

NPDES PERMIT NO. NM0030759

STATEMENT OF BASIS

MODIFICATION OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

PERMITTEES:

Los Alamos National Security, LLC
Management Contractor for Operations
Los Alamos, New Mexico 87545

and

U.S. Department of Energy
Los Alamos Area Office
Los Alamos, NM 87544

ISSUING OFFICE: U.S. Environmental Protection Agency (EPA)
Region 6
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PERMIT ACTION: Proposed modification of NPDES Permit No. NM0030759, issued by EPA on February 13, 2009.

DATE PREPARED: April 30, 2010

40 CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of February 1, 2010.

STATE CERTIFICATION: The permit modification has been forwarded to the New Mexico Environment Department (NMED) for certification in accordance with Section 401 of the CWA and regulations promulgated at 40 CFR124.53. A draft of the modified permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service; and to the National Marine Fisheries Service prior to publication.

I. BACKGROUND AND BASIS FOR MODIFICATION

On February 13, 2009, EPA Region 6 issued NPDES Permit No. NM0030759 (“the Permit”) to co-permittees Los Alamos National Security, LLC (LANS) and the U.S. Department of Energy (“DOE”) for discharges of storm water associated with industrial activity from solid waste management units (SWMUs) and areas of concern (AOCs) (collectively “Sites”) located at the Los Alamos National Laboratory (LANL) facility in Los Alamos County, NM. The facility covers approximately 40 square miles and is situated on the Pajarito Plateau in Northern New Mexico, which consists of a series of finger-like mesas separated by deep west-to-east oriented canyons cut by predominantly ephemeral and intermittent streams. The majority of the approximately 400 SWMUs and AOCs covered by the permit are remotely located and not associated with current industrial activities.

On March 13, 2009, the Western Environmental Law Center on behalf of Amigos Bravos, Concerned Citizens for Nuclear Safety, Embudo Valley Environmental Monitoring Group, Honor Our Pueblo Existence, New Mexico Acequia Association, Partnership for Earth Spirituality, J. Gilbert Sanchez, Kathy Sanchez, and Tewa Women United (“Petitioners”) filed a Petition for Review of the Permit with the EPA Environmental Appeals Board (EAB) under 40 CFR 124.19(a). The Petition for Review raises complex issues of law and fact, including whether and under what circumstances compliance schedules are permissible under the Clean Water Act and what is required to ensure compliance with water quality standards. On April 13, 2009, LANS/DOE filed a Motion to Intervene and Request for Leave to Respond to the Petition for Review. On April 21, 2009, the EAB granted LANS/DOE’s request to intervene.

By letter to the EAB dated April 26, 2010, the Region provided notice, as required by 40 CFR §§ 124.16(a)(2)(ii) and 124.60(b), of the conditions of the Permit that are uncontested and severable from the Permit conditions contested in the Petition for Review. Under 40 CFR §§ 124.16(a)(2)(i), these uncontested and severable conditions of the Permit as issued become fully effective 30 days from the date of the letter or on May 26, 2010.

Following extensive settlement discussions, EPA, the Petitioners and LANS/DOE have agreed to the terms and conditions of a permit modification addressing the concerns raised in the Petition for Review. Modification of the Permit will allow the parties to resolve the Petition for Review and finalize the terms and conditions of the Permit without the expense and delay of continued litigation. EPA believes the proposed modification is consistent with the CWA and federal regulations and that modification of the Permit is in the best interest of EPA, the permittees and the public. The permit modification strengthens and clarifies storm water control at the LANL facility, while providing for increased public involvement in permit implementation and compliance.

II. PROPOSED CHANGES TO THE PERMIT

The following changes are proposed to the final Permit issued on February 13, 2009.

- 1) The proposed modification changes the overall approach of the Permit from a water

quality-based approach to a technology-based approach and eliminates the compliance schedule.

Permit as Issued. The Permit as issued requires the installation of site-specific best management practices (BMPs) to reduce concentrations of pollutants in LANL's storm water discharges to levels at or below applicable target action levels established in the Permit, based on EPA's determination that the reduction of pollutant concentrations to levels at or below target action levels would be sufficient to ensure compliance with applicable State water quality standards. The Permit establishes a "staged" approach, through which the permittees' are required to install basic BMPs for all Sites during the first year of the 5-year Permit term, followed by additional, expanded or better-tailored BMPs at any Sites shown to be discharging pollutants in excess of the applicable target action levels. The target action levels are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. The target action levels are not themselves effluent limitations, but were established to evaluate the effectiveness of the water quality-based control measures or the BMPs.

The Permit as issued establishes four stages of BMPs, with Stage 0 BMPS being the basic BMP requirements for all Sites. Stages I – III are increasingly enhanced iterations of BMPs, required only if the previous iteration fails to achieve compliance with target action levels. The Permit sets interim deadlines for installation of BMPs, but includes a compliance schedule allowing the Permittees until October 1, 2015 to achieve final compliance.

Permit Modification. As proposed, the modified permit contains non-numeric technology-based effluent limitations, coupled with a comprehensive, coordinated monitoring program, to minimize pollutants in Permittees' storm water discharges. Permittees are required to implement site-specific control measures (including best management practices) to address the non-numeric technology-based effluent limits as necessary to minimize pollutants in their storm water discharges. As used in the modified permit, "minimize" means to reduce and/or eliminate discharges of pollutants in storm water to the extent achievable using site-specific control measures (including best management practices) that reflect best industry practice considering their technological availability, economic achievability and practicability. Under the modification, the "staged" approach to installation of control measures has been eliminated. The modified permit requires that control measures to address the non-numeric technology-based effluent limits be installed within six (6) months of the effective date of the modification.

Following installation of the control measures, the permittees must perform confirmation monitoring against the target action levels to determine the effectiveness of the measures. If confirmation monitoring shows target action levels are not being met at a particular Site, the permittees must take corrective action in accordance with timelines specified in Section E.4 of the modified permit through installation of measures reasonably expected to: (i) meet applicable target action levels at that Site; (ii) achieve total retention of storm water discharges from the Site; (iii) totally eliminate exposure of pollutants to stormwater at the Site; or through (iv) a demonstration that the Site has achieved RCRA "no further action" status or a Certificate of Completion under NMED's Consent Order.

In recognition of the number of Sites and the unique characteristics of each Site, the

permit modification categorizes the Sites into High Priority Sites and Moderate Priority Sites, and establishes deadlines for corrective action based on this prioritization. Permittees are required to certify completion of corrective action at all High Priority Sites within 3 years of the effective date of the Permit and at Moderate Priority Sites within 5 years of the effective date of the Permit— unless another deadline is specified under Sections E.3 or E.5.d of the modified permit.

EPA believes compliance with these technology-based effluent limitations and with the other terms and conditions of the modified permit will control discharges as necessary to meet applicable water quality standards.

2) The modified permit includes a description of the control measures installed to meet effluent limitations. This change allows the public an opportunity to review and comment on these control measures as a part of the permit modification process.

Permit as Issued. The Permit as issued requires the permittees to identify and describe in the SDPPP, which must be submitted within six (6) months of the effective date of the Permit, all control measures selected and installed to meet the applicable target action levels. The SDPPP must be made available to the Public, but is not public noticed for review and comment.

Permit Modification. The modified permit includes as Appendix E a description of the specific baseline control measures installed or to be installed within six (6) months of the effective date of the Permit to meet the Permit's non-numeric effluent limitations. Any subsequent control measures installed as a result of corrective action must be described in the SDPPP.

3) The “alternative compliance” section of the modified permit has been revised to reflect the switch to technology-based limits and to provide for public participation in any request by the permittees to place a Site or Sites under this section.

Permit as Issued. Section A.3.d.of Part I of the Permit as issued, entitled “Alternative Compliance,” provides that if “Stage III” or “final stage” BMPs have been installed at a Site or Site, but the discharge of storm water from that Site or Sites still shows concentrations of pollutants at levels above the target action levels established in the Permit, the permittees may request that EPA make a determination that no further action is needed based upon, among other things, a finding that values in excess of applicable target action levels are attributable solely to natural background levels of the subject pollutant(s) at that Site or Sites. All information related to such a request must be included in the SDPPP and made publicly available.

Permit Modification. Under the proposed modification, the “Alternative Compliance” provision has been reworked and moved to Section E.3 of Part I of the Permit. The provision as modified provides that where the permittees believe they have installed measures to minimize pollutants in their storm water discharges as required by Part 1.A of the Permit at a Site or Sites, but are unable to certify Completion of Corrective action due, for instance, to force majeure events, background concentrations of pollutants of concern, or pollutants of concern contributed by sources beyond the Permittees control, the Permittees may seek to place a site into Alternative Compliance, whereby Completion of Corrective Action will be accomplished on a case-by-case

basis, and as necessary, pursuant to a individually tailored compliance schedule determined by EPA.

To place a Site or Sites into Alternative Compliance, the permittees must file a written request with EPA following written notice to the public and opportunity for public comment. Such a request must include a comprehensive description of the control measures installed at the Site or Sites and a detailed demonstration, including any underlying studies and technical information, of how the permittees reached the conclusion that they are unable to certify Completion of Corrective action under Sections E.2.(a) through E.2.(d) of the modified Permit (individually or collectively).

Upon submitting such a request to EPA, the permittees must make the request and all supporting information available to the public for review and comment for a period of forty-five (45) days, and must develop and provide to the commenters a written response document addressing all relevant and significant concerns raised during the comment period. The request must then be submitted to EPA, along with the complete record of public comment and the permittees' response to comments. EPA's determination on the request will be made after considering all of the information submitted by the permittees, including all comments received on the request and the permittees response to those comments.

4) Section C of Part I of the Permit (Section H under the permit modification) dealing with "Reporting" has been modified for the sake of clarity and to simplify the reporting process. The name of Section C.1 (Section H.1 as modified) has been changed from "Sampling Reporting" to "Compliance Status Reports." In addition, under the modification, the reporting frequency for status reports has been reduced from semi-annual to annual to reflect the reduced number of interim deadlines as a result of the elimination of the compliance schedule. Consequently, the title of Section C.2 (Section H.2 as modified) has been changed from "Semi-Annual Status Reports" to "Annual Reports."

5) The "Deletion of Site" section has been modified for the sake of clarification and to comport with changes made to other portions of the Permit.

Permit as Issued. The Permit as issued provides that the Permittees may submit a request to remove a Site from Permit coverage if 1) the Site was never used for management of hazardous waste, assuming the Site does not otherwise meet the definitions of industrial activity, 2) the Site has installed permanent BMPs followed by confirmation sampling so that all point sources have been permanently removed; 3) the Site has ceased all discharges permanently, or 4) the Site has met RCRA's No Further Action status or the Site has received a Certificate of Completion under NMED's Consent Order and confirmation samples of runoff have demonstrated not greater than all applicable target action levels. The Permit provides for removal of a Site pursuant to this Section without modification of the Permit.

Permit Modification. Under the proposed modification, the permittees may submit a written request to remove a Site if (a) the Site was never used for management of hazardous waste, assuming the Site does not otherwise meet the definitions of industrial activities (40 CFR 122.26(b)(14)(i) through (xi)), or (b) The Site has met RCRA's No Further Action status or the

Site has received a Certificate of Completion under NMED's Consent Order.

The modified permit requires deletion of a Site to be approved by EPA as a minor modification to the Permit under 40 C.F.R. § 122.63. If such a modification is approved, EPA will notify the permittees in writing and issue a written public notice that the Permit has been modified to remove the Site from the Permit prior to the expiration of the Permit.

6) The proposed permit modification adds Section I.6 to Part I of the Permit to provide clarification regarding what constitutes a violation under the terms of the Permit and the CWA.

7) The permit modification adds Section I.7 to Part I of the Permit to provide for additional public involvement in the facility's implementation of and compliance with the terms of the permit. This Section provides for public participation over and above what is required under federal regulations and has been agreed to voluntarily by LANL and DOE as part of the settlement process.

Under this Section, the permittees will establish a public web site where information on the Permit, including the SDPPP, Annual Reports, Inspection Reports, DMRs, transmittal correspondence between the permittees and EPA, and other relevant data and documents, will be made available. The permittees will also provide the opportunity for members of the public to register for and receive e-mail notifications on compliance with the Permit on the public web site. E-mail notifications will provide notice of completion of installation of baseline control measures, updates on permit compliance, any requests for time extensions, spill information, and notification of any modification to the Permit or SDPPP including changing SMA locations, removing, deleting, or adding sites, and completions of corrective action. Notice will also be provided for any request to complete correction action under Section I.E.3 of the Permit. In addition, the permittees agreed to hold public meetings approximately every six (6) months, at which the permittees will update the public on implementation of and compliance with the Permit and provide an opportunity for both written and oral public comment.

8) Minor changes have been made to the following conditions of the Permit as issued to correct errors:

(a) Measuring unit "pg/l" has been added to the minimum quantification level (MQL) for PCBs in Appendix C. The unit of measurement was inadvertently omitted in the Permit as issued.

(b) STORET Codes for certain parameters listed under the "Applicable Target Action Levels" section of the Permit as issued are incorrect. These codes have been corrected in the modification.

9) Changes have been made to Appendix A to the Permit as issued to reflect the relocation of some Sites within site monitoring areas (SMAs). Consequently, corresponding changes have also been made to Appendices B (monitoring requirements) and D (SMA ID Nos.) to reflect the changes made to Appendix A. In addition, the reporting form included in Appendix D has been

reworked in consultation with EPA's enforcement staff in an effort to make the reporting process more effective.

10) Many conditions of the Permit as issued have been relocated under new sections and/or subsections of the permit modification without changes or with minor changes for the sake of clarity. The Table below cross references such changes.

From Final Permit (section & title)	To Permit Modification (section)
A.1. "Stage 0" BMPs, subsection a., b., c., d., and g.	A. Non-Numeric Technology-based Effluent Limitations
A.1.e. Maintenance of Control Measures	B.2. Maintenance of Control Measures
A.1.f. Modifications to Control Measures	E. Introduction paragraph
A.1.h. Construction Activity Permit Associated with Site Remediation	I. 1. Construction Activity Permit Associated with Site Remediation
A.1.i. More Extensive BMP Option	E. Introduction and E.4.(a) High Priority Sites
A.2. Inspection	G. Inspection
A.3.a. Applicable Target Action Levels	C. Applicable Target Action Levels
A.3.b. Sampling Location,	D.2. Sampling Location
A.3.c. Sampling Procedures	D. Confirmation Monitoring Requirements, subsection 1., 3., and 4., and E. Corrective Action, subsection 1. and 2.
B. Site Discharge Pollution Prevention Plan (SDPPP)	F. Site Discharge Pollution Prevention Plan (SDPPP)
C. Reporting	H. Reporting
D. Deletion of Site	I.2. Deletion of Site
E. Watershed Protection Approach	I.3. Watershed Protection Approach
F. Record Keeping	I.4. Record Keeping
G. Reopener	I.5. Reopener and Modification

11) Changes are also proposed to Appendix B of the Permit as issued to remove the requirement for monitoring of PCBs at the Sites listed below. As discussed in the Statement of Basis for the Permit as issued, soil data and Site history were used to determine pollutants of concern for each Site Monitoring Area (SMA). In the Permit as issued, the permittees were required to monitor for PCBs only at those Sites where information indicates PCBs were used, handled or disposed. Supplemental information indicates PCBs were not used, handled or disposed of at the Sites listed below.

Site No.	SMA No.	Description (1)

Site No.	SMA No.	Description (1)
16-010(b)	CDV-SMA-2.42	Site No. 16-010(b) is the location of a former flash pad (structure 16-387) associated with former MDA P. The flash pad was enclosed within a 100-ft x 100-ft fenced area, and consisted of a layer of sand several inches thick over a soil base. The pad was built in 1951 and was used to flash-burn HE-contaminated material. The flash pad operated as a hazardous waste treatment unit under RCRA interim status. Closure activities and verification sampling for this site were completed in 2000 and 2001, and NMED approved MDA P Site Closure Certification Report in 2005. PCBs were not a RCRA chemical of potential concern, and site history indicates that PCBs would not have been handled or managed at this Site.
16-018	CDV-SMA-2.41	Site No. 16-018 - also known as MDA P - has been entirely removed under RCRA closure which was approved by NMED in 2005. PCBs were not a RCRA chemical of potential concern, and site history indicates that PCBs would not have been handled or managed at this Site.
20-002(a)	S-SMA-3.95	Site No. 20-002(a) is the location of a former firing pit (structure 20-0006) used from 1945 to 1948 to conduct initiator tests. All tests conducted in the firing pit were contained within a vessel with interior dimensions of 14 ft. 8 in. x 14 ft. 8 in. x 12 ft. deep. The pit was removed in April 1948; a memorandum dated April 20, 1948 describing cleanup efforts in Sandia Canyon notes that one "cage" was excavated and that the "interior checked negative after clearing." RCRA chemicals of potential concern for this Site do not include PCBs. There is no evidence that PCBs were managed at this Site or that the Site is a source of PCBs.
20-002(d)	S-SMA-4.5	Site No. 20-002(d) is a former firing site that was located near a manhole (structure 20-0003). Historical information for former TA-20 shows that several (fewer than ten) implosion shots were conducted at the location. The site was cleaned up twice in the 1940s before the construction of East Jemez Road. Small pieces of HE were subsequently removed from the site in July 1966, July 1967, and June 1969. RCRA chemicals of potential concern for this Site do not include PCBs. There is no evidence that PCBs were managed at this Site or that the Site is a source of PCBs.
20-005	S-SMA-5.5	Site No. 20-005 is a former septic system that served a toilet, restroom sink, and darkroom sink in Building 20-0001, which was a laboratory building. The system was constructed in 1945 and its use was discontinued and the tank was removed in 1948. RCRA chemicals of potential concern for this Site do not include PCBs. There is no evidence that PCBs were managed at this Site or that the Site is a source of PCBs.
16-026(b)	W-SMA-5	<p>Site No. 16-026(b) is the location of the former outfall from a former high explosives sump in a rest house that was used to store molds and other materials used in the plastics-development facilities. The building previously housed a solvent disassembly tank used for removing high explosives from test devices. RCRA chemicals of potential concern for this Site do not include PCBs. There is no evidence that PCBs were managed at this Site or that the Site is a source of PCBs.</p> <p>The name provided for Site No. 16-026(b) was "Outfall from building 16-307 - PCB only site" in the February 2008 Final Supplemental Information Submittal. LANL has since determined that the site name was erroneous, and the correct</p>

Site No.	SMA No.	Description (1)
		site name is "Outfall from Structure 16-307."

(1) Site description information is taken from *Los Alamos National Laboratory Individual Permit Application for Storm Water Discharge from SWMUs and AOCs, Permit Application Number NM0030759, Final Supplemental Information Submittal, Volume 1*, February 14, 2008, LA-UR-08-0307.

III. PUBLIC COMMENT AND FINAL DETERMINATION

The proposed permit modification is open to the public for review and comment for a period of thirty-five days from May 1, 2010, or until June 5, 2010 (to accommodate staggered newspaper notice of the proposed modification). In accordance with 40 C.F.R. § 124.20(c), because the final day of the comment period falls on a weekend, Saturday June 5, 2010, the end of the comment period has been extended to the next working day, Monday, June 7, 2010. Anyone wishing to comment on the draft permit modification should submit their comments in writing by the close of business on June 7, 2010, to the address listed below. Pursuant to 40 C.F.R. § 122.62, only the proposed changes from the previously issued final permit are open for comment.

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Any person, prior to the close of the comment period, may submit a request in writing to EPA for a public hearing to consider the draft permit modification. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest.

Following the close of the comment period and any public hearing, if held, the Regional Administrator will issue a final permit modification decision and forward a copy of the final decision to the permittees, the Petitioners and anyone who submitted written comments on the modification or requested notice.