

# NPDES PERMIT NO. NM0030759

## FACT SHEET

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

APPLICANT: 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)  
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PERMIT ACTION: Proposed reissuance of LANL's NPDES storm water permit, which was modified in September 2010, with an effective date of November 1, 2010, and an expiration date of March 31, 2014. The modified permit, which has been administratively continued, authorizes discharges of storm water runoff from solid waste management units (SWMUs) and areas of concern (AOCs) on LANL property.

DATE PREPARED: March 19, 2015

40CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of January 2, 2015.

STATE CERTIFICATION: The permit is in the process of certification by the State agency following regulations promulgated at 40 CFR 124.53. A draft 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 the publication of that notice.

Several Pueblos are located in the vicinity of Los Alamos National Laboratory (LANL). They include the following: San Ildefonso, Santa Clara, and Cochiti. The Santa Clara Pueblo has approved water quality standards (WQS); however, no receiving waters where discharges are proposed to be authorized are under Santa Clara Pueblo jurisdiction. Santa Clara is therefore not believed to be affected by the discharges proposed to be authorized by this permit. Since discharges from LANL go directly to waters under the jurisdiction of the State of New Mexico and San Ildefonso and Cochiti Pueblo waters are downstream, the only CWA §401 certification is required from the State of New Mexico. Neither San Ildefonso nor Cochiti Pueblo has submitted WQS for approval at this time. However, pursuant to the Environmental Protection Agency (EPA)'s Tribal Consultation Policy, EPA offered, in letters of March 18, 2015, to San Ildefonso and Cochiti Pueblos, respectively, the opportunity to engage in government-to-government consultation because they are located downstream of the facility's discharges.

FINAL DETERMINATION: The public notice describes the procedures for the formulation of final determinations.

#### I. STATE STREAM STANDARDS

The general and specific stream standards are provided in "State of New Mexico Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC) New Mexico Water Quality Control Commission (WQCC). EPA approved the New Mexico Water Quality Standards (NMWQS) which were amended as of June 5, 2013.

#### II. RECEIVING WATER USES

Storm water runoff is either to Rio Grande Basin Segment No. 20.6.4.98, designated for livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact, to Rio Grande Basin Segment No. 20.6.4.126, designated for livestock watering, wildlife habitat, coldwater aquatic life and secondary contact or to Rio Grande Segment No. 20.6.4.128, designated for livestock watering, wildlife habitat, limited aquatic life and secondary contact pursuant to the approved NMWQS.

#### III. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Codes 9922, 9711, 9661, and 9611, the applicant currently operates a large multi-disciplinary facility which conducts national defense research and development, scientific research, space research and technology development, and energy development.

#### IV. BACKGROUND AND COVERAGE

The LANL facility is located in Los Alamos County, New Mexico. The Department of Energy (DOE) and Los Alamos National Security (LANS) are co-permittees (“Permittees,” or jointly referred to as LANL) for the purposes of this permit. On February 3, 2005, LANS, DOE, EPA Region 6, and the New Mexico Environment Department (NMED) entered into a Federal Facility Compliance Agreement (FFCA), which established an interim compliance program to regulate storm water discharges from Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) (collectively, as Sites) on LANL’s property prior to issuance of an individual storm water permit. An AOC is any area that may have had a release of a hazardous waste or hazardous constituent and which is not a SWMU.

EPA issued the first individual NPDES storm water permit covering these SWMUs and AOCs on February 13, 2009. The 2009 permit covered a total 405 Sites and designated 250 Site Monitoring Areas (SMAs) as sampling locations for monitoring purposes. 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 2009 permit with the EPA Environmental Appeals Board (EAB) under 40 CFR 124.19(a). On April 13, 2009, LANL filed a Motion to Intervene and Request for Leave to Respond to the Petition for Review. On April 21, 2009, the EAB granted LANL’s request to intervene.

Following extensive settlement discussions, EPA, the Petitioners and LANL agreed to the terms and conditions of a permit modification addressing the concerns raised in the Petition for Review. The final modified permit was issued September 30, 2010. The permit expired March 31, 2014, and has been administratively continued. The administratively continued permit (the AC Permit) does not cover storm water discharges associated with current conventional industrial activities or discharges from Sites co-located with the current conventional industrial activities. Discharges associated with conventional industrial activities will continue to be covered by the Multi-sector General Permit (MSGP).

#### V. DISCHARGE LOCATION

The 36-square mile LANL facility is located in Los Alamos County, approximately 25 miles northwest of Santa Fe, NM. The facility is situated on the Pajarito Plateau, 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 facility has 37 active technical areas spread over 36 square miles. The AC Permit has categorized the Sites into Site Monitoring Areas (SMAs), sub-watersheds, and watersheds for monitoring purposes. An SMA is an area

related to one or more Sites or industrial activities based on a common drainage area within a sub-watershed. A sub-watershed is a sub-area of the watersheds with its own defined drainage area. There are seven (7) major watersheds within the LANL facility boundary: Los Alamos/Pueblo, Sandia, Mortandad, Pajarito, Water/Canon de Valle, Ancho, and Chaquehui.

## VI. TENTATIVE DETERMINATION

On the basis of preliminary staff review and after consultation with NMED, EPA has made a tentative determination to issue a renewal permit for the discharges described in LANL's application and supplemental information, as well as for certain discharges covered by the AC Permit, but not included in LANL's application for reissuance. The proposed renewal permit retains the requirement that applicable Best Management Practices (BMPs) be installed at every Site.

## VII. ISSUES RAISED BY PERMITTEES IN PERMIT RENEWAL APPLICATION

In its application, LANL requested changes to some existing permit conditions. Key issues raised in the application are summarized below. A more detailed discussion of these issues can be found in LANL's application, which is posted on LANL's website: <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/renewal-application.php>. These issues are discussed in Section VIII of the fact sheet.

### A. PCBs in Precipitation and Storm Water

LANL states that "DOE, the NMED-DOE Oversight Bureau, and LANS conducted a multiyear cooperative study to characterize PCBs in certain surface waters located in the upper Rio Grande watershed and in areas in and around the Laboratory.... Environmental monitoring results show that small tributaries carrying a moderate amount of suspended soil/sediment likely will have total PCB concentrations above the human-health WQC (water quality criteria) of 0.64 ng/L and occasionally the wildlife habitat WQC of 14 ng/L, even in the absence of industrial pollution. PCB concentrations above the WQC would be expected in the most remote parts of the drainage system because of the high sediment load carried by small tributaries during periods of storm runoff. Table 12 shows that concentrations greater than the New Mexico human-health WQC were measured in 91% of storm water samples collected from tributaries to the Rio Chama and Rio Grande, in 28% to 78% in ephemeral channels on the Pajarito Plateau, and in 38% of storm water samples from the Rio Grande or Rio Chama.... As illustrated in Table 12, the PCB UTLs (upper tolerance limits) for storm water runoff from precipitation, snowpack, reference watersheds, and the Los Alamos townsite all exceed the 0.00064-µg/L TAL (target action level). That is, Sites with no Site related sources of PCBs may exceed the TAL for total PCBs solely from nonpoint atmospheric and/or developed landscape PCB contributions."

### B. Background Metals Concentrations and Radioactivity in Storm Water

LANL states that “A metals background study was conducted from 2009 to 2012 to investigate both natural (i.e., distant from any industrial activity or urban development) and anthropogenic sources of metals and gross-alpha radioactivity on the Pajarito Plateau. The two principal objectives of this study were to determine (1) background concentrations in reference watersheds and western boundary locations and (2) baseline concentrations of metals and radioactivity in nonpoint, urban runoff from the Los Alamos town site and developed landscapes within the Laboratory. The results of this study are presented in the Background Metals Report.... Results for the metals and gross-alpha radioactivity with common exceedances were strongly associated with each landscape type. Aluminum and gross alpha were elevated in distant non-developed landscapes because of the composition of natural minerals in weathered Bandelier Tuff. Copper and zinc were elevated within and adjacent to developed urban landscapes because these metals are associated with materials and activity occurring within a developed urban landscape.... Table 13 presents the results for aluminum and gross alpha from reference and developed watersheds. The reference watershed BV (background value) of 2210 µg/L for dissolved aluminum significantly exceeds the Individual Permit TAL of 750 µg/L. Similarly, the reference watershed BV of 1490 pCi/L for gross alpha significantly exceeds the Individual Permit TAL of 15 pCi/L.... Run-on from developed areas onto Sites commonly contains elevated concentrations of copper and zinc, which are subsequently observed as TAL exceedances even though the concentrations of these metals in shallow soil samples are consistent with BVs, and no historical Site-related processes used these metals. The fact that concentrations of copper and zinc are well below TALs in storm water runoff from remote non-developed watersheds on the Pajarito Plateau verify that these metals are associated with developed urban landscapes.... Table 13 presents the results for copper and zinc from developed, urban landscapes. The developed BV of 32.3 µg/L for dissolved copper significantly exceeds the Individual Permit TAL of 4.3 µg/L. Similarly, the developed BV of 1350 µg/L for dissolved zinc significantly exceeds the Individual Permit TAL of 42 µg/L.”

### C. NMED Hazardous Waste Bureau-approved Investigation Report under the RCRA Consent Order

LANL states that “The Permittees request that the renewed draft permit for the Individual Permit include specific language that allows the co-Permittees to complete corrective action or delete a Site, as appropriate, based on an NMED decision under the RCRA Consent Order that the Site poses no unacceptable risk to human health or the environment. This change is consistent with the existing Permit language under Section E, which recognizes the Laboratory may demonstrate a Site poses no unacceptable risk to human health or the environment through an NMED-approved CoC (certificate of completion) with or without controls under the RCRA Consent Order.” LANL provided the following rationale for change: “The Individual Permit application was submitted in March 2005, the same year DOE and NMED signed the RCRA Consent Order. Since 2005, however, the Laboratory has undertaken significant investigation and sampling activities as required under the RCRA Consent Order. As described above, NMED’s approval of the final investigation report for an aggregate area, technical area, or canyon is a key regulatory decision point because it documents whether or not an individual Site poses a risk to human health or the environment based upon current and reasonably foreseeable future use. Although the Laboratory will request CoCs for eligible SWMUs and AOCs once NMED has approved an investigation report, the time frame for receiving the CoC is dependent upon NMED. The co-Permittees believe NMED’s approval of the investigation report and the associated risk assessment provides the documentation necessary to demonstrate

that a Site does not have any significant industrial materials exposed to storm water if it satisfies residential risk. For these reasons, the Permittees propose the following to EPA:

\* Revise Section E ... to allow the Laboratory to demonstrate that it may be eligible for completion of corrective action under the Individual Permit or Site deletion if it received an NMED-approved investigation report under the RCRA Consent Order, confirming a Site poses no unacceptable risk to human health or the environment based on residential SSLs (soil screening levels).

\* Revise Section I ... to allow the Laboratory to demonstrate that a Site may be deleted if it receives an NMED-approved investigation report under the RCRA Consent Order confirming that the Site poses no unacceptable risk to human health or the environment based upon residential SSLs.”

#### D. RCRA Clean Closure

LANL states that “The Permittees request that the renewed draft Permit for the Individual Permit incorporate specific language that allows the co-Permittees to complete corrective action or delete a Site, as appropriate, for Sites that have achieved RCRA “clean closure.” A Site that has a certificate of clean closure is equivalent to an NMED decision that a SWMU or AOC poses no unacceptable risk to human health or the environment because all hazardous waste and hazardous waste residues must be removed and all soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed (see closure 40 CFR 264.178). This change is also consistent with the existing Permit language under Section E, which recognizes that the Laboratory may demonstrate that a Site poses no unacceptable risk to human health or the environment through an NMED-approved CoC with or without controls under the RCRA Consent Order. These changes are identified in the introductory text to Section E, Section E.1(d), Section E.3(iii) and Section I.5(d), *Deletion of Site*. The revised language would allow the Permittees to achieve completion of corrective action under the Individual Permit and delete a Site “through an NMED-approved Certificate of Clean Closure under the Hazardous Waste Facility Permit confirming that the Site poses no unacceptable risk to human health or the environment based upon residential soil screening levels.””

#### E. High Priority Sites

LANL states that “The Permittees request that their progress in addressing High Priority Sites be reflected in the draft permit for the renewal of the Individual Permit. As a result of new information and progress under the RCRA Consent Order, the Laboratory has determined that a substantial number of High Priority Sites identified in the Individual Permit are not the industrial source for PCBs and did not previously handle, store, treat or otherwise manage PCBs.”

#### F. Site Monitoring Requirements

LANL has requested removal of the monitoring requirements for certain pollutants of concern, alleging that the presence of these pollutants in its storm water discharges is due to soil background concentrations, instead of industrial activities. In support of this claim, LANL states the following: “The concentrations of naturally occurring constituents in shallow soil samples were compared with the applicable soil background concentrations in Inorganic and Radionuclide Background Data for Soils, . . . Initially, the concentration of each inorganic constituent was compared with the Laboratory’s soil BV for that constituent. . . . If 5% or more of the results were greater than the soil BV, the constituent was determined to potentially be present above background and the results were compared with the maximum concentration for that constituent in the Laboratory’s soil background data set. . . . These data were also compared with residential SSLs. SSLs alone do not represent cleanup standards and do not trigger the need for a response action or define “unacceptable” levels of contamination in soil. Residential SSLs are used to identify concentrations below which there is generally no need for concern. The latest New Mexico guidance for SSLs is the Risk Assessment Guidance for Site Investigations and Remediation (NMED, February 2012, updated in June 2012). NMED SSLs are based on a 1E-05 target risk for carcinogens, or a hazard quotient of 1 for noncarcinogens.”

LANL has also implemented screening processes for organic chemicals and PCBs, including comparison of storm water data with residential SSLs, site history, frequency of detection, magnitude of detection, and geographic distribution, to determine whether or not organic chemicals or PCBs are significant industrial materials at certain Sites.

#### G. Total Retention

LANL states that “The current IP does not define design criteria for total retention. Without a design basis the co-Permittees have not been able to use total retention as a tool for the completion of corrective action. The proposed 3-year 24-hour (1.19 to 1.79 in. of precipitation; dependent upon location of the Site) design storm was chosen to be both conservative and technically achievable. Total retention of the 3-year, 24-hour storm event represents a storm water capture volume that exceeds guidance provided by the Energy Independence Security Act and regulations implemented by leading Region 6 municipalities in the field of storm water quality. Despite the statistical annual risk of exceedance of the 3-year, 24-hour storm, only 13 storms in the 62-year period of record (1952 to 2013) have exceeded the 3-year, 24-hour storm. Research has demonstrated that increasing the capture volume (beyond basic water quality goals) is not correlated to an increase in removal efficiencies of targeted constituents.”

#### H. Sampling Locations

LANL states that “As stated previously, the Individual Permit treats a Site as an “industrial activity” that creates a “point source” and directs the Permittees to monitor storm water releases from Sites at SMA sampling points. An SMA is a single drainage area within a subwatershed and can include more than one Site. At the time the current Individual Permit was drafted, this subwatershed sampling approach was assumed to be representative of the point-source releases from the Site or Sites within the SMA. . . . Substantial new information collected since the Sites and SMAs were selected for the current Permit demonstrates that this assumption was frequently incorrect. Although the most common TAL exceedances are for aluminum, gross alpha, copper, zinc, and PCBs, RCRA Consent Order shallow soil data show that these

constituents were not released from historical activities at the majority of the Sites. The findings of the PCB Background Report clearly show that Sites with no Site-related sources of PCBs may exceed the TAL for total PCBs solely from nonpoint atmospheric and/or developed landscape PCB Contributions. The Background Metals Report confirms that Bandelier Tuff is the primary source of aluminum and gross-alpha TAL exceedances in undeveloped watersheds. The Background Metals Report also confirms that nonpoint runoff from developed areas is a major source of copper and zinc TAL exceedances.”

#### I. Sites Not Requiring Coverage under this Permit

LANL states that “Based on... extensive, new information, it is now clear that a number of Sites are not discharging storm water associated with industrial activity, storm water that causes or contributes to water-quality standards exceedances, or storm water that significantly contributes pollutants to waters of the United States.... The co-Permittees believe that NMED’s approval of the investigation report and the associated risk assessment provides the documentation necessary to demonstrate that a Site does not have any significant industrial materials exposed to storm water if it satisfies residential risk. The co-Permittees have identified 67 Sites that are currently known not to have significant industrial materials exposed to storm water....”

### VIII. DRAFT PERMIT RATIONALE

This section sets forth the principal factual, legal, methodological, and policy questions considered in preparing the draft renewal permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR 122.44, reasons why they are applicable, or an explanation of how alternate effluent limitations were developed. Over the last few years, LANL, representatives of interested citizens groups (i.e., Communities for Clean Water – CCW, Amigos Bravos, etc.) and NMED have held several meetings to discuss implementation issues related to the AC Permit. As a result of these meetings, LANL, NMED and the citizens groups have provided significant input and comments to EPA for consideration in preparing the draft renewal permit. In addition, EPA provided NMED, as the permit certifying agency, two-week preproposal review period during which to provide comments on the preliminary draft permit. After reviewing information provided in LANL’s permit renewal application, as well as the comments and additional information provided to EPA by LANL, interested citizens’ groups and NMED, EPA is proposing some major changes from the AC Permit. These proposed changes, as well as similarities between the AC permit and the proposed renewal permit, are discussed below, section by section in the sequence of the AC Permit.

#### A. Non-Numeric Technology-Based Effluent Limitations

The AC Permit contains non-numeric technology-based effluent limitations, coupled with a comprehensive, coordinated monitoring program, to minimize pollutants in LANL’s storm water discharges. LANL is 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 AC 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. This permit renewal retains the “non-numeric site-specific control measures” approach.

#### B. Control Measures

The AC Permit requires LANL to install baseline control measures for each Site and to maintain those control measures. There are no significant changes to this part of the permit, although there has been some restructuring of the content. The list of Baseline Control Measures and the requirements for maintenance of control measures from the AC Permit are retained, but divided into two subparts: structural control measures and nonstructural control measures. Parts A and B of the AC Permit are combined as Part A. Maintenance of Control Measures under the proposed permit.

#### C. Applicable Target Action Levels

The target action levels (TALs) established in the AC Permit, which are based on and equivalent to the most recent New Mexico State water quality criteria for the subject pollutants, are retained in the proposed renewal permit. The applicable TALs are not themselves effluent limitations, but are benchmarks to determine the effectiveness of control measures implemented to meet the non-numeric technology-based effluent limitations.

Because the receiving streams are likely dominated by storm runoff during storm events, and the storm water discharges are more likely to cause acute rather than chronic effects on aquatic life, the AC Permit used acute aquatic life criteria to establish the maximum target action levels (MTALs). The AC Permit also established average target action levels (ATALs) by using the most stringent criteria for livestock watering, wildlife habitat and persistent human health uses to screen against the average of effluent data in order to protect those designated uses. (Note: chronic aquatic life criteria were not used for ATALs.) If the MTAL of a specific pollutant is more stringent (lower value) than the ATAL, MTAL will be the only screening criteria for further action purposes.

In a letter dated May 8, 2008, based on site-specific data, NMED required as a condition of certification of the AC Permit that EPA incorporate the maximum target action levels (MTALs) for hardness-dependent metals based on a hardness value of 30 mg/l as CaCO<sub>3</sub>. A concentration of 100 mg/l TSS, based on the benchmark value in the MSGP, was used to calculate total-dissolved conversion factors, if necessary.

Total, unless indicated	CAS No.	MQL (µg/l)(*1)	ATAL (µg/l)(*2)	MTAL (µg/l)(*3)
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Total, unless indicated	CAS No.	MQL (µg/l)(*1)	ATAL (µg/l)(*2)	MTAL (µg/l)(*3)
<b>RADIOACTIVITIES</b>				
Ra-226 and Ra-228 (pCi/l)			30	---
Adjusted Gross Alpha (pCi/l)			15	---
<b>METALS</b>				
Aluminum, total recoverable	7429-90-5	2.5	---	3421
Antimony, dissolved (P)	7440-36-0	60	640	---
Arsenic, dissolved (P)	7440-38-2	0.5	9	340
Boron, dissolved	7440-42-8	100	5000	---
Cadmium, dissolved	7440-43-9	1	---	(*5)
Chromium VI, dissolved	7440-47-3	10	---	(*5)
Cobalt, dissolved	7440-48-4	50	1000	---
Copper, dissolved	7440-50-8	0.5	---	(*5)
Lead, dissolved	7439-92-1	0.5	---	(*5)
Mercury, total	7439-97-6	0.005	0.77	1.4
Nickel, dissolved (P)	7440-02-0	0.5	---	(*5)
Selenium, total recoverable	7782-49-2	5	5	20
Silver, dissolved	7440-22-4	0.5	---	(*5)
Thallium, dissolved (P)	7440-28-0	0.5	6.3	---
Vanadium, dissolved	7440-62-2	50	100	---
Zinc, dissolved	7440-66-6	20	---	(*5)
<b>CYANIDE</b>				
Cyanide, total recoverable	57-12-5	10	5.2	22
<b>DIOXIN</b>				
2,3,7,8-TCDD (P)	1746-01-6	0.00001	5.1E-08	---
<b>SEMIVOLATILE COMPOUNDS</b>				
Pentachlorophenol	87-86-5	5	---	19
Benzo(a)pyrene (P)	50-32-8	5	0.18	---

Total, unless indicated	CAS No.	MQL (µg/l)(*1)	ATAL (µg/l)(*2)	MTAL (µg/l)(*3)
Hexachlorobenzene (P)	118-74-1	5	0.0029	---

**PESTICIDES**

Aldrin (P)	309-00-2	0.01	0.0005	3
Gamma-BHC	58-89-9	0.05	---	0.95
Chlordane (P)	57-74-9	0.2	0.0081	2.4
4,4'-DDT and derivatives (P)	50-29-3	0.02	0.001	1.1
Dieldrin (P)	60-57-1	0.02	0.00054	0.24
Alpha-Endosulfan	959-98-8	0.01	---	0.22
Beta-Endosulfan	33213-65-9	0.02	---	0.22
Endrin	72-20-8	0.02	---	0.086
Heptachlor	76-44-8	0.01	---	0.52
Heptachlor Epoxide	1024-57-3	0.01	---	0.52
Toxaphene	8001-35-2	0.3	---	0.73

**PCBS**

PCBs (P)	1336-36-3	(*4)	0.00064	---
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**HIGH EXPLOSIVES**

RDX	121-82-4		200	---
2,4,6-Trinitrotoluene (TNT)	118-96-7		20	---

## Footnote:

(\*1) MQL is the minimum quantification level. EPA approved analytical methods with the same or more sensitive method detection level (MDL) than MQL shall be used. If an individual analytical test result is smaller than the MQL listed above, a value of zero (0) or "ND" may be used for reporting and action purpose. The Permittees need to use a 40 CFR 136 approved sufficiently sensitive method for a constituent if its MQL is higher than its MTAL or ATAL.

(\*2) ATAL stands for Average Target Action Level

(\*3) MTAL stands for Maximum Target Action Level

(\*4) Method 1668 Revision A or the most current revision of the Congener Method shall be used for PCB analysis.

(\*5) Hardness-dependent metals target action levels.

In comments on the draft renewal permit, the NMED raised a concern about situations where the Minimum Quantification Level (MQL) of a constituent is higher than the MDL in an available 136 method and NMED's water quality standard. NMED commented that due to the sufficiently sensitive rule, if there is a 136 approved method that will yield results below the MTAL or ATAL value, it must be used. EPA agrees and proposes to include the requirement to use the 40 CFR 136 approved sufficiently sensitive method for a constituent if its MQL is higher than its MTAL or ATAL.

As described above, chronic aquatic life criteria were not considered in the determination of ATALs for the AC Permit and the approach was accepted by NMED, LANL and local citizens groups. However, for the renewal permit, NMED has suggested using chronic aquatic life criteria for ATALs for certain constituents. EPA is proposing to use the same approaches to establish MTAL and ATAL values for the AC Permit, believing that such TALs without accounting for in stream dilution provides an adequate margin of safety. EPA is open to suggestions whether or not to use chronic aquatic life criteria for ATALs.

The NMED also questioned the use of the congener method MQL for PCBs because NMED cannot compare an individual congener to a state water quality standard or a TAL, which is representative of the additive value of all the congeners together. NMED requested that EPA delete congener MQLs. Because the use of Method 1668 for PCBs was certified as a required condition in the AC Permit by NMED, NMED should provide, as part of its certification of the renewal permit, a measurable and defensible MQL for reporting and compliance purposes. EPA is proposing to retain the PCB congener MQLs in the renewal permit, but will delete the PCB congener MQL list from the final permit if NMED provides a total PCB MQL prior to final permit issuance.

The NMED, LANL and CCW agreed to recommend use of receiving stream hardness to develop canyon-based TALs for hardness-dependent metals. The proposed permit implements this suggestion. The NMED provided EPA a list of stream hardness values and that list is attached as Appendix A to this Fact Sheet. Hardness-dependent MTAL values for each canyon are attached as Appendix B to this Fact Sheet.

The NMED suggested EPA add MTALs and ATALs to the permit as needed for constituents (most are semi-volatile compounds (SVC) and volatile organic compounds (VOC)) observed in soil test conducted by LANL for which there are also water quality standards. NMED's suggestions are based on soil values observed for 24 SMAs during the most recent Compliance Evaluation Inspection. EPA decided not to monitor VOC in 2008 when EPA drafted the first-time issuance permit because the volatile nature of constituents made sampling difficult to meet the sample collection and preservation procedures and such constituents may not be persistent in water. EPA has not been convinced that the permit should require the Permittees spend additional resources on monitoring of those SVC instead of focusing on pollutants which may pose more imminent environmental impacts. Firstly, those SVC constituents suggested by NMED are non-persistent and combined with their semi-volatile nature, they would be unlikely to cause persistent impact to the surface water. Secondly, almost all of the applicable water quality standards are based on HH-OO criteria, and are very unlikely to cause any adverse human health impact due to their non-persistent nature even if storm water runoff or sediments carrying SVC eventually reach the Rio Grande where edible fish or aquatic life are present. It is likely overkilled to use HH-OO criteria to evaluate environmental impacts caused by storm water runoffs which enter into a fish free stream. Thirdly, there are not enough stream data which have demonstrated SVC have reasonable potential to cause exceedance of applicable

water quality standards. Fourthly, based on monitoring data provided to EPA, pentachlorophenol, a non-persistent semi-volatile compound listed in the AC Permit, has not been detected. And, lastly, when existing or future BMPs are installed to control or eliminate exposure of pollutants to storm water, any SVC present in soil will also be controlled or eliminated. EPA is soliciting comments regarding whether it is necessary to require monitoring of those non-persistent SVC and what significant environmental benefits would be achieved if EPA requires monitoring of those non-persistent SVC.

#### D. Confirmation Monitoring Requirements

EPA proposes to retain this section, but to tailor the conditions to best fit the purpose of determining when cleanup or control of a site has been successful in ensuring that the quality of receiving waters will be protected. For instance, EPA proposes to require that the size of the drainage area of each SMA shall be representative and as close as practical to the size of the Site or Sites within the SMA. This change is proposed to address the fact that some of the SMA drainage areas in the AC Permit include significant drainage from non-point sources, indicating that the SMA may cover too wide an area to avoid masking effects from runoff outside the previous industrial activity area. EPA also proposes that in the event that new information indicates a current sampling location is not representative of discharges from the Site-affected media, the Permittees may add additional sampling points to collect more representative confirmation samples without going through the permit modification process. If more than one sampling location for a Site is needed, an equal volume of samples taken from different locations shall be composited and analyzed for confirmation purposes. However, the Permittees may move a sampler to make adjustments that arise from changes in natural conditions, installation of structural controls, unexpected events, or as otherwise necessary to ensure the sampling location is representative of storm water discharges from the Site-affected media as delineated by soil sampling data. Such changes may include minor updates in Site boundaries, changes in storm water drainage patterns, logistical, or security adjustment. EPA will not reopen the permit for modification for such minor adjustments. All additions or changes of sampling locations shall be addressed in the Permittees' SDPPP.

The weather patterns in Los Alamos County, coupled with the effects of some BMPs, have presented several challenges for confirmation monitoring. Under the AC Permit, the "measurable storm event" and "fifteen day storm interval" restrictions might have prevented some samples to be used for confirmation purposes. EPA, based on a recommendation by NMED, LANL and CCW, proposes to modify these restrictions. EPA proposes to eliminate the 15-day sampling interval and allow the permittees to immediately restart the samplers. Since BMPs may result in less runoff events and/or fewer measurable storm events from a particular Site, the current "measurable storm event" restriction may significantly hinder the further actions due to lack of valid confirmation samples. Therefore, EPA proposes to allow partial samples for confirmation purposes (e.g., analyze part of the required parameters from one storm and the rest from another).

EPA also proposes to allow comparisons of analytical results from discharge samples with results from run-on or precipitation samples to determine natural background and/or precipitation/run-on baselines. If the average concentration of a pollutant of concern in the run-on or precipitation samples are equal to or greater than the average concentration in the discharge samples, EPA may consider that that particular Site does not contribute significant materials from previous industrial activities to storm water. However, LANL must install run-on controls

for every site and properly maintain those controls unless LANL can demonstrate that a complete or partial run-on control is not feasible. EPA proposes to use the condition of “Geomean (run-off) – Geomean (run-on/precipitation)  $\leq$  TAL” to determine if a Site or Sites are reasonably expected to be adding to background levels and contributing to an exceedance of TALs. EPA proposes to include pollutant concentration in undisturbed land runoff as background concentration because at least two pollutants, mercury and PCBs, may be present in the air deposition and/or natural sources and their concentrations in the background runoff may already exceed applicable TALs. LANL has also provided a study report on PCBs and data indicating that PCB concentrations in background runoff can exceed TALs.

Because the Permittees have collected additional pollutant data through soil investigations associated with the RCRA Consent Order, NMED suggested that LANL be required to use soil data during the term of this permit to assess appropriate sampling locations, and to inform appropriate pollutants to monitor in storm water, based on the historic activity at the SWMU/AOC. NMED also suggested that the additional pollutant data be reviewed by an interdisciplinary team comprised of interested parties from LANL, NMED, and USEPA. EPA appreciates NMED and LANL’s suggestions to improve the confirmation sampling process. However, due to resource constraints, EPA is proposing a different approach. The proposed permit does allow LANL either to add more sampling points or to make minor adjustments to current sampling points in order to collect more representative confirmation samples. LANL may work with NMED to determine the best sampling locations. Since LANL already has soil data, LANL may consider whether to include monitoring of those constituents detected in soil in the final permit prior to the issuance of the final permit. (EPA is not sure if trace amounts of pollutants detected in soil would have a reasonable potential to contribute to an exceedance of WQS.) EPA will have no issue if additional sampling locations or additional pollutants are added to the permit during permit renewal process, but not during the term of the permit.

#### E. Corrective Action

The Permittees raised concerns about PCBs in precipitation, metals and radioactive materials in background soils, and run-on from urban areas that have contributed pollutants to storm water samples. The draft permit allows the Permittees to submit a site-specific demonstration (SSD) on a case-by-case basis to EPA that the Site(s) are not reasonably expected to be the source of the remaining pollutant(s) of concern. EPA proposes to include two factors, in addition to site history, natural background or baseline concentrations, or other factors that the Permittees have used in the past, to be evaluated for EPA’s approval of the SSD. (1) If the condition of “Geomean (run-off) – Geomean (run-on/precipitation)  $\leq$  TAL” is met, the Permittees has demonstrated that the Site or Sites are not reasonably expected to be the sole source for one or more of the remaining pollutant(s) of concern to contribute exceedance of TALs, If total run-on control or total capping of a Site is infeasible, the formula “Geomean (run-off) – Geomean (run-on/precipitation)  $\leq$  TAL” may reasonably demonstrate contribution from unrelated sources. (2) If surface soil (3 feet or deeper in depth) has been removed and replaced and soil data has demonstrated that concentrations of pollutants of concern in the new soil are significantly lower than the replaced old soil, the Permittees have reasonably

demonstrated that no significant amount of materials from previous activities remains in the site. If there is evidence to show that storm water penetrates into soil on that specific Site more than 3 feet and re-surface downstream, soil deeper than 3 feet may also need removal.

Consistent with a recommendation by NMED, LANL and CCW, EPA also proposes to replace “total retention” requirement with a performance-based retention control measure that retains a volume of storm water runoff from a Site or SMA that is equivalent to the volume from a 3-yr, 24-hr storm event. LANL states that the historically the “3-year, 24-hour” storm event is has actually occurred at LANL about once every five years (13 events over 62 years) in recent years. It may not be practicable and/or economically achievable to contain 100% of runoff from all precipitation events. It is reasonable to believe that control measures that limit discharges to once every three to five years on average will significantly reduce pollutants from entering into the waters of the US. Such control measures reduce discharge frequency, statistically, from every storm event to once every permit term. In addition, EPA also proposes that the Permittees may install a run-on control measure coping with runoff and sediment control measures (i.e., low impact development, green infrastructure, sediment catch basin or barrier, etc.). Such installations will minimize discharges from any storm less than the 3-year, 24-hour storm event.

The draft permit proposes to include caps or other engineered covers and/or soil removal as options for the total elimination of exposure to storm water. NMED commented that because LANL might not have evaluated some of the affected areas properly during the previous permit term due to those Sites having been inactive for decades and LANL not being able to accurately delineate boundaries of original activities or affected-areas due to afterward pollutant migrations, the renewal permit should require two confirmation samples after the Site has been capped. Although NMED’s concern are understandable, EPA does not believe that this is a corrective action issue, but rather a site information issue. If NMED has information or data which indicates that LANL failed to provide accurate site boundaries for any specific Site, NMED should raise it before the permit is finalized so LANL may correct it prior to initiating corrective actions to avoid waste of resources for inappropriate works. If new information indicates some affected-areas are not identified in the permit, EPA may add those areas to the Site list. But, once a Site is totally covered and does not expose significant materials to storm water, confirmation samples are not required. However, EPA proposes to require one confirmation sample if the capped area is smaller than the associated SMA drainage area. If the Permittees choose to remove contaminated soil and replace it with new soil, EPA may determine based on new soil data that no significant amount of materials remain on the site and corrective actions are complete for that particular Site.

EPA proposes to revise the section on Alternative Compliance in the AC Permit because of the following facts and/or concerns: (a) most of the issues (i.e., run-on, natural background, precipitation, size of MSA, non-industrial activities, and etc.) raised by LANL during the past five years to justify its requests for alternative compliance could be resolved through proposed the new permit conditions; (b) the deadline set forth in the AC Permit for requesting Alternative Compliance for Priority Sites has passed and any new alternative compliance schedule will likely pass the final compliance deadline, October 31, 2015, established in the AC Permit; (c) Resource constraints make the process established in the AC Permit under which EPA issues a new tailored work plan to the Permittees if EPA denies the Alternative Compliance Request unworkable; and (d) EPA believes it makes more sense to determine the status of compliance based on installed site-specific control measures (i.e., site clean-up, sediment control, combination of control measures, other approaches beyond the baseline control measures, and etc.) on a case-by-case basis under the authority of the CWA.

EPA proposes to revise the “Alternative Compliance” section to require the Permittees to provide a list of additional on-the-ground actions or a watershed protection approach which have resulted in a significant reduction of discharges of Site-related pollutants with their request for alternative compliance. If EPA, after considering all the information submitted by the Permittees, including all comments received on the request and the Permittees response to those comments, denies the request, EPA may require the Permittees to install Site-specific control measures to complete the corrective action.

Since no one can know with certainty when rainfall will permit TAL sampling, and therefore confirm if site controls have been effective, the proposed permit replaces hard deadlines for final actions with reactive correction action requirements. If any confirmation sampling results still show exceedance of the applicable TALs, the Permittees shall take proper corrective actions and complete such actions within three years from the date the Permittees have knowledge of the TAL exceedance. New schedules with four action stages are proposed as follows: (1) initiate a corrective action evaluation within 30 days, (2) complete the corrective action evaluation within 180 days, (3) commence engineering design, purchase order, or installation of BMPs processes within 270 days, and (4) complete installation of BMPs within 36 months, from the date when the Permittees have knowledge of TAL exceedance. Because LANL may need to take several corrective actions, and those actions may be either at the same or different action stages, during the same time frame, it is difficult to predict or to judge whether a 3-year schedule is adequate or manageable in light of 300-400 Sites covered by this permit.

EPA proposes not to distinguish High Priority Sites from Moderate Priority Sites and their associated compliance deadlines. The compliance schedule for High Priority sites expired and the compliance schedule for the Moderate Priority sites will expire October 31, 2015. Therefore, it makes meaningless to keep two categories of sites with two compliance schedules. EPA is not proposing a deadline for the Permittees to certify completion of corrective actions based on new information available to EPA. (1) The number of Sites certified is low during the past permit term due to various reasons including lack of confirmation samples and TALs exceedance due to natural background or contribution from other sources. Although most of the issues or causes may be resolved by the newly proposed permit conditions, it is still unpredictable how quick those problems will be resolved. (2) Lack of confirmation samples may be a sign that the existing control measures have been working well to reduce discharges from measurable storm events to longer than the permit term. However, in many cases, the Permittees will not be able to certify the completion of corrective action without confirmation sampling results. (3) It requires years (up to 3 years as proposed in this permit renewal) to complete advanced and more tailored corrective actions when confirmation sampling results become available. Then, after the completion of corrective actions, the Permittees still need to collect confirmation samples before they may certify the completion of corrective action. Because the Permittees will not be out of compliance due to any of three circumstances discussed above, provided site controls have been put in place, EPA does not see the need to establish a deadline for certification of completion dependent on confirmation sampling. If any commenter believes such a deadline should be required, EPA requests that he or she provide reasons why the suggested deadline is reasonably achievable and also provide solutions to address the three issues discussed above.

F. Site Discharge Pollution Prevention Plan (SDPPP)

The proposed renewal permit retains the requirement that the Permittees develop and update their SDPPP which summarizes training, descriptions of Sites, control measures, sampling and inspection procedures, and other requirements and defined in the AC Permit.

G. Inspections

EPA proposes to retain the erosion and post-storm inspections and reporting requirements in the permit.

H. Reporting

EPA proposes to modify the current reporting requirements in the AC Permit and consolidate all reporting requirements into one annual compliance status report. Reporting requirements will reflect proposed changes discussed above.

I. Other Conditions

EPA proposes to change the provisions of Other Conditions from the AC Permit. Once a Site is terminated from coverage under the renewal permit, it will be the Permittees' responsibility to ensure that the Site complies with all other applicable regulatory requirements Major changes are discussed below.

- (1) Sites which meets corrective action completeness status under the RCRA program are not proposed to be eligible for Site deletion under the renewal permit. Although the Permittees may claim that Sites that have achieved completeness status under RCRA are eligible for deletion from the AC Permit once confirmation samples are obtained, EPA proposes to replace the criteria for site deletion with other criteria as discussed in items (2) – (5) below. Note that the criteria for RCRA cleanup do not match up exactly with the NPDES requirement for a permit for storm water associated with industrial activity where industrial activity took place in the past and significant materials remain and are exposed to storm water.
- (2) Site-related pollutants have never been exposed, or will no longer be exposed, to storm water. This criteria is similar to one of the criteria listed in the AC Permit.
- (3) Sites have no significant materials to be exposed to storm water after installation of permanent control measures. If a minimum of two confirmation storm water samples were collected and no pollutants exceeded the applicable TALs, the Permittees have demonstrated that the Site is no longer considered an industrial activity for areas where industrial activity has taken place in the past pursuant to 40 CFR 122.26(b)(14). This is based on presumption that LANL will properly maintain all installed on-site control measures. The Permittees are subject to enforcement for discharging without a permit if installed control measures fail, re-exposing significant materials, and contaminated storm water reaches the waters of the U.S.
- (4) Sites have no significant materials remaining after removal of contaminated soil. The Permittees may certify corrective action complete by removing 3-feet or more contaminated surface soil and providing soil data to demonstrate no significant materials from previous activities remain.

- (5) The Permittees demonstrated that no applicable TAL exceedances are reasonably expected to be Site-related and any exceedances are due to runoff (e.g., natural background or urban-type runoff). This is also based on presumption that LANL will properly maintain all installed on-site control measures.
- (6) EPA may approve a request for Site deletion in writing by issuing a minor permit modification pursuant to 40 CFR 122.63(e)(2).

The AC Permit has a provision which encourages the Permittees to voluntarily install watershed-based control measures. However, the AC Permit does not recognize watershed-based control measures as acceptable for compliance purposes. EPA proposes to allow the Permittees to use a watershed-based control approach for compliance purposes on a case-by-case basis if the Permittees demonstrate that significant reduction of pollutants discharged into major canyons has been accomplished. The NMED questioned whether “significant reduction” means that storm water discharges at the bottom of the watershed meets WQS. EPA is not proposing to use state WQS to define “significant reduction” because the scope of a watershed will cover a wider drainage area than storm runoffs from Sites within the watershed and pollutants contributed by naturally occurring background and non-point sources may cause exceedance of state WQS. Also, this is not a water quality-based permit, but rather a non-numeric technology-based permit, with site-specific control measures, including BMPs, expected to be protective of water quality. The Permittees are in compliance with the permit if they implement appropriate basic (including structural and non-structural) control measures and take timely corrective actions in accordance with the permit conditions. A watershed protection approach will reduce the total load of pollutants from entering into the waters of the downstream canyons.

Although EPA established TALs based on state WQS in the AC permit, it was not EPA’s intent that these TALs (particularly for chronic or human health-based pollutants) be used as “standards” or “criteria.” Rather, as stated in the AC Permit, “The Permittees must control discharges from all Sites as necessary to ensure such discharges will not cause or contribute to a violation of applicable water quality standards. EPA believes that compliance with the non-numeric technology-based effluent limitations and other terms and conditions of this Permit will control discharges as necessary to meet applicable water quality standards.” EPA took a BMP approach and used TALs as benchmarks to determine whether more BMPs beyond those basic BMPs were necessary. Also, EPA determined that if a discharge met TALs, that discharge would not cause or contribute to a violation of state WQS. But, EPA also realized that if a discharge exceeded TALs, it might or might not (it is difficult to determine reasonable potential for storm water discharge) cause or contribute to a violation of state WQS. While the TALs apply to discharges from Sites without accounting for dilution in the receiving water, the NM WQS apply to the waters of the U.S. or to State waters, not to a discharge itself. Therefore, EPA determined that BMPs were the most reasonable approach to deal with runoff from the SWMUs and AOCs. EPA also established the alternative compliance process to deal with non-site related sources of pollutants which might cause or contribute to exceedances of TALs and could not be properly addressed by BMPs.

To control each Site separately, individually, and independently and then confirm effectiveness with runoff monitoring is not only time consuming, but also resource intensive. Because metals and persistent pollutants likely remain in the sediments and sediment movements caused by storm water discharges may eventually reach the downstream waterbodies, it may be more meaningful, in certain circumstances, to control sediment than to control runoff in order to protect water quality of downstream waterbodies, e.g., canyons and Rio Grande. One

example of technology for watershed protection approach is to build sediment control barriers in the runoff pathways. EPA also solicits for comments whether or not to give credit in some fashion for in-stream sediment removal as part of watershed protection approach.

Under the proposed renewal permit, Sites will not be subject to a compliance schedule when no confirmation samples can be collected after installation of control measures. Instead, EPA is proposing that the Permittees be required to conduct inspections and maintenance of installed control measures. The proposed permit also allows the Permittees to make a determination that existing control measures and topography are capable of retaining a volume of storm water runoff that is equivalent to a 3-yr, 24-hr storm or greater. This determination may be made based upon a site survey and/or field evidence that the SMA did not discharge storm water during a 3-yr, 24-hr storm or greater event and all sampling equipment was fully functional during the storm event.

#### J. Water Quality-Based Effluent Limits

EPA proposes to retain the provision regarding Water Quality-Based Effluent Limits in the permit.

#### K. Appendices

The Permittees sent the following updates of Site information, as supplemental information to the Application dated March 27, 2014, via email dated January 16, 2015:

Table 1. Sites Not Requiring Coverage under the IP (No Release of Significant Industrial Materials)

Table 2. Sites where significant Industrial Materials were never exposed to Storm Water.

Appendix A: Site Monitoring Area and Site Information

Appendix B: Site Monitoring Requirements

Appendix D: Site Monitoring Locations & Permitted Feature Assignment

Appendix E: Control Measures Installed

On January 16, 2015, LANL submitted an update to its application for reissuance of the permit, which included proposed deletion of sixty-one (61) Sites previously covered by the AC Permit. The majority, forty-nine (49), of the Sites deleted from the application for reissuance can be categorized as Sites for which the Permittees had obtained Certificates of Completion (CoC) under the RCRA Program and Sites that had received Investigation Report approval but had not yet obtained a CoC. The remaining twelve (12) Sites were either subsurface disposal sites, Sites where further investigation concluded that there was no evidence that the suspected Site actually existed, or Sites that never discharge. Presumably, the Permittees have determined that discharges from these deleted sites no longer require NPDES permit authorization. (See Appendix C to the fact sheet.)

NMED provided information disputing the Permittees' decision not to include those Sites in the permit renewal. In most of cases, NMED argued that either no confirmation samples were taken, confirmation sampling results showed exceedance of TALs, or soil data show present

of pollutants. For those exceeding TALs, most of them exceeded gross alpha. Since the Permittees previously requested and obtained permit authorization for discharges from the disputed Sites and the Permittees have not completed the confirmation process established by the AC permit, EPA is proposing to continue authorization of those Sites proposed for deletion by the Permittees. Under the AC Permit, a Sites may be deleted if “[t]he Site has met RCRA’s ‘corrective action complete without controls/corrective action complete with controls’ status’ or the Site has received a Certificate of Completion under NMED’s Consent Order and confirmation samples of runoff have demonstrated concentrations no greater than applicable target action levels.” Because meeting the criteria for corrective action complete or CoC under RCRA does not necessarily demonstrate compliance with the Clean Water Act, confirmation sampling was required to demonstrate no exceedance of TALs and thus ensure that discharges from the Site no longer met the definition of discharges of storm water associated with industrial activity at 40 CFR 122.26(b)(14). Without confirmation sampling, a Site might meet the criteria for RCRA CoC or Investigative Report approval and yet still contain significant materials from the previous industrial activity that are exposed to storm water – meaning discharges from that Site still meet the definition of “storm water discharge associated with industrial activity” and require NPDES permit authorization.

Appendix A of the permit lists authorized Sites, with those that were previously authorized under the AC Permit, but have been deleted under the proposed reissuance, indicated by strike-through (e.g., ~~00-011(e)~~), and those that LANL requested be deleted, but EPA proposes to retain highlighted (e.g., **c-00-020**). EPA specifically requests comment on whether some or all of the deleted sites should be included in the final permit.

The Permittees also submitted an updated Appendix B which lists Site monitoring requirements. The updated list includes addition and deletion of monitoring requirements. The Permittees proposed to monitor semi-volatile compound (SVC), High Explosive (HE), PCBs or Dioxin instead of other pollutants at certain Sites. NMED provided comments and a revised list. While LANL did not provide justifications for deletions of monitoring requirements, NMED frequently used comments, such as downstream canyon impairments, no storm water sample has been collected, monitoring may not be representative, SMA not representative, or need to review soil data, to reject LANL proposed changes. EPA decides to propose Appendix B based on Sites listed in Appendix A and NMED’s inputs on monitoring requirements for comments. EPA only proposes to add PCBs and Dioxin to the list. EPA has discussed the rationales not to propose monitoring for VOC and non-persistent SVC in section VIII.C above. EPA may consider monitoring of HE for Sites which were used for test or handle of explosive materials.

While EPA recognizes the importance to identify site-specific pollutants caused by previous site-specific activities, in order to effectively protect and address the water quality of downstream canyons, EPA is soliciting comments whether or not to focus on constituents which have caused or may have potential to cause water impairment of downstream canyons. While the NPDES permit program is to protect the waters of U.S., receiving stream water quality data may help us to identify major pollutants of concern. This approach may reduce some uncertainties, such as, runoffs from some remote or small sites may not reach those major canyons, non-persistent pollutants may not cause persistent water quality problem in canyons or Rio Grande, unspecified non-point source runoff volume which would dilute effluent concentrations, amount of pollutants reaching canyons to cause or contribute to exceedance of water quality standards, and etc.. Appendix A

to this Fact Sheet has listed names of canyons and pollutants causing impairments.

#### IX. 24-Hour Oral Reporting

The AC permit, Part II.B., requires a 24-hour oral reporting to both EPA and NMED if any confirmation sampling result shows exceedance of MTAL. Because an exceedance of MTAL does not cause permit violation and any of those exceedances will unlikely cause immediate human health problem, EPA proposes to remove the 24-hour reporting requirement to minimize unnecessary reporting requirements to EPA.

But, EPA retains the requirement for LANL to report to NMED in case NMED, as the permit certifying agency, still wants to receive such reports. EPA may remove the 24-hour oral reporting requirement totally from the final permit if NMED does not want to receive such reports either.

#### X. ANTI-BACKSLIDING AND ANTI-DEGRADATION POLICY

The New Mexico 20.6.4 NMAC, Section 20.6.4.8 “Antidegradation Policy and Implementation Plan” sets forth the requirements to protect designated uses through implementation of the State water quality standards. The permit renewal does not authorize new or increased discharges into the environment; rather, it enforces BMP requirements aiming at reduction of pollutants released to the environment.

EPA proposes several changes due to new information revealed during the term of the AC permit, and all those changes are in compliance with EPA’s anti-backsliding policy. EPA proposes to remove the requirements for installation of baseline control measures which are the non-numeric technology-based effluent limitations established in the AC permit because all sites now have baseline control measures in place. Therefore, maintaining those baseline control measures will meet the non-numeric technology-based effluent limitations in the AC permit.

#### XI. VARIANCE REQUESTS

No variance requests have been received.

#### XII. ENDANGERED SPECIES ACT

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. According to the most recent county listing of species, shown on the U.S. Fish and Wildlife Service’s (the Service’s) Information, Planning, and Conservation System (IPAC), the following species may be present in the county where the proposed NPDES discharge occurs: southwestern willow flycatcher (*Empidonax traillii extimus*), Mexican spotted owl (*Strix occidentalis lucida*) with critical habitats, and Jemez Mountains salamander (*Plethodon neomexicanus*) with critical habitats. New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) is listed as proposed endangered species.

Mexican spotted owl. The Mexican spotted owl prefers forested mountains and canyons with mature trees that create high, closed canopies, which are good for nesting. They also nest in stick nests built by other birds, in tree cavities and caves and on cliff ledges. The main threats to the Mexican spotted owl are starvation, fire, and loss of habitat due to logging, which also causes a greater risk of predation by great horned owls as a result of increased open space. The reissuance of this permit will not contribute any above mentioned threats to the Mexican spotted owls. EPA maintains the “no effect” determination.

Southwestern willow flycatcher. LANL has provided a statement to EPA, via an email dated August 26, 2013, when EPA prepared the permit reissuance for LANL’s industrial wastewater discharge permit (NM0028355) that “The only area of habitat that we currently manage as Southwestern Willow Flycatcher habitat is the wetlands complex on the north side of Pajarito Road just east of TA-18. We have been surveying the area since the mid-90s and have never had any nest, but we occasionally do have migrant Willow Flycatchers come through. Since none of them have stayed and nested we cannot say that they were the endangered southwestern subspecies.” Based on the new information available, since the southwestern willow flycatcher has not been observed for staying or nesting in LANL since the mid-90s, EPA has determined that this permitting action has “no effect” on southwestern willow flycatcher.

Jemez Mountains Salamander. LANL stated in the email of August 26, 2013, that “We do have habitat for the Jemez Mountains Salamander in a few different canyons that will be managed under our Habitat Management Plan once the federal listing is final which is any day now. We have confirmed the habitat in Los Alamos Canyon is occupied and the other areas we have modeled to be habitat are assumed to be occupied since the species is so hard to find and surveys destroy habitat.”

Based on information provided by the FWS in Federal Register, Vol. 78, No. 175, (September 10, 2013), the Jemez Mountains salamander is strictly terrestrial, does not possess lungs, and does not use standing surface water for any life stage. Respiration (the exchange of oxygen and carbon dioxide) occurs through the skin, which requires a moist microclimate for gas exchange. Substrate moisture through its effect on absorption and loss of water is probably the most important factor in the ecology of this terrestrial salamander. The Jemez Mountains salamander spends much of its life underground, but can be found above ground when relative environmental conditions are warm and wet, which is typically from July through September; but occasional salamander observations have been made in May, June, and October. Relatively warm and wet environmental conditions suitable for salamander aboveground activity are likely influenced by melting snow and summer monsoon rains. When active above ground, the species is usually found under decaying logs, rocks, bark, or moss mats or inside decaying logs or stumps. Changes in pH (acidity or alkalinity) can affect plethodontid salamander behavioral and physiological responses. In one study of the Jemez Mountains salamander, soil pH was the single best indicator of relative abundance of salamanders at a site. Sites with salamanders had a soil pH of 6.6 ( $\pm$  0.08) and sites without salamanders had a soil pH of 6.2 ( $\pm$  0.06).

The following statements are also provided in the above mentioned Federal Register. Subsurface geology and loose rocky soil structure may be an important attribute of underground salamander

habitat. Geologic and moisture constraints likely limit the distribution of the species. Soil pH (acidity or alkalinity) may limit distribution as well. However, the composition of this subterranean habitat has not been fully investigated. ... The salamander's subterranean habitat appears to be deep, fractured, subterranean, igneous rock in areas with high soil moisture. Many terrestrial salamanders deposit eggs in well hidden sites, such as underground cavities, decaying logs, and moist rock crevices. Because the Jemez Mountain salamander spends the majority of its life below ground, eggs are probably laid and hatch underground. Although no egg clutches have been discovered in the wild, it is believed they are laid in the fractured interstices of subterranean, metamorphic rock. Jemez Mountain salamanders lack lungs; instead, they are cutaneous respirators (meaning they exchange gases, such as oxygen and carbon dioxide, through their skin). To support cutaneous respiration its skin must be moist and permeable. Jemez Mountain salamanders must address hydration needs above all other life-history needs. The salamander must obtain its water from its habitat. In addition, it has no physiological mechanism to stop dehydration or water loss to the environment. Based on this information, it is likely that substrate moisture through its effect on absorption and loss of water is the most important factor in

the ecology of this species. We suspect that these components may be a main driver behind salamander occurrences and distribution.

LANL has developed a Habitat Management Plan (HMP) entitled "Threatened and Endangered Species Habitat Management Plan Area of Environmental Interest Site Plan for the Jemez Mountains Salamander", dated July 2013. The HMP states that the primary threats to the JMS on Los Alamos National Laboratory (LANL) property are impacts to habitat quality or destruction of individual salamanders caused by LANL or Los Alamos County operations. Forested LANL property is also subject to impacts from severe wildland fire and wildfire suppression. During periods of the year when the salamanders are on the soil surface, when conditions are warm and wet (generally July – September), they are vulnerable to injury and mortality from soil-disturbing activities, including operation of heavy equipment in core habitat. They also are at risk to be found and collected by people.

The HMP has identified areas of environmental interest (AEIs) which consist of two areas, a core area and a buffer area. The core habitat is defined as suitable habitat where the JMS occurs or may occur at LANL. The core habitat consists of sections of north-facing slope that contain the required micro-habitat to support the salamanders. The buffer area is 328 feet (100 meters) wide extending outward from the edge of the core area. LANL has identified core habitats which contain contiguous and noncontiguous habitat areas. The largest contiguous section of habitat at LANL is in Los Alamos Canyon. There are two noncontiguous areas of habitat in Two-mile Canyon, four in Pajarito Canyon, one contiguous area in Cañon de Valle, and the entire Fenton Hill facility.

The HMP provides the guidelines for habitat alterations and allowable activities in AEI core and buffer areas for the salamanders. It describes what and where habitat alterations are allowed under the guidelines of this site plan. If an activity does not meet the restrictions given in the guidelines, the activity must be individually reviewed for ESA compliance through the section 7 consultation process. Because any activity conducted by LANL which may affect federally listed endangered species requires compliance with ESA section 7 consultation process and LANL has implemented the HMP to protect the species habitats, EPA determines that the reissuance of this permit has "no effect" upon the baseline of the HMP. If any site-specific information indicates that to comply with the permit requirements may cause adverse effect to the species during the term of the permit, then EPA may reevaluate the effect for that specific Site.

New Mexico Meadow Jumping Mouse. New Mexico Meadow Jumping Mouse has been proposed to be listed in the federal endangered species list. LANL stated in the above mentioned email that LANL does not have any New Mexico Meadow Jumping Mouse habitat at LANL. Experts from NMDGF (New Mexico Department of Game and Fish) have surveyed areas of possible habitat and they have confirmed that LANL does not have habitat for that species. Therefore, any federal action on the facility will have “no effect” on the species.

Therefore, EPA has determined that the reissuance of this permit will have no effects on any of those listed species upon either previous ESA consultation or existing Habitat Management Plan baselines.

### XIII. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by 40 CFR\_124.9:

A. APPLICATION(S)

EPA Application Forms 1 and 2F received by EPA dated March 27, 2014.

B. STATE WATER QUALITY REFERENCES

STATE ADMINISTRATIVE CODE

The general and specific stream standards are provided in "The State of New Mexico Standards for Interstate and Intrastate Surface Waters 20.6.4 NMAC" (20.6.4 NMAC, effective June 6, 2013)

WATER QUALITY STANDARDS IMPLEMENTATION

Region 6 Implementation Guidance for State of New Mexico Standards for Interstate and Intrastate Stream, May 15, 2012.

## Appendix A – Watershed Information

<u>Canyon Name</u>	<u>Waterbody Segment</u>	<u>Impairments (303d)</u>	<u>Canyon Specific Hardness Value (mg/L)</u>	<u>Designated uses</u>
Acid	20.6.4.98	Pueblo to headwaters: gross $\alpha$ , PCBs, chronic Cu, acute Cu, Al	22.45	LW, WH, MWAL,
Ancho	20.6.4.128	North Fork to headwaters: PCBs Rio Grande to North Fork Ancho: Al, PCBs, gross $\alpha$	39.73	LW, WH, LAL,
Arroyo de la Delfe	20.6.4.128	Pajarito to headwaters: gross $\alpha$ , Al	21.89	LW, WH, LAL,
Bayo	20.6.4.98	Not assessed.	58.70 (n=1)	LW, WH, MWAL,
Canada del Buey	20.6.4.128	within LANL: PCBs, Al, gross $\alpha$	38.52	LW, WH, LAL,
Canon de Valle	20.6.4.126 (perennial), 20.6.4.128	LANL gage E256 to Burning Ground Spring: PCBs, Al, gross $\alpha$ below LANL gage E256: Al, gross $\alpha$ upper LANL boundary to headwaters: Al, PCBs, gross $\alpha$	39.97	(126) Coldwater AL, LW, WH, (128) LW, WH, LAL,
Chaquehui	20.6.4.128	Not assessed.	30.10 (n=3)	LW, WH, LAL,
DP	20.6.4.128	Los Alamos Canyon to LANL boundary: gross $\alpha$ , PCBs, Al	30.99	LW, WH, LAL,
Fence	20.6.4.128	Not assessed.	68.23	LW, WH, LAL,
Graduation	20.6.4.98	Pueblo Canyon to headwaters: PCBs, Acute Cu, Al.	31.14	LW, WH, MWAL,
Los Alamos	20.6.4.128	1. DP to Upper LANL boundary: PCBs, Al, gross $\alpha$ , Hg 2. NM-4 to DP Canyon: gross $\alpha$ , PCBs, Al	41.97	LW, WH, LAL,
Mortedad	20.6.4.128	within LANL: gross $\alpha$ , Al, PCBs, acute Cu	26.47	LW, WH, LAL,
North Fork Ancho	20.6.4.128	Ancho Canyon to headwaters: gross $\alpha$ , PCBs	?	LW, WH, LAL,
Pajarito	20.6.4.126 (Arroyo de la Delfe to Starmers), 20.6.4.128	1. Arroyo de la Delfe to Starmers Spring: Al 2. Upper LANL boundary to headwaters: PCB, Al, Ar, Se, gross $\alpha$ , PCBs 3. Within LANL above Starmers Gulch: Al, gross $\alpha$ 4. Within LANL below Arroyo de la Delfe: Al, PCBs.	42.77	(126) Coldwater AL, LW, WH, (128) LW, WH, LAL,
Potrillo	20.6.4.128	above Water Canyon: Al, gross $\alpha$	21.20	LW, WH, LAL,
Pratt	20.6.4.128	Not assessed.	26.47	LW, WH, LAL,
Pueblo	20.6.4.98	1. Acid Canyon to headwaters: PCBs, Al, gross $\alpha$ 2. Los Alamos Canyon to Los Alamos WWTP: gross $\alpha$ , PCBs, Al. 3. Los Alamos WWTP to Acid Canyon: PCBs, gross $\alpha$	40.28	LW, WH, MWAL,
Rendija	20.6.4.98	Guaje Canyon to headwaters: Not assessed	114.60 (n=1)	LW, WH, MWAL,
Sandia	20.6.4.126	1. Sigma Canyon to NPDES Outfall 001: Al, PCBs, acute Cu, Thallium,	54.52	(126) Coldwater AL,

	(Sigma to Outfall 001), 20.6.4.128	gross $\alpha$ 2. within LANL below Sigma: PCBs, Al, gross $\alpha$		LW, WH, (128) LW, WH, LAL,
South Fork Acid	20.6.4.98	Acid Canyon to headwaters: gross $\alpha$ , PCBs, acute Zn, acute Cu	21.40	LW, WH, MWAL,
Ten-Site	20.6.4.128	Mortendad to headwaters: gross $\alpha$ , PCBs, Al.	15.84	LW, WH, LAL,
Threemile	20.6.4.128	Pajarito to headwaters: gross $\alpha$ , Al	29.36	LW, WH, LAL,
Twomile	20.6.4.128	Pajarito to headwaters: gross $\alpha$ , PCBs, Al	29.02	LW, WH, LAL,
Walnut	20.6.4.98	Pueblo Canyon to headwaters: PCBs, acute Cu	22.81 (n=1)	LW, WH, MWAL,
Water	20.6.4.126 (Area-A Canyon to SR 501), 20.6.4.128	Area-A Canyon to NM 501: Al Within LANL below Area-A Canyon: Al, PCBs, gross $\alpha$	39.69	(126) Coldwater AL, LW, WH, , (128) LW, WH, LAL,

## Appendix B - Watershed-based MTALs for Hardness-dependent Pollutants

Canyon	Hardness	Al	Cd	Cr-III	Cu	Pb	Mn	Ni	Ag	Zn
Acid	22.45	442.18	0.46	167.63	3.29	12.30	1815.23	132.31	0.25	41.13
Ancho	39.73	966.27	0.75	267.53	5.63	23.33	2195.38	214.45	0.66	69.11
Arroyo de la Delfe	21.89	427.14	0.45	164.19	3.21	11.95	1800.03	729.51	0.24	40.19
Bayo	58.70	1649.14	1.05	368.31	8.14	35.99	2500.21	298.35	1.29	98.57
Canada del Buey	38.52	926.20	0.73	260.84	5.47	22.54	2172.88	208.91	0.62	67.20
Canon de Valle	39.97	974.27	0.76	268.85	5.66	23.49	2199.79	215.54	0.66	69.49
Chaquehui	30.10	666.70	0.59	213.13	4.34	17.10	2001.49	169.56	0.41	53.70
DP	30.99	687.60	0.61	218.28	4.46	17.67	2021.01	173.80	0.43	55.14
Fence	68.23	2026.45	1.19	416.60	9.37	42.44	2628.69	338.85	1.67	113.02
Graduation	31.14	692.16	0.61	219.14	4.48	17.77	2024.27	174.51	0.43	55.38
Los Alamos	41.97	1041.65	0.79	279.82	5.93	24.81	2235.86	224.63	0.72	72.65
Mortedad	26.47	554.07	0.53	191.84	3.84	14.86	1917.62	152.09	0.33	47.77
North Fork Ancho	30 (default)	657.69	0.59	212.55	4.32	17.04	1999.27	169.09	0.41	53.53
Pajarito	42.77	1068.94	0.80	284.18	6.04	25.33	2249.96	228.25	0.75	73.91
Potrillo	21.20	408.81	0.44	159.94	3.12	11.53	1786.92	126.05	0.22	39.04
Pratt	26.47	554.07	0.53	191.84	3.84	14.80	1917.62	152.09	0.33	47.77
Pueblo	40.28	984.64	0.76	270.56	5.71	23.69	2205.46	216.96	0.67	69.98
Rendija	114.60	4122.49	1.86	637.04	15.28	74.89	3124.33	525.45	4.07	181.11
Sandia	54.52	1490.46	0.99	346.68	7.59	33.17	2439.44	280.28	1.13	92.16
South Fork Acid	21.40	414.10	0.44	161.18	3.14	11.65	1786.50	127.06	0.23	39.37
Ten-Site	15.84	274.27	0.34	125.98	2.37	8.29	1616.15	98.50	0.14	29.95
Threemile	29.36	638.55	0.58	208.83	4.24	16.63	1984.96	166.03	0.39	52.49
Twomile	29.02	628.45	0.57	206.84	4.19	16.42	1977.28	164.40	0.38	51.94
Walnut	22.81	451.92	0.47	169.82	3.34	12.52	1824.88	134.10	0.25	41.73
Water	39.69	964.94	0.75	267.31	5.63	23.31	2194.64	214.26	0.66	69.05



**Appendix C - Table 1**  
**Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed**

Site	SMA	CoC Type	Approved Residential Risk Assessment in IR	CoC Date	IR	IR Approval Date
<b>Sites Meeting Residential Risk and Having CoCs without Controls</b>						
00-011(c)	R-SMA-2.05	Complete without Controls	No (No COPCs, risk not evaluated)	May 16, 2012 (NMED 2012)	Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area at TA 00, Revision 1 (LANL 2007)	Dec. 20, 2007
16-030(c)	CDV-SMA-1.4	Complete without Controls	No (No COPCs, risk not evaluated)	Jan. 23, 2008 (NMED 2008)	n/a	n/a
45-001	ACID-SMA-2	Complete without Controls	Yes	Feb. 22, 2013 (NMED 2013)	Phase II Investigation Report for Pueblo Canyon Aggregate Area (LANL 2010)	Dec. 23, 2010
45-002	ACID-SMA-2	Complete without Controls	Yes	Feb. 22, 2013 (NMED 2013)	Phase II Investigation Report for Pueblo Canyon Aggregate Area (LANL 2010)	Dec. 23, 2010
45-004	ACID-SMA-2	Complete without Controls	Yes	Feb. 22, 2013 (NMED 2013)	Phase II Investigation Report for Pueblo Canyon Aggregate Area (LANL 2010)	Dec. 23, 2010
46-004(m)	CDB-SMA-0.55	Complete without Controls	Yes	July 13, 2012 (NMED 2012)	Investigation Report for Upper Cañada del Buey Aggregate Area, Revision 1 (LANL 2011)	May 31, 2011
53-001(b)	S-SMA-3.72	Complete without Controls	Yes	July 31, 2013 (NMED 2013)	Investigation Report for Lower Sandia Canyon Aggregate Area, Revision 1 (LANL 2011)	Sept. 26, 2011
C-00-020	R-SMA-0.5	Complete without Controls	No (No COPCs, risk not evaluated)	May 16, 2012 (NMED 2012)	Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area at TA 00, Revision 1 (LANL 2007)	Dec. 20, 2007

Table 1 (continued)

## Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed

Site	SMA	CoC Type	Approved Residential Risk Assessment in IR	CoC Date	IR	IR Approval Date
<b>Sites Meeting Residential Risk and Having CoCs with Controls</b>						
C-46-001	CDB-SMA-1	Complete without Controls	Yes	July 13, 2012 (NMED 2012)	Investigation Report for Upper Cañada del Buey Aggregate Area, Revision 1 (LANL 2011)	May 31, 2011
00-011(a)	R-SMA-2.5	Complete with Controls (UXO Surveys, Storm Water)	Yes	May 7, 2013 (NMED 2013)	Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area At TA-00, Revision 1 (LANL 2007)	Dec. 20, 2007
00-011(d)	B-SMA-1	Complete with Controls (UXO Surveys, Storm Water)	Yes	May 7, 2013 (NMED 2013)	Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area At TA-00, Revision 1 (LANL 2007)	Dec. 20, 2007
00-011(e)	R-SMA-2.3	Complete with Controls (UXO Surveys, Storm Water)	Yes	May 7, 2013 (NMED 2013)	Investigation Report for Guaje/Barrancas/Rendija Canyons Aggregate Area At TA-00, Revision 1 (LANL 2007)	Dec. 20, 2007
01-001(b)	LA-SMA-2.3	Complete with Controls (Storm Water)	Yes	Sept. 10, 2010 (NMED 2010)	Investigation Report for Upper Los Alamos Canyons Aggregate Area, Revision 1 (LANL 2010)	Apr. 21, 2010
01-001(c)	LA-SMA-4.2	Complete with Controls (Storm Water)	Yes	Sept. 10, 2010 (NMED 2010)	Investigation Report for Upper Los Alamos Canyons Aggregate Area, Revision 1 (LANL 2010)	Apr. 21, 2010
01-003(e)	LA-SMA-5.02	Complete with Controls (Storm Water)	Yes	Sept. 10, 2010 (NMED 2010)	Investigation Report for Upper Los Alamos Canyons Aggregate Area, Revision 1 (LANL 2010)	Apr. 21, 2010
01-006(d)	LA-SMA-4.2	Complete with Controls (Storm Water)	Yes	Sept. 10, 2010 (NMED 2010)	Investigation Report for Upper Los Alamos Canyons Aggregate Area, Revision 1 (LANL 2010)	Apr. 21, 2010
35-014(e2)	M-SMA-10.3	Complete with Controls (Storm Water)	Yes	Sept. 27, 2013 (NMED 2013)	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008

Table 1 (continued)

## Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed

Site	SMA	CoC Type	Approved Residential Risk Assessment in IR	CoC Date	IR	IR Approval Date
35-016(i)	M-SMA-10.3	Complete with Controls (Storm Water)	Yes	Sept. 27, 2013 (NMED 2013)	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
48-007(a)	M-SMA-4	Complete with Controls (Storm Water)	Yes	Sept. 7, 2010 (NMED 2010)	Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1 (LANL 2010)	June 4, 2010
48-007(d)	M-SMA-4	Complete with Controls (Storm Water)	Yes	Sept. 7, 2010 (NMED 2010)	Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1 (LANL 2010)	June 4, 2010
48-010	M-SMA-4	Complete with Controls (Storm Water)	Yes	Sept. 7, 2010 (NMED 2010)	Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1 (LANL 2010)	June 4, 2010
<b>Sites with COCs Requested Meeting Residential Risk</b>						
04-001	T-SMA-7.1	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
04-002	T-SMA-7.1	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
04-003(b)	T-SMA-7	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-001(a)	M-SMA-12.8	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-001(b)	M-SMA-12.9	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-001(c)	M-SMA-13	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008

Table 1 (continued)

## Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed

Site	SMA	CoC Type	Approved Residential Risk Assessment in IR	CoC Date	IR	IR Approval Date
05-002	M-SMA-12.7, M-SMA-12.8, M-SMA-12.9	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-004	M-SMA-12.6	n/a	Yes	n/a	Investigation Report for Lower Mortandad/Cedro Canyons, Revision 1 (LANL 2012)	Sep. 10, 2012
05-005(a)	M-SMA-12.7	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-005(b)	M-SMA-12.6	n/a	Yes	n/a	Investigation Report for Lower Mortandad/Cedro Canyons, Revision 1 (LANL 2012)	Sep. 10, 2012
05-006(b)	M-SMA-12.7	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
05-006(e)	M-SMA-12.7	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
16-017(a)-99	CDV-SMA-1.3	n/a	Yes	n/a	Supplemental Investigation Report for Consolidated Units 16-007(a)-99 and 16-008(a)-99 (LANL 2010)	Feb. 16, 2010
35-004(a)	T-SMA-4, T-SMA-5	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008, 102187)	Apr. 1, 2008
35-004(h)	PRATT-SMA-1.05	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
SWMU 35-008	M-SMA-10	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008

Table 1 (continued)

## Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed

Site	SMA	CoC Type	Approved Residential Risk Assessment in IR	CoC Date	IR	IR Approval Date
35-009(d)	PRATT-SMA-1.05	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-010(e)	T-SMA-6.8	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-014(e)	M-SMA-10	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-014(g)	T-SMA-2.85	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(a)	T-SMA-5	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(b)	T-SMA-3	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(e)	M-SMA-10.01	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(f)	M-SMA-9.1	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(i)	PRATT-SMA-1.05	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(m)	PRATT-SMA-1.05	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008

**Table 1 (continued)****Sites Not Requiring Coverage under the Individual Permit – Investigation complete with no remediation performed**

<b>Site</b>	<b>SMA</b>	<b>CoC Type</b>	<b>Approved Residential Risk Assessment in IR</b>	<b>CoC Date</b>	<b>IR</b>	<b>IR Approval Date</b>
35-016(n)	T-SMA-2.85	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008
35-016(q)	T-SMA-5	n/a	Yes	n/a	Investigation Report for Middle Mortandad/Ten Site Aggregate, Revision 2 (LANL 2008)	Apr. 1, 2008

Appendix C - Table 2

## Sites Not Requiring Coverage under the Individual Permit – Significant Industrial Materials Never Exposed to Stormwater

SMA	Site	Brief Description	Justification
54-017	CDB-SMA-4 PJ-SMA-17 PJ-SMA-18 PJ-SMA-19 PJ-SMA-20	Subsurface disposal pits at Material Disposal Area (MDA G)	Subsurface disposal area with no surface exposure
54-018	CDB-SMA-4 PJ-SMA-17	Subsurface disposal pits at MDA G	Subsurface disposal area with no surface exposure
54-020	CDB-SMA-4 PJ-SMA-19	Subsurface disposal shafts at MDA G	Subsurface disposal area with no surface exposure
54-014(D)	PJ-SMA-18	Storage trenches A, B, C, and D at MDA G	Subsurface disposal area with no surface exposure
54-013(B)	PJ-SMA-19	Subsurface disposal pit (truck washing pit converted to Pit 19) at MDA G	Subsurface disposal area with no surface exposure
54-004	PJ-SMA-14	Material Disposal Area H (MDA H)	Subsurface disposal area with no surface exposure
50-009	T-SMA-1	Material Disposal Area C (MDA C)	Subsurface disposal area with no surface exposure
00-011(c)	R-SMA-2.05	Mortar Impact Area	No evidence found to verify existence
C-00-020	R-SMA-0.5	Mortar Impact Area	No evidence found to verify existence
05-001(c)	M-SMA-13	Firing Site	No evidence found to verify existence
16-030(c)	CDV-SMA-1.4	Outfall from Former Building 16-222	Roof drains that did not receive a release
35-016(m)	PRATT-SMA-1.05	Drainlines and Outfall Associated with Cooling Tower 35-33	Cooling tower never operated and discharge to outfall never occurred