminated waste material generated by the HE processing facilities. This Storm Water Pollution Prevention Plan addresses the active structures at the TA-16 Burn Ground Unit. This SWPPP does not address activities not associated with the TSDF (e.g., Environmental Restoration or Decontamination/ Decommissioning Activities). These are addressed by separate SWPPPs, to be reviewed/approved by the Environmental Stewardship Water Quality Group (ENV-WQH). These other plans will also require the review and concurrence of ESA-MEE to ensure that the TA-16 Burn Ground is left in acceptable condition after the other projects are complete.

1.1 Pollution Prevention Team

The Pollution Prevention Team develops, implements, maintains and revises this Storm Water Pollution Prevention Plan (SWPPP). The members are selected because of their familiarity with firing site activities and the potential impact of these activities on storm water runoff. The Pollution Prevention Team also includes representatives of the ENV-WQH, who serve in an advisory capacity and collect samples and perform visual examination of storm water. Each member of the Team, except the ENV-WQH representative, receives SWPP training provided by ENV-SWRC,. A list of the current Pollution Prevention Team members and duties is provided

in the table below. This list is revised annually when there are changes in team members or their duties. The duties of the Pollution Prevention Team members are as follows:

Team Leader: The Team Leader is responsible for the implementation of the SWPP Plan and its associated BMPs and for overseeing the assigned duties of other Team members. The Team Leader is responsible for ensuring that problems noted in inspections are corrected.

Site Leader: The Site Leader is responsible for training, recordkeeping, and Plan revision. He or she will ensure that all team members, operational site workers, and applicable supervisors receive training in accordance with Section 3.6. The Site Leader is also responsible for revising and updating the SWPP Plan as required. They will ensure that inspection documents and other records relating to the SWPP Plan and storm water pollution control measures are managed in accordance with Section 3.6 and established document control procedures and that the ESA-MEE and ENV-WQH copies of SWPP Plans are all kept current.

Inspections: A qualified team member is responsible for conducting facility site inspections. These include periodic inspections, non-storm water discharge certifications, quarterly visual storm water inspections, and the Site Compliance Evaluations.

ENV-WQH Advisor: Advises on NPDES Regulations, SWPP Plan, BMP's, controls, and assists with inspections.

Sample collectors: Performs visual examination of storm water discharges and collects samples of storm water discharges.

Operations Contact: Supervise all operations at the Burn Ground and ensures that operations are conducted in accordance with the SWPPP. Ensures that SWPPP is implemented and spills are properly reported. Ensures Best Management Practice implementation. Ensure that preventive maintenance and scheduled inspections are completed and documented. Ensures operators receive training specified in SWPPP for storm water pollution prevention. Notifies the Site Leader whenever there is a development or change in facility operations that may require any revision to the SWPP Plan Complete weekly inspections and forwards copies to ENV-SWRC.

**Table 1-1
Storm Water Pollution Prevention Team Members**

Duties	Name	Group	Phone#	Email
Team Leader	Ann Sherrard	ESA-WOI	665-7226	sherrard@lanl.gov
Site Leader	Randy Johnson	DX-4	667-0509	randyj@lanl.gov
Inspector(s)	Randy Johnson	DX-4	667-0509	randyj@lanl.gov
	Ann Sherrard	ESA-WOI	665-7226	sherrard@lanl.gov
	Robert Garcia	ESA-MEE	667-96891	garcia_robert@lanl.gov
	Steve Veenis	ENV-WQH	667-4503	veenis@lanl.gov
ENV-WQH Advisor	Steve Veenis	ENV-WQH	667-4503	veenis@lanl.gov
Sample Collectors	ENV-WQH Operations Team Contact: Steve Veenis	ENV-WQH	667-0013	veenis@lanl.gov
Operations Contact:	Robert Garcia	ESA-MEE	665-6891	garcia_robert@lanl.gov

2.0 FACILITY ASSESSMENT

This site is covered under the Hazardous Waste Treatment, Storage, or Disposal activities sector of the Multi-Sector General Permit. The site maps in Appendix A show direction of storm water flow, locations of structural BMPs, location of surface waters (canyons), locations of potential pollutant sources and locations where significant materials are exposed to precipitation, spill locations, locations of industrial activities exposed to precipitation, locations of outfalls and outline of area draining to each outfall, location and description of non-storm water discharges, location and source of significant run-on flows. A general description of the structures at the Burn Ground, types of materials handled, and residues generated that may be exposed to storm water follows:

TA-16-388 Flash Pad

Flashing operations are conducted at TA-16-388 to remove HE from equipment/materials. The structure consists of a concrete pad on which racks or trays are placed on which the materials to be flashed are staged. Propane burners are used to heat the materials to a temperature where the HE degrades. Oils and solvents are also burned at the flash pad; the oil/solvent burn tray is no longer used and has been deleted from this plan.

TA-16-399 HE Burn Tray

This burn pad consists of an elevated metal tray lined with firebrick and sand for burning HE solids. Burning will destroy the HE. However, if inerts contaminated with HE are also burned, there may be some barium-contaminated residue.

TA-16-401 and -406 Filter Vessels Treatment Operations

These filter vessels are constructed of welded steel and lined with firebricks. Liquid passes through the sand/gravel filter bed into a fluid drain at the base of the filter vessel and through carbon adsorption units at the HE Wastewater Treatment Facility (HEWTF) located near the filter vessels. Solids collected on the surface of the sand are burned to destroy the HE. Since these filters are piped directly to the HEWTF, any storm water that came into contact with these materials would be treated at the HEWTF prior to release. It would then be considered treated industrial water and not storm water. Sand is removed after a burn and treated at the TA-16-388 Flash Pad. Clean sand piles used to replenish the filters are located adjacent to the filters. A new sand pile will be located across the asphalt drive from the filter vessels. The site is curbed on the upslope side, which will prevent run-on. The pile will be bermed on the down slope side to prevent runoff.

TA-16-389 Control Building

TA-16-389 is the control building for burning operations. There are no materials associated with this structure that are exposed to storm water. Therefore, it is not listed in Table 2-1.

Other

A covered <90 day storage area (TA-16-386) is maintained at the Burn Ground. Materials stored in this area are already packaged in drums and are placed on a covered concrete pad. Therefore, there are no materials exposed to storm water and it is not listed in Table 2-1.

2.1 Potential Pollution Sources

This section identifies and contains a summary of potential pollutant sources with a reasonable potential to pollute storm water.

The materials exposed to storm water and the practices used to minimize exposure to run-on/runoff are summarized in Table 2-1. Controls used for each potential pollutant are included in their descriptions and are further described in Section 3.

2.1.2 Solid Waste Management Units (SWMUs)

The Laboratory's 1990 Solid Waste Management Units Report and subsequent documents identified areas with possible legacy contamination (referred to as Solid Waste Management Units (SWMUs) at the TA-16 Burn Ground. These SWMUs are shown on the figure in Appendix A. Table 2-2 describes the TA-16 Burn Ground SWMUs. If the SWMUs still have ongoing processes, the storm water measures and controls for current activities are covered in Section 2.1. This section lists only legacy use, legacy contaminants, and covers only measures and controls for legacy contamination. Control of stormwater for these sites is the responsibility of the Laboratory's Environmental Restoration Program, not ESA.

2.2 Non-Storm Water Discharges

In June 1993, Santa Fe Engineering conducted a Wastewater Stream Characterization (WSC) of the Burn Ground. The characterization included interviews, review of engineering drawings, and dye test studies of all piping discharging into the environment from buildings. WSC Report #11 details the characterization for the Burn Ground. Subsequent to preparation of the WSC report, the TA-16-389 septic tank was removed, and a new one added in TA-16-1507. The non-storm water discharge assessment and certification form, included in Appendix B, certifies that all storm water outfalls have been evaluated for the presence of non-storm water discharges. The following non-storm water discharges at the Burn Ground are covered under this permit:

- testing of the fire hydrants,
- the NPDES-permitted discharge from the HEWTF (outfall 05a055), and
- the septic tank serving the TA-16-1507 restroom.

2.3 Summary of Storm Water Monitoring

Storm water monitoring for the TA-16 Burn Grounds is conducted at Station E257 within a Canon del Valle tributary. The map included in the plan as Figure 2-1 shows the storm water station location relative to the regulated activity for this site.

**Table 2-1
Materials Management and Storm Water Exposure Minimization Practices For Materials
Subject to Run-on/Runoff**

Description of Exposed Significant Materials	Period of Exposure	Materials Management Practices	Storm Water Exposure Minimization Practices
Ash from 388 Flash Pad	Periodic	After the burn, ash is sampled and placed in barrels, which are stored in a covered <90 day storage area until analytical results are available. Depending on the analytical results, the ash is shipped to an appropriate disposal or treatment location.	A retractable cover prevents storm water run-on/runoff except during burning. The flash pad has secondary containment.
HE-contaminated materials and equipment at 388 Flash Pad.	Periodic	After flashing, equipment is disposed as NMED special waste or salvaged.	A retractable cover prevents storm water run-on/runoff except during burning. The flash pad has secondary containment.
Oil/solvent at 388 Burn Tray or Flash Pad	Constant	Oil/solvents are staged the day of burning. Residues are sampled, drummed, stored, and disposed in the same manner as described for the 388 ash.	A retractable cover prevents storm water run-on/runoff except during burning. The burn tray has secondary containment.
Oil leakage from equipment awaiting flashing on 388 Flash Pad	Periodic	Oil is drained from hydraulic equipment before it is transported to the Burn Ground; residual could leak. Any residual oil is burned during flashing.	A retractable cover prevents storm water run-on/runoff except during burning. The flash pad has secondary containment.
HE materials at 399 Burn Tray	Periodic	HE is staged just before burning and never when there is precipitation. After the burn, residues (if any are present) are sampled, barreled, stored, and disposed in the same manner as described for the 388 ash.	A cover is used after burning to prevent residue dispersal and run-on/runoff. The pad area is bermed.
Sand/ash mixtures at 401/406	Periodic	Ash (and unburned residues) and a small amount of sand are removed after each burn. If any sand/ash is spilled during drumming, it is immediately cleaned up and added to the drummed material. The ash and sand are sampled, drummed, stored, and disposed as described above for the 388 ash.	Any runoff from the filters is routed to and treated by the HEWTF.
Sand piles at 401/406	Periodic	Clean sand is stored on the ground at TA-16-401/406. When the sand in the filters becomes clogged, it is replaced with clean sand.	The clean sand is stored at a high point that is not subject to drainage.
Outdoor vehicle and equipment storage/parking	Periodic	Vehicles and cranes are used to transport materials for burning to the Burn Ground. After staging the structures, the vehicles are removed from the site. Tanker trucks used to transport HE-contaminated water to the HEWTF are stored at the Burn Grounds. During periods of inactivity, they may be stored in a garage.	Loading and unloading activities are not conducted during storm water events. Vehicles used for loading/unloading the burn structures are not resident at the Burn Ground. The pump trucks used to transport HE-contaminated wastewater are well maintained and not serviced on-site.

**Table 2.2
Burn Ground SWMUs**

SWMU and Legacy Use	Structure No.	Legacy Contaminants	Storm Water Measures and Controls
16-005(g) Sand Filter for Basket Wash	TA-16-393	Decommissioned	NA
16-006(e) Septic System	TA-16-385	Unknown	NA
16-010(c) HE Burn Tray	TA-16-388	HE, Barium	See Section 3.2 for BMP remedial actions for this site
16-010(d) HE Burn Tray	TA-16-399	HE, Barium	Tray area bermed Rock check dams in drainage
16-010(e and f) Sand filters for Basket Wash Facility	TA-16-401 TA-16-406	Same as 16-010(k-n)	Old sand filters removed and new sand filters installed with drainage to HEWTF
16-010(h) Basket Wash Facility	TA-16-390	See data in Appendix C	The Basket Wash Facility has been removed. There is no discharge to the environment.
16-010(i) Filter Bed for Basket Wash Facility and Burn Pad	TA-16-392	See data in Appendix C	Vegetated slopes Rock check dams
16-010(j) Filter Bed for Basket Wash facility	TA-16-394	See data in Appendix C	The structure been removed. Residual soil contamination is controlled with vegetated slopes and rock check dams
16-010(k, l, m, and n) Basket Wash Facility Troughs	TA-16-1129 TA-16-1134 TA-16-1135 TA-16-1136	See data in Appendix C	The troughs have been removed. Residual soil contamination is controlled with vegetated slopes and rock check dams
16-028(a) South Drainage from Burn Ground	None	See data in Appendix C	Rock check dams

Analysis of storm water samples indicates that Benchmark Values for magnesium, lead, and COD were exceeded in July 2003. Magnesium is not a contaminant typically treated at the TA-16 Burn Ground and is likely contained in the soil in the vicinity. COD and lead are likely impacted by legacy contaminants, not active operations. ENV-WQH collects the samples and provides analysis. They periodically provide the data to ESA, who includes it with this plan at the time of the annual update.

2.4 Threatened and Endangered Species and Wetlands Assessment

ENV-ECO completed a Biological Evaluation in September 2001. The report entitled, "The Potential Effects of Operations under the NPDES Storm Water Multi-Sector General Permit for Industrial Activities on Federally-Listed Threatened and Endangered Species and Other Potentially Sensitive Species at the Los Alamos National Laboratory" (LA-UR-01-4657) is available upon request from ENV-WQH.

2.5 Documentation of Permit Eligibility Related to Historic Places

ENV-ECO conducted a cultural resource review in September 2001. The cultural resource review complies with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations (36 CFR Part 800). The review is available upon request from ENV-WQH

3.0 BEST MANAGEMENT PRACTICES

An important element in the development of a SWPPP is identification of appropriate Best Management Practices (BMPs). BMPs are standard operating and maintenance procedures designed to minimize the potential for spills, exposure of materials, or any other event that could adversely affect the quality of water and sediment that is transported out of the area by storm water runoff. The EPA has identified eight baseline BMPs that should be incorporated into a SWPPP. These include good housekeeping, preventive maintenance, inspections, spill prevention and response, training, recordkeeping and reporting, sediment and erosion control, and storm water management practices.

This section describes the non-structural and structural Best Management Practices (BMPs) implemented at the facility to insure that this industrial activity does not adversely impact surface water quality.

3.1 Good Housekeeping and Design Controls

This plan is a comprehensive set of standard and detailed operating procedures designed to ensure that equipment in waste management operations is in good working order and properly used and that scheduled maintenance is performed. The plan incorporates provisions for corrective, predictive and preventive maintenance. It also addresses appropriate adjustment and/or replacement of devices, equipment, and systems. This program allows for identification and corrections of conditions that have the potential to cause breakdowns or failures that could result in the release of pollutants to the environment.

All waste management, storage, and operational areas are maintained in a clean and orderly state. ESA's standard operating and maintenance procedures 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.

3.2 Structural Controls

This section describes sediment and erosion controls and storm water management measures at the site.

TA-16-388 Flash Pad and Burn Tray: A retractable cover prevents exposure to precipitation and storm water run-on/runoff except during burning. The flash pad has secondary containment. An interceptor trench directs run on to the south, away from the facility. A retaining wall on the uphill slope of the burn pad was installed to stabilize the slope and prevent erosion. The culvert and drainage east of the facility is lined with rock riprap. The burn tray has a cover and secondary containment.

TA-16-399 Burn Tray: A cover is used after burning to prevent residue dispersal, exposure to precipitation and run-on/runoff. The pad area is bermed.

TA-16-401/406: Any storm water runoff from the filters is routed to and treated by the NPDES-permitted HEWTF.

There has been no need for significant sediment and erosion control projects since FY00.

3.3 Preventive Maintenance and Inspections

Burn Ground personnel perform inspections of the treatment facilities at least weekly and document the condition of the materials being handled, any poor housekeeping, spills, and other problems on the *Hazardous and Mixed Waste Facility Inspection Record Form*. Deficient items identified during inspections must be corrected within fourteen (14) days of the inspection. If a deficiency cannot be immediately repaired/remedied, it is entered into the ENV Action Tracking Database, allowing facility personnel to track and prioritize deficiencies. The Team Leader is responsible for ensuring that any maintenance or repairs associated with a deficiency or opportunity for improvement, including any regular or scheduled maintenance is promptly and adequately performed. These forms are also used to document when remedial action is taken. The original forms are kept at the Burn Ground and copies are provided to the Solid Waste Regulatory Compliance Group (ENV-SWRC).

Vehicles are used to deliver and stage material at the burn structures. These vehicles are not resident and there have been no historical releases from them. Staging materials and packaging of residues do not occur during precipitation events. Therefore, there has been no exposure of materials during loading and unloading. There are two resident pump trucks used to transport HE-contaminated wastewater to the HEWTF. They may be parked near the HEWTF. However, they are not serviced at the Burn Ground. They are well maintained and there has been no history of oil or gasoline leaks from them. Central Maintenance Management System (CMMS) is a database of all ESA owned equipment. This database sends an alert to the ESA area coordinator whenever a piece of equipment is due for PM or inspection. A Work Order is then generated to have the equipment serviced and inspected as per the manufacturers required specifications for that specific equipment.

It is the responsibility of each Pollution Prevention Team member to bring to the attention of the Site Leader any changes in facility conditions or operations that require the revision or incorporation of new material to the SWPP Plan.

3.4 Spill Prevention and Response Procedures

Spills or releases are minimized by the application of good housekeeping procedures, best management practices, and engineering and administrative controls. Examples of these measures include storing equipment on asphalt areas and regularly inspecting for leaks. Containment is used to prevent releases during waste staging, burning, and residue management, as described below:

TA-16 Burn Grounds Stormwater Stations

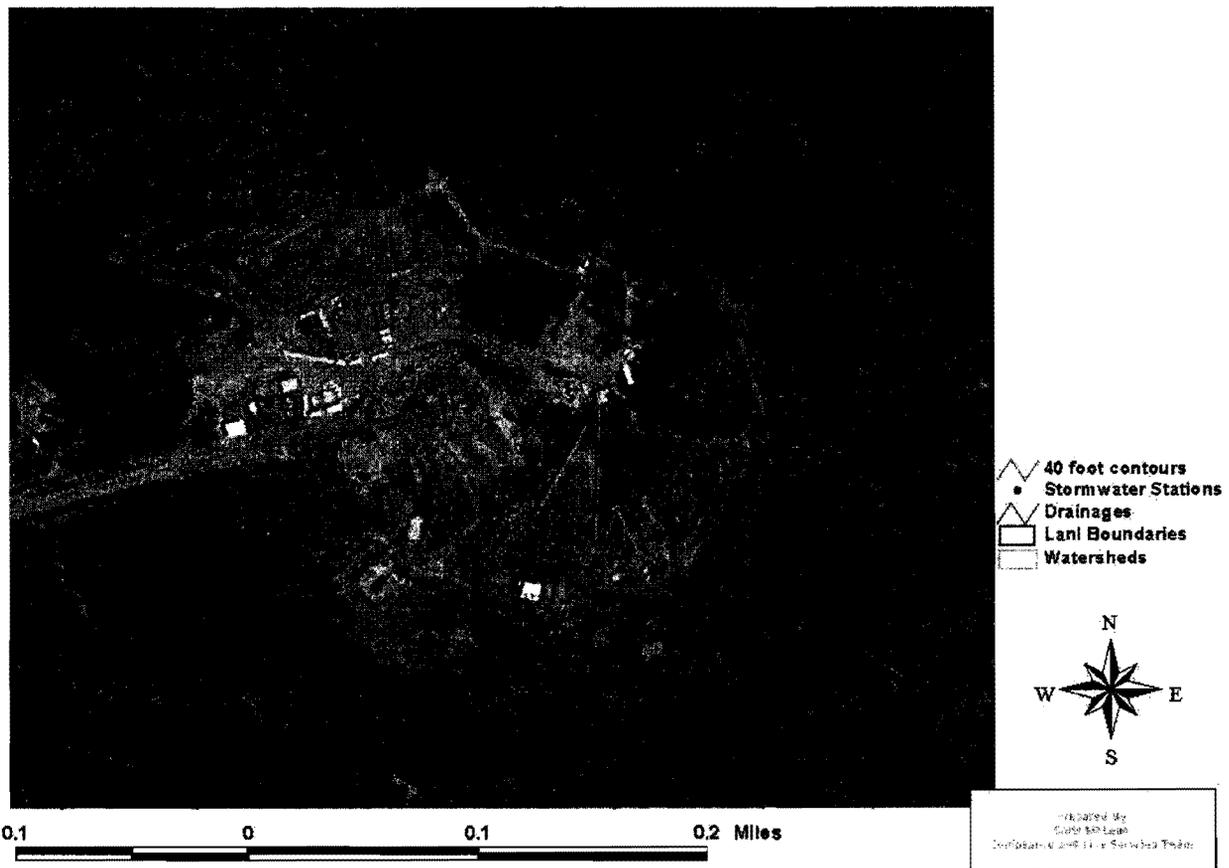


Figure 2-1: TA-16 Burn Ground Storm Water Monitoring Stations

- The TA-16-388 Flash Pad is located on a concrete pad with walls on the back and on two sides. The pad is sloped toward the back wall, so that any releases are contained on the pad and can be removed and properly treated or disposed. The flash pad has a retractable cover, used to prevent run-on.
- The TA-16-399 HE Burn Tray is installed on a concrete pad that is surrounded by earthen berms. Wastes are staged on this pad just before a burn, so releases during staging are highly unlikely. After a burn is completed, any residue is covered until it can be removed, reducing the likelihood of dispersion of ash by wind.
- The TA-16-401 and TA-16-406 Sand Filters are contained in steel tanks. Any liquids introduced into the tanks are piped directly into the HEWTF, where they are treated. The sand filters are covered when not in use.
- The transport and handling of solid HE and HE-contaminated equipment is designed to ensure that none is spilled. HE is transported in trucks specifically designed not to release HE or permit an explosion in the case of accidents. Solids are unloaded directly onto the appropriate burn structures.

The Emergency Management & Response (EM&R) Office has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. In the event of a spill, the EM&R Office must be notified by calling 667-6211. EM&R will then determine appropriate cleanup procedures. If fire or explosion hazards are present, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. Facility spill response procedures are also contained in each Building Emergency Plan. The equipment available for emergency response is listed in Table 3-1.

The completion of a spill report is also required in the event of a significant spill. Such reporting consists of either internal spill record keeping or external agency notification. The EM&R Office and ENV-WQH will make the determination for the type of reporting in accordance with Laboratory and DOE policies, and federal and state regulatory reporting requirements. Copies of internal spill reports are kept by ENV-WQH. External agency notification may consist of verbal or written notification to the National Response Center, Environmental Protection Agency Region VI, or the New Mexico Environment Department.

3.5 Employee Training

Employee training is essential for effective SWPP Plan implementation and maintenance. The objective of the training program is to instill in employees an understanding of the components and goals of the SWPP Plan; to help them recognize situations that could lead to potential storm water contamination; and to provide instruction in proper spill prevention and response, good housekeeping, and material management practices.

Members of the pollution prevention team, except for ENV-WQH personnel, receive storm water pollution prevention training provided by ESA. ENV-WQH provides already trained personnel. ESA maintains a Storm Water Pollution Prevention Self Study training course, which includes sections on the following topics:

- Goals of the Storm Water Pollution Prevention Plan.
- Spill response and cleanup.
- Conducting inspections.
- Good housekeeping and material management practices to prevent storm water pollution.
- Site-specific structures, equipment and procedures designed to minimize erosion and storm water pollution.
- Goals and procedures resulting from the annual Comprehensive Site Compliance Evaluation.

Any changes in facilities or procedures that are to be implemented as a result of the most recent Comprehensive Site Compliance Evaluation.

ENV-WQH will notify ESA if changes in requirements or procedures require further training. ENV-WQH will provide such training, as needed. Training records are maintained in the Employee Development System (EDS), the official training database for LANL.

3.6 Recordkeeping and Documentation

The Pollution Prevention Team is responsible for timely amendment of the SWPP Plan. The Plan is amended whenever there is a change in design, construction, operation, or maintenance procedures that affect the course of storm water discharge or affects the potential for contamination of storm water runoff. Examples of such a change could include changes in the types of operations performed at the Burn Ground or significant changes in the direction of runoff due to construction or modification of roads, paved pads, buildings, or other structural features. Small construction projects at the facilities will be covered in this SWPP Plan by adding them as addendums that can be easily closed out as the work is completed. ENV-WQH and ESA maintain current copies of this SWPPP and will make it available for review on request.

Any necessary changes to operational procedures or structural features must be implemented in a timely manner, not to exceed twelve (12) weeks of the revision of the SWPP Plan for non-structural measures and controls or three (3) years for structural controls. Construction work impacting more than one acre will obtain an individual SWPPP. ENV-WQH and ESA maintain current copies of this SWPPP and will make it available for review on request.

Table 3-1
Emergency Equipment near the TA-16 Burn Ground

FIRE CONTROL EQUIPMENT

Fire extinguishers are located at or in:
Tank-truck garage (TA-16-1507)
Control Building (TA-16-389)
High Explosives Wastewater Treatment Facility (HEWTF) (TA-16-1508)
Each truck used to transport high explosives
Four fire hydrants are located within the TA-16 Burn Ground Unit.
Three additional fire hydrants are located at the TA-16 Burn Ground.
A fire alarm pull station is located at the HEWTF.

SPILL CONTROL

Portable berms to contain spills are stored in an all-weather cabinet near the center of the TA-16 Burn Ground, at the less-than-90-day storage area (TA-16-386), and beside the Control Building.

COMMUNICATION EQUIPMENT

Telephones are available at the Control Building, at the TA-16-401 Sand Filter, at the HEWTF, and at the railroad gate at the entrance to the Burn Ground.

DECONTAMINATION EQUIPMENT

Eyewash stations are located in the tank-truck garage and in the HEWTF.

PERSONNEL PROTECTION EQUIPMENT

Respirators, coveralls, and safety glasses are available for TA-16 personnel during waste-handling operations.
All vehicles are equipped with first-aid kits.

4.0 INSPECTIONS AND SAMPLING

Summary of inspections and evaluations required under this Plan:

Type	Frequency Conducted	Conducted By
Comprehensive Site Compliance Evaluation	Annually	SWPP Team Member (inspector)
Facility Inspection	Quarterly	SWPP Team Member (inspector)
Visual Examination of storm water	Quarterly, using the sample taken within the first 30 minutes of start of discharge	ENV-WQH
Storm Water Sampling	Biennially (by ENV-WQH)	ENV-WQH

4.1 Comprehensive Site Compliance Evaluation

Inspectors on the SWPPP team perform a Comprehensive Site Compliance Evaluation annually during August or September. This is when intense thunderstorms are common in the Los Alamos area, and any problems related to precipitation and runoff is most likely to be apparent. The Site Compliance Evaluation Report form and Checklist provided in Appendix E is used to ensure that significant areas, structures and conditions are not overlooked during the inspection.

A report is prepared that describes the results of the inspection and any irregularities that were encountered during the evaluation. The report includes, as a minimum, the following items:

- Scope of the evaluation
- Date(s) on which the inspection was performed and personnel performing the inspection
- Major observations relating to implementation of the SWPPP
- Revisions to potential pollutant sources and/or pollution prevention measures and controls
- A description of any incidents of non-compliance with the SWPPP that were noted during the inspection and the actions taken to correct them

The Site Compliance Evaluation Report is reviewed and approved by an authorized owning group representative. If no incidents of non-compliance are identified, ESA signs the section of the forms that certifies that the facility is in compliance with the SWPPP and the permit. Copies of the report are maintained as part of the SWPPP, which is kept for a minimum three years

4.2 Quarterly Facility Inspection

Regulations require that regular inspections be conducted. At LANL, in addition to the annual Comprehensive Site Compliance Evaluation, quarterly inspections are conducted. The inspections are made during the following periods: January through March, April through June, July through September, and October through December. When the annual compliance

evaluation coincides with the quarterly inspection, the annual compliance evaluation is counted as a quarterly inspection. For these inspections the facility is walked and inspected for SWPP issues. An inspection form is completed, signed by the an authorized owning group representative, and retained with the SWPPP for at least three years from the date of the inspection. In addition, ENV-WQH maintains a copy of each report in their files.

4.3 Quarterly Visual Examination of Storm Water Quality

The requirements and procedures for quarterly visual monitoring are applicable to all facilities covered under the MSGP, regardless of the facility's sector of industrial activity. For storm water discharges from TSD facilities, Water Quality & Hydrology Group (ENV-WQH) performs a visual examination of a representative discharge from each associated outfall quarterly and documents the results. The examinations must be made at least once in each of the following periods: January through March, April through June, July through September, and October through December.

The visual examinations for the TA-16 Burn Ground are made of samples collected by the automated sampler within the first 30 minutes of when the runoff begins. Observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution are documented during the examination. The performance of analytical tests on these samples is not required. Where practicable, the same individual performs the collection and examination of discharges for the entire permit term. If samples cannot be collected over the course of the visual examination period as a result of insufficient runoff, this information is documented on the Discharge Monitoring Reports (DMRs) as a "No Discharge" event for the quarter.

ENV-WQH prepares reports on the results of the visual examination of storm water samples. The reports include the examination date and time, examination personnel, the nature of the discharge, visual quality of the discharge, and probable sources of any observed storm water contamination.

4.4 Sampling of Storm Water Events

In compliance with regulatory requirements, ENV-WQH personnel sample storm water discharges at monitoring station E257, located down gradient from the TA-16 Burn Ground. This monitoring station measures impacts from active operations as well as legacy contamination of the area surrounding the active units. The automated sampler at that location collects a grab sample within the first 30 minutes of the discharge.

To the extent possible, all water samples are collected quarterly during a precipitation event that produces at least 0.10 inch of rainfall, occurs at least 72 hours from the previously measurable (0.1 inch) storm event, and has had a minimum of 60 days between previously sampled events.

All samples are analyzed for the constituents listed in Table 4-1, as required for Sector K - Hazardous Waste Treatment, Storage, or Disposal Facilities. All collection, preservation, and analysis methods are those approved in Title 40, Part 136 of the Code of Federal Regulations (U.S. EPA, 1992b). In the event that appropriate analytical methods for a particular constituent are not listed in 40 CFR, Part 136, appropriate analytical methods are selected from those

described in either "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods" (U.S. EPA, 1986), or "Standard Methods for the Examination of Water and Waste Water" (American Public Health Association, 1989). Table 4-1.

The analytical results of storm water runoff samples and other data collected in accordance with this SWPP Plan are reported directly to ENV-WQH. ENV-WQH completes and submits DMRs to EPA in accordance with the permit by ENV-WQH. Included in the DMR is the date and duration of the storm event(s) sampled, rainfall measurements or estimates of the storm event that generated the sampled runoff, duration between the storm event sampled and the end of the previous measurable storm event, and an estimate of the total volume of the discharge sampled. When available, analytical results of the events sampled are posted electronically on the ENV-WQH home page. This allows for timely use of the data by the operating facility. ENV-WQH maintains hard copies of the DMRs for a period of at least 3 years.

Pollutant of Concern	Benchmark Value	Method of Analysis (From 40 Part CFR 136)
Ammonia, NH ₃	19 mg/l	350.1,350.2,350.3
Arsenic, total recoverable	0.16854 mg/l	206.2,206.3,206.4,206.5,200.7,200.8
Cadmium, total recoverable	0.0159 mg/l	213.1,213.2,200.7,200.8
Chemical Oxygen Demand, COD	120 mg/l	410.1,410.2,410.3,410.4
Cyanide, total	0.0636 mg/l	335.2,335.3
Lead, total recoverable	0.0816 mg/l	239.1,239.2,200.7,200.8
Magnesium, total recoverable	0.0636 mg/l	242.1,200.7
Mercury, total	0.0024 mg/l	245.1,245.2
Selenium, total recoverable	0.2385 mg/l	270.2,200.7,200.8
Silver, total recoverable	0.0318 mg/l	272.2,272.2,200.7,200.8

5.0 REVISION OF STORM WATER POLLUTION PREVENTION PLAN

Amendments to the SWPPP are made, as needed, following the annual Comprehensive Site Compliance Evaluation. The Plan should also be amended whenever additional inspections identify a change in design, construction, operation, or maintenance procedures that effects the course of storm water discharge or effects the potential for contamination of storm water runoff. Examples of such a change include changes in the types of facility operations performed; or significant changes in the direction of runoff due to construction or modification of roads, paved pads, buildings, or other structural features.

The Pollution Prevention Team is responsible for timely amendment of the SWPPP. It is the responsibility of each Pollution Prevention Team member to bring to the attention of the Team Coordinator any changes in facility conditions or operations that require the revision or incorporation of new material to the SWPPP. Any necessary changes to operational procedures or structural features must be implemented in a timely manner, not to exceed twelve (12) weeks of the revision of the SWPP Plan for non-structural measures and controls or three (3) years for structural controls.

Table 5-1 contains a list of events that require modification of the SWPPP, along with the Plan sections that would typically be affected. Table 5-1 is not all-inclusive. SWPPP Modification may be required for any event that has the potential to significantly affect storm water runoff or sediment transport from TA-16.

TABLE 5-1: Events Requiring Modification of the SWPPP

Event Requiring Modification of the SWPPP	Actions Required to Modify the SWPPP	SWPPP Section Affected by the Changes
Annual update	Update team members, summary of monitoring data, and any other information not requiring an immediate update	As needed
Significant changes in facility operational procedures or locations of operations.	Modify map and text sections of the SWPPP to reflect the changes.	Section 2 & Section 3.2
Significant changes in the types of materials handled at the facility.	Review to determine whether changes in SWPPP procedures are required; add the new materials to the inventory list in the SWPPP.	Section 2.1
Change in drainage area or direction of runoff due to construction or other modifications.	Review changes and modify facility site map as appropriate. Modify text sections.	Section 2.0, 2.1 & Section 3.2
Changes in erosion and sediment control structures.	Modify facility site map and appropriate text sections.	Section 3.2
Changes in storm water management controls.	Modify facility site map and appropriate text sections.	Sections 3.2
Completion of Comprehensive Site Compliance Evaluation.	Review the entire SWPPP 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 F & other parts of the SWPPP as appropriate, updated annually.
Spill or leak of waste, water, or other materials at TA-15.	Document the release and cleanup procedures; incorporate the documentation in the SWPPP.	Appendix I

Appendix A

Site Map

Appendix B

Non-Storm Water Discharge Certifications

NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION					Completed by: _____ Title: _____ Date: _____	
Date Of Evaluation	Outfall Directly Observed During the Test (Location)	Identify Potential Significant Sources of Non- Storm Water	Method Used to Test or Evaluate Discharge	Is Non-Storm Water Present?	How Often?	Describe Results from Test for the Presence of Non-Storm Water Discharge
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 completed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.						
Name & Official Title: _____						
Signature: _____			Date Signed: _____			

Appendix C

Sampling Data Summary

Canon de Valle tributary at Burn Grounds (E257)

Sample Date	Analyte	Result	Benchmark Value	Units
07/27/04	Magnesium	6.66	0.0636	mg/L
04/08/04	COD	62.6	120	mg/L
07/23/04	COD	56.1	120	mg/L
07/27/04	COD	186	120	mg/L
04/08/04	Arsenic	0.852	168.54	mg/L
07/23/04	Arsenic	18.5	168.54	mg/L
07/27/04	Arsenic	6.3	168.54	mg/L
04/08/04	Cadmium	0.217	15.9	ug/L
07/23/04	Cadmium	2.64	15.9	ug/L
07/27/04	Cadmium	2	15.9	ug/L
04/08/04	Cyanide (Total)	0.00276	0.0636	mg/L
04/08/04	Lead	5.14	81.6	ug/L
07/23/04	Lead	83.6	81.6	ug/L
07/27/04	Lead	68.7	81.6	ug/L
04/08/04	Selenium	4.37	238.5	ug/L

Appendix D

Plan Amendment Table

Appendix E

Comprehensive Site Compliance Evaluation Report Form

Appendix F

Visual Storm Water Inspection Form

Quarterly Storm Water Visual Inspection

Procedure

- ENV-WQH performs and documents a visual examination of a storm water discharge collected at monitoring station E257 at the TA-16 Burn Ground at least once in each of the following periods: January through March, April through June, July through September, and October through December.
- An automated sampler is used to collect samples during the first 30 minutes after the discharge reaches the sampler location.
- If ENV-WQH determines that the sample represents a storm- or snow melt-event whose magnitude is <0.1 inches in magnitude, they may choose to discard the sample.
- ENV-WQH examines the sample in a well lit area and notes observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution on the attached inspection form. He or she checks for odor in the sample by waving the air over the jar towards his or her nose but does not directly sniff the sample since hazardous chemicals may be present. The sample may be dumped back into the watercourse after the examination is performed and documented.
- If the field technician notes that there are pollutants in the sample, they conduct an inspection of the area to attempt to find the source of contamination and implement corrective actions as appropriate.
- ENV-WQH prepares an examination report and supply a copy of the report to ESA.
- ESA maintains a copy of the report with the SWPPP.

GUIDANCE

Odor – describe any odors that may be observed in the discharge. Examples of odors that may be present are burnt oil, sewage, diesel, sulfuric, or detergent odors.

Color – describe the color of the discharge. Color should not be confused with clarity.

Clarity – describe the clarity or cloudiness of the discharge.

Floating solids – describe floating solids present in the sample.

Settled solids – describe any settled solids in the sample.

Suspended solids – describe any suspended solids in the sample. Suspended solids are floating between the bottom of the sample and the surface of the water. Examples include fine sediment, ash, and dust.

Foam – describe any accumulation of foam.

Oil sheen – describe any oil sheen present, including the thickness and consistency.

Other – describe any other indicators of storm water pollution in addition to the descriptions mentioned above.

Probable sources - relate pollutants in the sample to the potential sources of pollutants that are on the site.

Corrective actions - Evaluate whether BMPs should be implemented or modified to eliminate the contaminant source.

Storm Water Visual Inspection Form

Inspection Location: _____

Inspector: _____ Date & Time: _____

Inspection Quarter (Circle One): Jan-Mar Apr-Jun Jul-Sep Oct-Dec

Nature of discharge: Runoff Snowmelt

Inspection completed within first half hour of flow: Yes No

Reason if conducted during second half hour of flow: _____

Visual Quality of Storm Water Discharge

Color: _____

Odor: _____

Clarity: _____

Floating Solids: _____

Settled Solids: _____

Suspended Solids: _____

Foam: _____

Oil Sheen: _____

Other Indicators of Possible Storm Water Pollution: _____

Site Observations

Probable sources of pollutants: _____

Corrective actions: _____

CERTIFICATION STATEMENT

"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."

Name: _____ **Title:** _____

For: University of California and Department of Energy at Los Alamos National Laboratory (LANL)

(signature)

(date)

Appendix G

NPDES Permit

Appendix H

RECORDS OF SPILLS AND LEAKS

