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Date: November 2, 2020
Refer To: N3B-2020-0186

Evelyn Rosborough
U.S. Environmental Protection Agency, Region 6
NPDES/Wetlands Review Section (6WD-PN)
Permitting & Water Quality Branch
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Isaac Chen
U.S. Environmental Protection Agency, Region 6
Permitting Section (6WQ-NP)
Permitting & Water Quality Branch
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Subject: Permittees' Comments on the U.S. Environmental Protection Agency Draft Los Alamos National Laboratory National Pollutant Discharge Elimination System Storm Water Individual Permit (Permit No. NM0030759)

Dear Ms. Rosborough and Mr. Chen:

The U.S. Department of Energy Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees, submit this letter and enclosure to provide comments on the draft Los Alamos National Laboratory (LANL) National Pollutant Discharge Elimination System (NPDES) Storm Water Individual Permit (Permit No. NM0030759) (the Permit). The comments provided by the Permittees fall into the following categories: (1) substantive changes to proposed Permit conditions based on the Permittees' knowledge and understanding; (2) organizational changes to clarify, improve, and facilitate understanding of the Permit; and (3) questions or responses to new information provided in the Permit and Fact Sheet that were not previously discussed. These proposed changes and justification are provided in the main text and Attachments 1 and 2; supporting justification for the proposed changes is provided in Attachments 3 through 11.

This submittal includes the following:

- Table 1, Permittees' Comments on the EPA Draft "LANL NPDES Storm Water Individual Permit (NM0030759)"
- Attachment 1, proposed changes to the draft Permit (redline/strikeout version and changes-accepted version)
- Attachment 2, proposed changes to the draft Permit, Appendixes A through C
- Attachments 3 through 11, supplemental materials to support changes proposed in the Permittees' comments and Attachments 1 and 2

In preparing these comments, the Permittees relied heavily on the stakeholder input and informal agreements made during stakeholder webinars, which were held to develop the preliminary permit language used in the Permittees' Permit application. Therefore, it is critical that the U.S. Environmental Protection Agency (EPA) consider the changes recommended to the draft Permit, which more closely mirror permit conditions developed in the stakeholder webinar process.

In consideration of conditions proposed in the draft Permit, Site-specific conditions, and information presented in the draft Fact Sheet, the Permittees, with this submittal, have modified the list of Sites proposed for deletion from the Permit. Specifically, additional Sites have been added and others have been removed from the list of Sites recommended for deletion from the Permit. Sites proposed for deletion are presented in Appendix A of the draft Permit (Attachment 2), and supporting rationale for these requests is provided in Attachments 3 through 8.

Also included in this comment submittal is a link to the completed "Development of Background Threshold Values for Storm Water Runoff on the Pajarito Plateau, New Mexico 2019 Revision" report (Attachment 9). This revised storm water background characterization report incorporates background sampling data collected through 2018. Target action levels (TALs) and background threshold values (BTVs) in Appendix B and Appendix C, respectively, have been updated to reflect the inclusion of 2019 data.

If you have any questions, please contact Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or M. Lee Bishop at (505) 257-7902 (lee.bishop@em.doe.gov).

Sincerely,

Joseph Murdock

Joseph Murdock
Program Manager
Environment, Safety and Health
N3B-Los Alamos

Sincerely,

M Lee Bishop Digitally signed by M Lee Bishop Date: 2020.10.28 12:52:59 -06'00'

M. Lee Bishop, Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

Enclosure(s):
1. Permittees' Comments on the U.S. Environmental Protection Agency Draft Los Alamos National Laboratory National Pollutant Discharge Elimination System Storm Water Individual Permit (Permit No. NM0030759) (EM2020-0224)

cc: (letter and enclosure[s] emailed)
Carol Johnson, EPA Region 6
Curry Jones, EPA Region 6
Laurie King, EPA Region 6
Brent Larsen, EPA Region 6
Sarah Holcomb, NMED-SWQB
Chris Catechis, NMED-DOE-OB
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Pamela T. Maestas

From: Rosborough, Evelyn <rosborough.evelyn@epa.gov>
Sent: Monday, November 2, 2020 2:41 PM
To: Pamela T. Maestas; Chen, Isaac
Cc: Johnson, Carol; Jones, Curry; Larsen, Brent; Sarah Holcomb; Emily M. Day; Regulatory Documentation; cheryl.rodriguez@em.doe.gov; Audrey Krehlik; Amanda B. White
Subject: RE: Submittal to EPA on 11/2/2020 of Permittees' Comments on EPA Draft LANL NPDES IP

Hello Ms. Maestas,

The email is confirmation of receipt of your comments. If you have any questions, please let me know.

Thanks,

Evelyn Rosborough
U. S. Environmental Protection Agency
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1201 Elm Street, Suite 500
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From: Pamela T. Maestas <pamela.maestas@em-la.doe.gov>
Sent: Monday, November 2, 2020 2:48 PM
To: Rosborough, Evelyn <rosborough.evelyn@epa.gov>; Chen, Isaac <Chen.Isaac@epa.gov>
Cc: Johnson, Carol <johnson.carol@epa.gov>; Jones, Curry <jones.curry@epa.gov>; Larsen, Brent <Larsen.Brent@epa.gov>; Sarah Holcomb <sarah.holcomb@state.nm.us>; Emily M. Day <Emily.Day@em-la.doe.gov>; Regulatory Documentation <RegDocs@EM-LA.DOE.GOV>; cheryl.rodriguez@em.doe.gov; Audrey Krehlik <Audrey.Krehlik@EM-LA.DOE.GOV>; Amanda B. White <Amanda.White@em-la.doe.gov>
Subject: Submittal to EPA on 11/2/2020 of Permittees' Comments on EPA Draft LANL NPDES IP

Ms. Rosborough and Mr. Chen,
Attached for submittal is a pdf of the following:

- Permittees' Comments on the U.S. Environmental Protection Agency Draft Los Alamos National Laboratory National Pollutant Discharge Elimination System Storm Water Individual Permit (Permit No. NM0030759) (N3B-2020-0186, letter and enclosure)

Please acknowledge receipt of this submittal by responding to this email.
Let me know if you have any questions.
Thank you.

Pamela T. Maestas
Regulatory Documentation Manager
Newport News Nuclear BWXT-Los Alamos, LLC
c. 505-927-7882
regdocs@em-la.doe.gov

1200 Trinity Drive, Suite 150
Los Alamos, NM 87544

November 2020
EM2020-0224

Permittees' Comments on the U.S. Environmental Protection Agency Draft Los Alamos National Laboratory National Pollutant Discharge Elimination System Storm Water Individual Permit (Permit No. NM0030759)

N3B Los Alamos

Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.

The U.S. Department of Energy Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees, are providing comments on the draft Los Alamos National Laboratory (LANL) National Pollutant Discharge Elimination System (NPDES) Storm Water Individual Permit (Permit No. NM0030759) (IP or Permit) issued by the U.S. Environmental Protection Agency (EPA). The comments provided by the Permittees fall into the following categories: (1) substantive changes to proposed Permit conditions based on the Permittees' knowledge and understanding; (2) organizational changes to clarify, improve, and facilitate understanding of the Permit; and (3) questions or responses to new information provided in the Permit and Fact Sheet that were not previously discussed. The Permittees' comments are provided in Table 1 and are organized by draft Permit and Fact Sheet order. Supplemental materials to support the comments in Table 1 are provided in the following attachments:

Attachment 1	Proposed Changes to the Draft Permit (Redline/Strikeout Version and Changes-Accepted Version)
Attachment 2	Proposed Changes to the Draft Permit, Appendixes A through C
Attachment 3	Revised List of Sites Not to Be Included In the Permit Renewal
Attachment 4	Sites Not on DOE Property that Qualify for Long-Term Stewardship and Site Descriptions
Attachment 5	Sites Where No Significant Industrial Materials Were Used and Site Descriptions
Attachment 6	Sites with a Certificate of Completion from the New Mexico Environment Department under the Compliance Order on Consent that Qualify for Long-Term Stewardship and Site Descriptions
Attachment 7	New Mexico Environment Department Compliance Order on Consent Deferred Site List
Attachment 8	Sites Where Analytical Results from at Least Two Sampling Events Yielded No Target Action Level Exceedance and Site Descriptions
Attachment 9	Development of Background Threshold Values for Storm Water Runoff on the Pajarito Plateau, New Mexico, 2019 Revision
Attachment 10	Additional Site Information in Response to the Citizens for Clean Water Comment Regarding Proposed Site Deletion
Attachment 11	Sites to Be Rescreened Using the Site-Specific Determination

Table 1
Permittees' Comments on the EPA Draft "LANL NPDES Storm Water Individual Permit (NM0030759)"

Comment Number	Document	Page	Part	Comment
1	Permit	All	All	The Permittees have provided a redline/strikeout of the draft Permit as well as a "clean" version of the draft Permit with all changes accepted as Attachment 1.
2	Permit	1	2nd Paragraph	Change the street address for Newport News Nuclear BWXT-Los Alamos, LLC, as follows: "**1200 Trinity Dr. Suite 150** ~~600 Sixth Street~~"
3	Permit	1	5th Paragraph	Add Segment No. 20.6.4.114 to the list of Water Body Segments, as there are site monitoring areas (SMAs) that drain to this Segment.
4	Permit		Appendixes	Redline/strikeouts of Appendices A, B, and C are provided as Attachment 2. The Permittees are presenting the Sites proposed for deletion in Appendix A of the draft Permit as a color-coded redline/strikeout. Attachments 3 through 8 include additional information pertaining to these Sites. Additionally, the permittees are proposing the addition of some Sites not on DOE Property, which were proposed for deletion in the Permit application. Upon further consideration and the conditions laid out in the Fact Sheet, the Permittees now believe these Sites need to stay on the Permit. The Permittees are requesting to add one SMA to Appendix A, PJ-SMA-9.2, which monitors SWMU 40-001(c). This SMA was identified during the initial sampling implementation plan (SIP) exercise from 2016 to 2018. SWMU 40-001(c) was identified to discharge to both sides of the canyon and will now be monitored by 2M-SMA-2.5 and PJ-SMA-9.2 In Appendix B (reordered as Appendix C in Attachment 2), the updated background threshold values (BTVs) based on the final Windward BTV document (February 2020) are presented; Attachment 9 includes a link to the final 2019 report. In Appendix C (reordered as Appendix B in Attachment 2), revisions to the footnotes are presented and Table C-1 has been updated (i.e., 2018 and 2019 data were incorporated into the canyon-based geomean hardness, and the hardness-based maximum target action levels (MTALs) were recalculated based on these new hardness values). The Permittees are also requesting to edit six target action levels (TALs) in Appendix B because the TALs as written in the draft permit do not match the New Mexico Environment Department (NMED) Water Quality Standard (WQS), the WQS for each of the edited TALs has an additional significant figure.
5	Permit	5	Part I.1	Edit the sentence as follows: "…POCs that may be released by natural **(undeveloped)** or urban **(developed)** environments and…" to be consistent with the BTV language used throughout the Permit.
6	Permit	5	Part I.3	Per Part I.C.2, change text as follows: "…an exceedance of applicable ~~TALs or BTVs~~ **composite BTVs and/or TALs (per Part I.C.2)**…" as this language describes the conditions that prompt Corrective Action.
7	Permit	6	Part I.A.1	What does the reference to 'Limits Required' in the title "'Limits Required' Structural Control Measures" mean? The Permittees recommend deleting "Limits Required" from this heading.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
8	Permit	6	Part I.A.1.b.i	Edit this section as follows: "A Site has been removed from the Permit so ~~that discharges from that Site are~~ **storm water discharges associated with industrial activity under 40 CFR 122.26(b)(14)** are no longer authorized ~~under this permit~~, or...".
9	Permit	7	Part I.A.1.f	Edit as follows: "Corrective actions shall be taken ~~immediately~~ **as soon as practicable** if deficiencies…" because immediately is not feasible.
10	Permit	7	Part I.A.2	What does the reference to 'Limits Required' in the title "'Limits Required' Nonstructural Control Measures" mean? The Permittees recommend deleting "Limits Required" from this heading.
11	Permit	7	Part I.A.2.b	Add sentence to the end of this Section which reads: "**Minor non-storm water discharges such as uncontaminated fire hydrant/sprinkler test water, water line flushing (dechlorinated), fire-fighting, building washing (no cleaning agents), HVAC condensate, irrigation, etc. are allowed.**" This language clarifies discharges, which may occur outside the control of the Permittees.
12	Permit	7	Part I.B	In the first paragraph of Part I.B, edit the sentence as follows: "The Permittees shall perform confirmation monitoring as detailed below following installation of each ~~site-specific~~ **certified** control measure." to be consistent with language used throughout the Permit.
13	Permit	8	Part I.B.1	Edit text as follows: "…unless the sampling location was moved or ~~constituents~~ **POCs** were added to the monitoring suite during the Sampling Implementation Plan **(SIP) evaluation conducted in conjunction with NMED** during 2016–2018." Constituent is changed to pollutant of concern (POC) to be consistent throughout the Permit. Regarding the SIP, the acronym should be included here because it is used later in the Permit, and it is relevant to include that this SIP exercise was conducted in conjunction with the New Mexico Environment Department (NMED).
14	Permit	8	Part I.B.1.(a), or if Permittees proposed numbering accepted Part I.B.1.i	Add sentence to end of section which reads: "**For samples collected under the previous Permit where the Permittees have been unable to collect a second sample, upon issuance of the final Permit the Permittees may use the results from a single sample**." For samples collected under the previous Permit the Permittees propose that this two year clock would begin when validated data is/was received from the first sample collected. For example, if one of two samples was collected under the previous Permit, the Permittees will proceed with Site-Specific Demonstration once two years have passed since the sample was collected.
15	Permit	8	Part I.B.1.(b), or if Permittees proposed numbering accepted Part I.B.1.ii	After construction of a cap or other engineered cover ~~(and opportunity for review by NMED and EPA)~~, one confirmation sample is required if the capped area is smaller than the SMA drainage area. Otherwise, no further confirmation sampling is required, unless required by Part I.B.1.d. The Permittees find this language to be vague with respect to the review requirements. If the language is not deleted, please clarify the time period for review, how comments will be resolved, whether Permittees shall wait to proceed with monitoring prior to finalization, etc. Furthermore, the State does not have primacy in New Mexico regarding U.S. Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Permits, thus should be removed from this statement.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
16	Permit	9	Part I.B.1.a.(ii)	Edit the sentence as follows: "...add additional sampling locations during the Permit term in order to collect ~~additional~~ **confirmation** ~~investigation~~ samples." Data collected at any new sampling location will be confirmation data to be used in Permit-related decision-making.
17	Permit	9	Part I.B.1.c	Edit as follows: "the Permittees shall ~~immediately~~ reactivate the sampler **as soon as practicable** to attempt…" because immediately is not feasible.
18	Permit	10	Part I.B.1.d.(ii)	Delete: "or if monitoring data (from the facility, state, or local agency) show an exceedance of applicable TALs" because the Permittees cannot control facility, state, or local agency's method of collection, sample handling/preservation/filtration, or laboratory method of analysis. Permittees request 90 days to initiate corrective actions, because 30 days is not a sufficient amount of time.
19	Permit	10	Part I.B.2.b	Edit the sentence as follows: "The Permittees must inspect control measures~~ and storm water management devices~~ at any Site affected by a "storm rain event" defined below..." as storm water management devices are not defined as being distinct from control measures throughout the permit.
20	Permit	11	Part I.C	Edit the preamble text in Part I.C as follows: "~~Results of site confirmation sampling are evaluated against the Target Action Levels (TALs).~~ **Site evaluations shall be performed as described in this section.**"
21	Permit	12	Part I.C.1	Please correct Part I.C.1 as follows: "Target Action Levels (TALs) are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. 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. **TALs and Background Threshold Values are listed in Appendix B and Appendix C to this permit, respectively**. ~~Corrective actions will occur if any validated analytical result for a particular POC from a confirmation sample at an individual SMA is greater than the Maximum Target Action Level (MTAL) or if the geomean of all applicable sampling results is greater than the Average Target Action Level (ATAL) or Background Threshold Value (BTV). Target Action Levels and Background Threshold Values are listed in Appendix C and Appendix B to this permit, respectively.~~" The suggested deleted text is incorrect and is described in detail in the following sections on Site-Specific Demonstration, Long-Term Stewardship, and Deletion of Site.
22	Permit	12	Part I.C.2	Edit the first sentence in the first paragraph of Part I.C.2 as follows: "The Permittees may use the **Site History with either the run-on and runoff evaluation or the Site-specific information** ~~one or more of the following methods~~ to perform a site-specific demonstration (SSD) showing that the Site or Sites are not reasonably expected to be the source for one or more of the remaining POCs that have exceeded applicable TALs." The Permittees would like to clarify that the Site History will not solely be used to make determinations in the SSD, rather it will be used as supplemental information.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
23	Permit	12	Part I.C.2	In the first paragraph of this section, please clarify the language regarding when monitoring will begin per the initial SIP. The Permittees propose that the new monitoring requirements be implemented during the first full monitoring season following the initial SIP submittal. The Permittees have added clarification language to the initial SIP monitoring timeline in Part I.E.2.
24	Permit	12	Part I.C.2	Edit this sentence as follows: "For Sites where data has been collected under the 2010 Permit, **or requests have been submitted to EPA (e.g., Alternative Compliance or Force Majeure) that are pending**, this demonstration must be conducted within 1 year of the effective date of this Permit." The Permittees believe it is imperative that the Permit address past unanswered requests to EPA where compliance monitoring data may be rescreened via the SSD and the timeline during which such rescreening will take place.
25	Permit	12	Part I.C.2.a	In the second paragraph of this section, delete "sole" from sentence when referring to "sole source" as there may be multiple sources (undeveloped background, developed background, Site run-on, etc.), and it is unreasonable to claim that the Site is the "sole source" of any POC.
26	Permit	12	Part I.C.2.a	The Permittees would like to re-propose that equation (1) be edited as follows: "V(runoff) – V(run-on) ≤ ~~0~~ **TAL**". This is not a zero-discharge Permit and the Permittees use the TALs as the benchmarks with which to determine a path forward for each Site. This also applies to EPA's response to the Citizens' for Clean Water (CCW's) comment on Run-on/Runoff (page 18 of the Fact Sheet).
27	Permit	13	Part I.C.2.b	Edit the sentence as follows: "…information on land use upstream of and within the SMA, and **relevant** scientific literature". The Permittees would like to specify that the scientific literature needs to be relevant to the Site location, ecology, hydrology, and location.
28	Permit	13	Part I.C.2.b.(i)	Edit the composite BTV equation as follows: "~~90th percentile~~ **C**omposite BTV = **[**(% impervious SMA area * 90th percentile developed landscape BTV) + (% pervious SMA area * **95-95 UTL** ~~90th percentile~~ undeveloped landscape BTV)**]/ 100%**" such that units will be consistent. Rationale for the request to change the BTV statistic for undeveloped areas from the 90th percentile to the 95-95 UTL is discussed in comment number 32.
29	Permit	13	Part I.C.2.b.(i)	Edit SW Tier 1 as follows: "SW Tier 1: When the confirmation sample result ~~is less than~~ **does not exceed** the TAL, the Permittees can cease monitoring for that POC for the remainder of the Permit." to be consistent throughout the Permit.
30	Permit	13	Part I.C.2.b.(i)	Edit the second sentence of SW Tier 2 as follows: "However, if the **composite** BTV and the confirmation sample result ~~are less than~~ **do not exceed** the TAL, SW Tier 1 applies." to be consistent throughout the Permit.
31	Permit	13	Part I.C.2.b.(i)	Edit the second sentence of SW Tier 3 as follows: "However, if the **composite** BTV and the confirmation sample result ~~are less than~~ **do not exceed** the TAL, SW Tier 1 applies." to be consistent throughout the Permit.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
32	Permit	13	Part I.C.2.b.(i), Appendix C, and Pages 13 and 18 of the Fact Sheet	The Permittees have worked diligently with EPA, NMED, and CCW regarding the development of storm water BTVs, particularly with respect to investigating data stability, data quality, and selecting sampling locations for background that are upwind of the Laboratory yet have similar elevation gradients, soil types, geologic formations, and vegetative cover (Windward, SEP DQO/DQA Document, 2017). During a series of webinars and meetings between September 2018 and January 2019, the Permittees and stakeholders discussed various statistical approaches to use for BTVs, with the Permittees proposing the 95-95 upper tolerance limit (UTL) as the most appropriate statistic for the intended use and population parameters of the background dataset. Indeed, soil/sediment and groundwater BTVs for environmental cleanup and risk assessments are commonly computed based on the 95-95 UTL which "is designed to contain, but not exceed, a large fraction (95%) of the possible background concentrations within a sampled population, thus providing a reasonable upper limit on what is likely to be observed in background with a 95% degree of confidence" (page 14 of 2019 draft IP). The 95% degree of confidence is considered a good compromise between false positives and false negatives and the UTL provides a predictive setup for future sampling results, unlike upper percentiles which "potentially may lead to a higher number of false positives resulting in unnecessary cleanup (i.e., determining a clean on-site location comparable to background as dirty)" (U.S. EPA Region 9, 2011). CCW is a proponent of a more conservative upper percentile that would lead to approximately 25% false positives (i.e., unnecessary cleanup at 25% of Sites); however, there is no statistical, environmental, or budgetary foundation for this statistic. The Permittees suggest a compromise: the 95-95 UTL BTV for undeveloped landscapes which tend to be associated with naturally occurring constituents, and the 90th percentile BTV for developed landscapes which tend to be associated with anthropogenic-related constituents. U.S. EPA Region 9 (2011), "Statistical Methods used to Establish Background Datasets using Sampled Data Collected from DTLs, and Surface and Subsurface Soils of Three RBRAs of the Two Formations and Compute Estimates of Background Threshold Values Based Upon Established Background Datasets (with and Without Observations) For the Santa Susana Field Laboratory Investigation."
33	Permit	13	Part I.C.2.b.(ii)	Replace first sentence of intro to SD Tiered approach with the following language: "**When Permittees use Site-specific information in the SSD**, ~~Soil data can be used to help confirm site status, but cannot be the only factor in making a determination. Using~~ validated surface soil data results (i.e., within 3 feet below ground surface) from Consent Order soil characterization efforts, the following comparison can be made: 95-95 upper tolerance limit (UTL)..." as this more closely mirrors the SW Tier description.
34	Permit	13	Part I.C.2.b.(ii)	Add a reference to the 2019 NMED "Risk Assessment Guidance for Site Investigations and Remediation; Volume 1 Soil Screening Guidance for Human Health Risk Assessments" as this is the screening guidelines the Permittees will use to perform soil screening.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
35	Permit	13	Part I.C.2.b.(ii)	Please replace the existing SD Tier language with the following (per the Permittees' July 15, 2019, final Permit application): "SD Tier 1: When the soil sample result does not exceed the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the Permittees can cease monitoring for that POC and it is not considered as a Site-related POC. If SW Tier 1 conditions are also met, Permittees may request the Site be deleted from the permit. SD Tier 2: When the soil sample result of one or more POCs exceed(s) the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the POC shall remain or be added to storm water monitoring requirements for that SMA if it is considered as a Site-related POC."
36	Permit	14	Part I.C.2.b.(ii)	Delete the third paragraph of this section: "The tier results of the confirmation…the POCs (see Part I.D)." as it is redundant with the introduction to Part I.C.2.
37	Permit	14	Part I.C.2.c	The Permittees request clarification as to when, following provision of documentation to EPA regarding Site history, the Permittees can expect a response from EPA. The Permittees are requesting that the permit be edited as follows: "…not exposed to storm water. **Upon provision of documentation to EPA that a POC is not Site related the Permittees may cease monitoring for the POC. If EPA provides a response that the POC is not to be removed then the Permittees will initiate monitoring at that time.** Relevant documentation of Site-related knowledge shall be reported in the SIP."
38	Permit	14	Part I.C.3	Change final sentence in introductory paragraph as follows: "The Permittees may ~~submit a written request to EPA, with a copy to NMED, to~~ place a **Site or** Sites in the LTS Category if it meets one **or more** of the following conditions: ..." as Sites will be screened (and potentially categorized as LTS) annually and documentation of the SSD will be included in the SIP to support the LTS categorization.
39	Permit	14	Part I.C.3.(b)	To be consistent with the Permittees' suggested revisions to Part I.C.2.b.(ii), remove Part I.C.3.(b) as it conflicts with the Permittees' proposed SD Tiered approach.
40	Permit	14	Part I.C.3.(c)	Why is this section called out specifically in LTS and does it preclude us from deleting a Site with Wildlife Habitat standards for non-perennial streams? Does this negate the BTVs for PCB and LTS using BTVs? This statement conflicts with the footnote in the TAL table (currently Appendix C) and the Fact Sheet (page 13). The Permittees recommend deletion of this section.
41	Permit	14	Part I.C.3.(d)	Change to "Storm water sample results are greater than Adjusted Gross Alpha (AGA) **ATAL** before monitoring requirements of AGA ~~is~~ **was** removed from the **2010** permit; or" to clarify which AGA data would qualify a Site to be placed into the LTS category.
42	Permit	14	Part I.C.3.(e)	Edit language as follows "Sites **that** have no evidence of storm water discharges **(as required by Part I.B.2.b, Post Storm Rain Event Inspections)** for the past five years." For Site(s) where monitoring is required, Part I.B.2.b describes the process the Permittees will use to identify if there has been discharge at a Site.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
43	Permit	14	Part I.C.3. (d) (if comments 39 and 40 are accepted)	The Permittees request to add language to the end of Part I.C.3, Long-Term Stewardship, which reads: "(d) A Site is deferred under the NMED Consent Order and Site investigations are delayed. When the Site is removed from the NMED Consent Order deferred list, active confirmation monitoring will resume at the Site per Part I.B." Under the NMED Consent Order: "'Deferred' or 'Deferred Site' means the SWMUs and AOCs for which full investigation and/or remediation is deferred until such time as the SWMU or AOC is taken out of service or otherwise becomes accessible (e.g., firing sites and active facilities). Deferred Sites include the SWMUs and AOCs where delayed investigation, due to active Facility operations, was proposed in NMED-approved investigation work plans and reports." This delay in investigation directly impacts the IP, as no soil samples will be collected until the Site is removed from the deferred list. Without soil sample results, the Permittees cannot fully perform a Site Evaluation per Part I.C. In addition, current operational activities, including firing, are ongoing at the Sites. Therefore, given the complex contractual and regulatory considerations associated with transferring Site management between LANL contractors (see comment number 86), and the inability to complete Site evaluations, the Permittees request to place the NMED Consent Order deferred Sites into Long-Term Stewardship (Part I.C.3) until they are removed from the deferred list and NMED Consent Order Site investigations resume. When the Site is removed from the deferred list, active confirmation monitoring will resume at the Site per Part I.B.
44	Permit	15	Part I.C.4	Delete the first sentence of the last paragraph. If a Site is deleted from the Permit, BMPs will no longer need to be maintained because there will no longer be storm water discharges associated with industrial activities at that Site under 40 CFR 122.26(b)(14), as discussed in (a) through (f) of this section. Replace the second sentence of the last paragraph with: "EPA may approve a Site deletion request as a minor modification to the Permit under 40 CFR 122.63(e) (2). If such a request 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." This language clarifies the approval and public notification process.
45	Permit	15	Part I.C.4.c	Sites are eligible for deletion from the Permit when "a minimum of two confirmation storm water samples were collected, no POCs exceeded the applicable TALs", the Permittees have identified the Sites (Attachment 8) that meet this criteria with samples collected under the 2010 Permit and are requesting they be deleted from the Permit. Additionally, the Permittees request clarification as this deletion requirement of two confirmation samples with all results below TALs conflicts with Part I.B.1.i, "If the Permittees are unable to collect a second sample within two years, the results of the single sample may be considered to be representative of the discharge from that Site." Please edit Part I.C.4.c as follows: "For all SMAs that contain the Site, ~~a minimum of~~ two confirmation storm water samples were collected **(or see Part I.B.1.i)**, no POCs exceeded the applicable TALs, and therefore, the Permittees 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);"

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
46	Permit	15	Part I.C.4.d	Edit the sentence as follows: "…exposed to storm water and**/or** demonstrating that no significant industrial materials from previous industrial activity remain at the Site." It is not always the case that soil removal is needed to demonstrate than no significant industrial materials remain at the Site.
47	Permit	15	Part I.C.4.d	Under this section EPA states that Sites are eligible for deletion from the permit when, "The Permittees certified corrective action complete by removing soil that contained a release of Site-related pollutants that were exposed to storm water and demonstrating that no significant materials from previous industrial activity remain in the Site", this language covers Sites the Permittees certified corrective action complete through receipt of a certificate of completion (COC) from NMED under the 2010 IP. The Permittees have screened the Sites which were certified complete through this manner and for those Sites which qualify for Long-Term Stewardship the Permittees are requesting they be deleted from the Permit, the list of these Sites is included as Attachment 6.
48	Permit	15	Part I.C.4.f	Rewrite this section as follows: "~~Insufficient storm water runoff results in confirmation samples not being collected at the associated SMA during the previous permit cycle. If the following criteria are met, the Sites are not discharging into a receiving stream or canyon~~**: If, for Long-Term Stewardship Sites, no evidence of discharge is apparent at a Site after a 25-year, 24-hour storm event or, if the Site is being monitored, the following conditions are met**: …" to better clarify the conditions in which Site deletion would occur under this part of the Permit.
49	Permit	15	Part I.D.1	Edit language as follows: "Once a ~~TAL or BTV~~ **composite BTV and/or TAL (per Part I.C.2)** has been exceeded..." as this language describes the conditions that prompt Corrective Action.
50	Permit	15	Part I.D.1	In the Determination of Corrective Action Measures section, delete the second sentence: "At a minimum…from storm water." This sentence proposes requirements that are either overly onerous and inappropriate for an NPDES permit (i.e., "evaluation of the efficacy, limitations, and predicted water quality improvement performance of any proposed storm water controls based on published literature; or distribution of contaminants in soil and the predicted efficacy of any proposed soil removal on removal of POCs from storm water"), or are addressed during an internal, intensive decision-making process where many potential corrective actions are considered and includes an internal peer review process (i.e., "volume of storm water currently retained and the potential for additional retention of storm water; potential and physical limitation for installation of Site-appropriate storm water controls [with consideration of technological availability]").
51	Permit	16	Part I.D.1.a	Edit the sentence as follows: "Where feasible, these enhanced controls shall incorporate low-impact design and green infrastructure design features **(e.g., plunge pools, compost-filled wattles, and bio-retention basins)**" as the Permittees would like to include green infrastructure design features which are already in use or planned for future use.
52	Permit	16	Part I.D.1.b.ii	Please correct II to ii, to be consistent with the numbering schema in this section.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
53	Permit	16	Part I.D.1.b.ii	Edit the first sentence as follows: "Soil removal. **The** Permittees shall demonstrate and certify to EPA, with a copy to NMED, that soil removal meets the requirements of this Part through collection and evaluation of ~~confirmation~~ soil sampling results." as the Permittees believe the inclusion of "confirmation" is unnecessary because they are soil sampling results, not storm water sampling results.
54	Permit	17	Part I.D.1.b.ii	Remove the Note from this section, as this conflicts with other parts of the Permit and the Permittees find the note to be vague as to what "evidence" would be considered under this Note.
55	Permit	17	Part I.D.1.c	Edit the sentence in the second paragraph as follows: "The Permittees shall provide, in **the SDPPP**, information (e.g., sediment removal, sediment depth, water level, estimated capacity remaining, evidence of discharges, or others) to demonstrate the retention facility maintains capacity to **store runoff volume** from a 3-year, 24-hour storm **event**." The Permittees would like to clarify where the information will be presented, as well as to use clear and consistent language with respect to a 3-year, 24-hour storm event.
56	Permit	17	Part I.D.1.c	Edit the sentence in the fourth paragraph as follows: "In an event of discharge, the Permittees shall report such a discharge in the annual SDPPP and demonstrate that such a discharge is caused by a storm event ~~that is equivalent to~~ **greater than** a 3-year, 24-hour ~~or greater~~ storm **event**." The Permittees would like clarify that anything greater than (not equal to) storm water runoff from a 3-year, 24-hour storm event would be considered a discharge from a control structure designed to retain storm water runoff from a 3-year, 24-hour storm event.
57	Permit	17	Part I.D.2	Edit the sentence as follows: "…or POCs that **exceed composite BTVs and/or TALs (per Part I.C.2)** are contributed by sources…" as this language describes the conditions that prompt Corrective Action.
58	Permit	18	Part I.D.2	Remove "within 90-days of validated confirmation of TAL or BTV exceedance." This period of time is too short for what is required for an Alternative Compliance request and it conflicts with the Fact Sheet (page 27).
59	Permit	18	Part I.D.2	Please edit the Note as follows: "(Note: Alternative Compliance requests submitted ~~in 2015~~ under the previous permit conditions may be resubmitted with all supporting documents, if applicable under this permit, without reopening a new public notice.)" The Permittees request the ability to rescreen all Alternative Compliance requests submitted under the AC Permit.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
60	Permit	18	Part I.D.3	Edit the section as follows: "If ~~one or more POCs exceeding the applicable TALs or BTVs cannot be excluded as the source of the exceedance~~ **corrective action is required at the Site**, pursuant to Part I.C, the Permittees shall take proper corrective actions and complete installation of additional control measures **as soon as practicable**, or within 24 months from the date when the Permittees have knowledge of **composite BTV and/or TAL** ~~or BTV~~ exceedances **(per Part I.C.2)**. ~~The Permittees shall make reasonable efforts, in good faith, to achieve completion of corrective actions within the 24 month compliance schedule.~~ For Sites which require corrective actions prior to the effective date of the final permit, ~~corrective actions~~ **installation of additional control measures** shall be completed no later than ~~12~~ **24** months from the effective date of the final permit. The proposed language is more precise, less redundant, and describes the conditions that prompt Corrective Action. Additionally, the Permittees are requesting additional time to complete installation of additional control measures to allow for proper data screening per the initial SIP, pursuant to Part I.E.2, which allows the Permittees one year from the effective date of the final permit to submit the initial SIP.
61	Permit	19	Part I.D.5	The Permittees recommend removal of this section. The difference between Certification of Completion of Corrective Action, Completion of Corrective Action, and Certification of Installation of a Control Measures is confounding. What exactly does it mean to certify that corrective action is complete? This section is redundant with requirements under Determination of Corrective Action Measures (Part I.D.1) and Confirmation Sampling (Part I.B.1). If this section remains, please consider the following comments: Edit the preamble as follows: "Under this Permit, completion of corrective action **shall occur when** ~~shall mean~~:" to be more clear as to what conditions must be met to Certify Completion of Corrective Action. The Permittees request to delete section Part I.D.5.a, because there are three pathways for Corrective Action, thus there should be three pathways for Completion of Corrective Action Certification, and because it is inconsistent with Part I.C.2. Edit Part I.D.5.b as follows: "The installation of enhanced control measures under Part I.D.1.(a) with confirmation monitoring analytical results **that do not exceed** ~~less than~~ the applicable **composite BTVs and/or TALs (per Part I.C.2)** ~~TALs or BTVs~~ as demonstrated under Part I.B.1; or" This language describes the conditions that prompt Corrective Action and is consistent with other sections of the permit. Edit Part I.D.5.c as follows: "The installation of control measures **or the removal of soil** that eliminate exposure of Site-related POCs to storm water under I.D.1.(b), with confirmation monitoring analytical results that **do not exceed** ~~less than~~ the applicable **composite BTVs and/or TALs (per Part I.C.2)** ~~TALs or BTVs~~ as demonstrated under Part I.C., if confirmation monitoring is required;" This language describes the conditions that prompt Corrective Action and is consistent with other sections of the permit.
62	Permit	19	Part I.D.6	Delete Part I.D.6, as it is redundant, confusing, and discussed in much greater detail in Confirmation Sampling (Part I.B.1). In a previous comment on Part I.C.2, the Permittees have recommended Part I.D.6.c be added to Part I.C.2 for clarity.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
63	Permit	20	Part I.E.1	After the first sentence, add: "**The reporting period is from January 1 to December 31**." to clarify the reporting period and to be consistent with other sections in the permit.
64	Permit	22	Part I.E.1.c	Edit the following sentence as follows: "~~All~~ Changes must be incorporated into the SDPPP. ~~and a summary of these changes must be included in the Annual Report.~~" The Annual Report is no longer a requirement in this permit, thus all references to it should be removed.
65	Permit	22	Part I.E.2	Edit the sentence as follows: "Within 1 year of the effective date of the Permit, the Permittees, ~~in consultation with EPA and NMED Surface Water Quality Bureau (SWQB),~~ shall evaluate the appropriate monitoring requirements and representative sampling locations for all Sites covered under this permit." The Permittees find this language to be vague with respect to consultation requirements. If the language is not deleted, please clarify the period of time for consultation, how comments will be resolved, whether Permittees shall wait to proceed with monitoring prior to finalization, etc. Furthermore, the SWQB does not have primacy in New Mexico regarding EPA NPDES Permits, thus should be removed from this statement.
66	Permit	23	Part I.E.2.a	Edit this section as follows: "For each SMA, if the sampler location changed or a new location was added ~~as an investigative sample location~~ from the previous year, report any updated latitude and longitude and indicate the reason for the change in the appropriate SIP section." If the Permittees choose to add additional sampling locations, samples collected at that location will be confirmation samples.
67	Permit	23	Part I.E.2.b	Delete the following sentences from the 3rd paragraph of this section: "Permittees will evaluate current and necessary best management practices to address any exceedance. The Permittees shall document analytical results and any voluntary actions taken in the SIP". Without a TAL, an exceedance cannot occur and this is inconsistent with other sections of the permit which refer to TAL exceedances. Additionally, as per the Permit, the Permittees will initiate Corrective Action and install control measures as necessary when a TAL is exceeded. Analytical results are reported annually, as well as being available to the public via the Intellus interface.
68	Permit	25	Part II.1	Edit the sentence as follows: "~~If the Permittees submit to EPA a Watershed Protection Plan which can demonstrate significant reduction of nonpoint-source and point-source water POCs from being discharged into major canyons and therefore will result in improvement of receiving water quality,~~ EPA may consider ~~such~~ a Watershed Protection Plan as Alternative Compliance for ~~associated~~ Sites **upstream of a watershed control**. ~~within the scope of the Plan.~~ **Storm water results from samples collected downstream of the control will be treated as compliance samples and screened per the Site-Specific Demonstration (Part I.C.2)**". This language clarifies how SSD will occur under a Watershed Protection Approach.
69	Permit	25	Part II.3.(c)	Change public meeting frequency from every six (6) months to annually, as agreed upon in the meetings held between EPA, NMED, and CCW prior to the submission of the July 15, 2019, draft application by the Permittees.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
70	Fact Sheet	2	State Certification Section	Edit the sentence as follows: "Santa Clara is therefore not **understood** ~~believed~~ to be affected by the discharges proposed to be authorized by this permit." such that the language is less subjective.
71	Fact Sheet	2	Part III	Part III, Receiving Water Uses, is missing additional receiving waters covered under this permit, please edit as follows: "The receiving waters are designated under the NM WQS for the following uses: Rio Grande Basin Unclassified **Waters of the State** Segment No. 20.6.4.98, designated for livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact; Rio Grande Basin Segment No. 20.6.4.126, designated for livestock watering, wildlife habitat, coldwater aquatic life and secondary contact; Rio Grande **Basin** Segment No. 20.6.4.128, designated for livestock watering, wildlife habitat, limited aquatic life and secondary contact; **and Rio Grande Basin Segment No. 20.6.4.114, designated for irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, primary contact and warmwater aquatic life, and public water supply** pursuant to the approved NMWQS."
72	Fact Sheet	2	Part VI	The numbering on this Part is incorrect, the Permittees request that the numbering be changed from “VI” to “IV”.
73	Fact Sheet	3	Part V	In the first paragraph, please edit the language as follows: "The Department of Energy (DOE) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) are co-permittees (~~“Permittees,” or~~ jointly referred to as **"the Permittees"** ~~LANL~~ for the purposes of this permit.” The Permittees are not currently associated with LANL and this reference is incorrect. For all subsequent references where “LANL” is used in place of the “the Permittees” please replace LANL and replace with “the Permittees”.
74	Fact Sheet	4	Part VI	The Permittees request that the last sentence of this Part be edited as follows: "The proposed renewal permit retains the requirement that applicable Best Management Practices (BMPs) be installed and maintained at every Site**, as necessary**." Baseline BMPs have been installed at every site as part of the AC Permit and, in the new Permit, BMPs will be installed as necessary and as outlined in the Corrective Action section of the Permit (Part I.D).
75	Fact Sheet	4	Part VII	In the Acronyms and Abbreviations section, the Permittees request that “BV background value” be removed from the list of Acronyms and Abbreviations because is it not used in the permit. The Permittees request that the list of MSGPs in the Acronym and Abbreviation be edited as follows: "MSGP Multisector General Permit **(**~~NMR053195~~, **NMR050011, NMR050012, NMR050013)**." NMR053195 was terminated on October 31, 2018 and replaced by NMR050013 and the other two Permits are relevant to Los Alamos National Laboratory.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
76	Fact Sheet	6	Part VII.A.4	The Permittees agree that wildlife habitat and aquatic life criteria for cyanide are more stringent than those for human health-organism only (HH-OO), and consistent with other analytes in the Permit, more stringent applicable criteria for cyanide may offer sufficient protection and make EPA's 2015 recommended HH-OO update (EPA 820-R-15-031) largely moot for the purposes of this Permit. The Permittees reiterate that EPA's 1984 AWQC are stated as free cyanide (the sum of HCN and CN-), and that this measure is "a more reliable index of toxicity." Now that free cyanide and acid-dissociable cyanide are more easily discriminated from the total recoverable cyanide by improved analytical techniques, NMED is encouraged to update New Mexico Water Quality Standards to reflect this knowledge and advance in methods. In response to EPA's comment solicitation on updating or revising TALs through the annual SIP process to reflect New Mexico Water Quality Standard (NMWQS) updates, the Permittees do not believe that it is appropriate to change TALs within a permit cycle. The Permittees request that TALs be updated or revised only when the permit is renewed.
77	Fact Sheet	7	Part VII.A.5	The Permittee agrees that monitoring dissolved chromium (sum of dissolved chromium III and dissolved chromium VI) is appropriate for Clean Water Act purposes. While chromium III is sparingly soluble, biologically relevant (probable trace element), and non-toxic; dissolved chromium III is supported, as it could oxidize to chromium VI (toxic form). The Permittees agree that chromium speciation may be indicated for site-specific reasons; however, monitoring chromium species for storm water events is operationally infeasible. The Permittees encourage NMED to allow general monitoring for total dissolved chromium for State Water Quality purposes as it is a scientifically supportable compromise accounting for potentially biologically available (potentially toxic) forms of Cr.
78	Fact Sheet	7	Part VII.B	The Permittees are proposing to update the hardness-dependent MTALs to include hardness data from storm water samples collected in 2018 and 2019. The Permittees are submitting a redline/strikeout version of Appendix C (see Attachment 2).

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
79	Fact Sheet	8	Part VII.C	The Permittees continue to investigate the nature and toxicity of aluminum for the Pajarito Plateau/ Jemez Region. While the impact of a 10-µm filtration is distinct for the Pajarito Plateau/Jemez Region than from the Rio Grande at Buckman, the site for the 2011 Aluminum Filtration study leading to the NMED guidance, the Permittees note that the 10-µm does not sufficiently exclude non-toxic mineral forms of aluminum on the Pajarito Plateau/Jemez Region. New, regionally based guidance is warranted to take into account the high but non-toxic aluminum present in many New Mexico surface water systems, particularly stormwater. Since the submittal of the July 15, 2019 permit application, additional analysis (Ryan et al., 2019) concluded that storm water samples from the Pajarito Plateau (greater than 100 locations from background sites and SMAs, collected between 2007 and 2017), often exceeded EPA and New Mexico ambient water quality criteria, regardless of sample location or restriction of pre-filtering. Additionally, toxicity testing using sensitive organisms indicated that aluminum concentrations several-fold greater than ambient water quality criteria did not elicit a toxic response (Dail et al., 2020, in preparation). Current aluminum impairments (364 river miles state-wide) may have been erroneously listed given this new understanding of the form and toxicity of geologic aluminum (Ryan et al., 2019).
80	Fact Sheet	9	Part VII.E	The Permittees are submitting the final Background Threshold Value Report (see Attachment 9). Therefore, the Permittees have revised the BTVs to be used in conjunction with this Permit and have provided them in a redline/strikeout to Appendix C (see Attachment 2).
81	Fact Sheet	9	Part VII.E	The Permittees believe that the composite BTV equation should be added to this section of the Fact Sheet: "Composite BTV = [(% impervious SMA area * 90th percentile developed landscape BTV) + (% pervious SMA area * 95-95 UTL undeveloped landscape BTV)] / 100." This is critical information to include when discussing BTVs and how they will be used in the new Permit.
82	Fact Sheet	9	Part VII.E	Regarding EPA's response to the LANL comment: "To use BTVs instead of TALs in certain circumstances does not conflict with anti-backsliding regulations." The Permittees would like to know when using the BTVs would conflict with anti-backsliding regulations and recommend removal of "in certain circumstances" from this sentence.
83	Fact Sheet	13	Part VII.H	There is conflicting information regarding the application of the Site-Specific Demonstration for PCBs between the Fact Sheet (page 13) and the Permit (Long-Term Stewardship Part I.C.3 and Appendix C). The Permittees re-propose the following TALs for PCBs: the human health-organism only aquatic life standard for perennial streams (Water Body Segment Nos. 20.6.4.126 and 20.6.4.114) and the wildlife habitat standard for non-perennial streams (Water Body Segment Nos. 20.6.4.128 and 20.6.4.98).
84	Fact Sheet	13	Part VII.H	N3B welcomes NMED’s UAA work to determine applicability of aquatic life use and/or human health-organism only criteria to certain waters.
85	Fact Sheet	13	Part VII.I	The Permittees concur that active outfalls should be removed from the Individual Permit. This situation applies to three SWMUs: 03-045(b), 03-045(c), and 03-049(a). These Sites have been removed from Appendix A in Attachment 2.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
86	Fact Sheet	13	Part VII.I	The Permittees acknowledge the difficulties associated with managing storm water discharges from legacy SWMUs/AOCs co-located with currently operational facilities such as firing sites. However, numerous issues require resolution before proposing that Sites be deleted from the IP and covered by another permit. These include further analysis of which operational facilities are co-located with SWMUs/AOCs, whether adjustment of SWMUs/AOCs boundaries that are located both inside and outside of operational facilities is appropriate, and determining the regulatory impacts of covering legacy SWMUs/AOCs under different permitting mechanisms. Activities at LANL are currently managed by two distinct contractors operating under different environmental permits and regulatory programs. If Site management is transferred between these contractors, additional direction from EPA on future regulatory requirements is requested. In addition, internal discussions would be required to determine how to implement contract changes prior to transferring Sites between permits. The Permittees have requested the addition of language to the Permit to place deferred Sites into Long-Term Stewardship (see comment number 43) and are providing EPA with a list of the Sites deferred under the NMED Consent Order in Attachment 7 Table 7-1. If the Sites become inactive, and investigations are allowed to take place, the Permittees request the ability to change the Site status in the Permit in order to perform storm water monitoring as required.
87	Fact Sheet	13	Part VII.I	Based on the conditions laid out in the Permit the Permittees have evaluated the Sites not on DOE property. Non-DOE Sites which do not qualify for Long-Term Stewardship under the draft Permit conditions, should not be removed from the Permit at this time. Attachment 3 is a revised list of Sites proposed for deletion from the Permit. Attachment 4 lists the non-DOE Sites requested for deletion along with relevant supporting information: Site descriptions, parcel identification numbers and NMED Consent Order status for EPA's consideration.
88	Fact Sheet	13	Part VII.J	Please edit the language as follows: "…and therefore EPA ~~intents~~ **intends** to delete the original Site numbers through this permit renewal process."
89	Fact Sheet	13	Part VII.J	Following the submission of the Permit application, the Permittees identified additional Sites where no significant industrial materials were known to be used. For EPA's consideration, the Permittees are providing a list of these Sites in Attachment 5.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
90	Fact Sheet	13	Part VII.J	The Permittees are providing a revised table of the "List of Sites Not to Be Included In the Permit Renewal." In addition to the table currently included in the Fact Sheet, this new table includes Sites to be removed for the following reasons: Certificate of Completion from NMED under the Consent Order and certified Corrective Action Complete with no Site-related TAL exceedances; and Sites with all confirmation sample results less than TALs. This revised table is included as Attachment 3. To supplement the additional Sites included in this table, the Permittees are including Site descriptions and other relevant information for all categories (except Administrative changes) in Attachments 4-8.
91	Fact Sheet	18	Part VII.K	In EPA's response to CCW's comment on Site Deletion, the last sentence is confusing: "To remove a Site from this permit coverage does not shield the Permittees from complying with other regulatory requirements or obligations." The Permittees request more information regarding other regulatory requirements or obligations the Permittees would be required to comply with as stated in EPA's response.
92	Fact Sheet	18	Part VII.K.b	The Permittees disagree with EPA's response and request it be deleted from the Fact Sheet. The Sites in the Permit are linked to Sites in the Consent Order. During Consent Order investigations, the nature and extent of POCs is investigated, and under these circumstances, the SWMU or AOC boundary would change. These changes would be included in the SDPPP/SIP, sampler locations would be adjusted, and SMA boundaries would be updated, but would not result in the creation of a new SWMU or AOC. The Permittees recommend the following response to CCW's comment: "The BTV development document (Windward 2018) does contain descriptions of the drainage areas to the background sampling locations. Disturbances, such as Forest Service dirt roads, grazing activities, etc., do occur in these drainage areas; however, there is no land in the Jemez mountains that does not have some small disturbance, as these mountains have been inhabited for many, many years."
93	Fact Sheet	21	Part VIII. Part I.A	The final sentence of this section is confusing: "If in any case, the Site releases pollutants to the environment due to failure of BMPs or due to any cause, such discharges are not authorized unless the Permittees requests the coverage for the Site." If a Site is deleted from the Permit, BMPs will no longer need to be maintained because there will no longer be storm water discharges associated with industrial activities at that Site under 40 CFR 122.26(b)(14), as discussed in the Permit, Part I.C.4, Site Deletion.
94	Fact Sheet	21	Part VIII. Part I.B.1.c	To add clarity, please edit the sentence as follows: "However, NMED and the Permittees may propose such **priority** ~~propriety~~ during SIP process, if appropriate."
95	Fact Sheet	21	Part VIII. Part I.B.1.d	Delete: "or if monitoring data (from the facility, state, or local agency) show an exceedance of applicable TALs" because the Permittees cannot control facility, state, or local agency's method of collection, sample handling/preservation/filtration, or laboratory method of analysis.
96	Fact Sheet	22	Part VIII. Part I.B.1.d	Edit the sentence as follows "shall initiate appropriate actions to correct the problems within **ninety (90)** ~~thirty (30)~~ days of being made aware of such information." The Permittees request 90 days because 30 days is not a sufficient amount of time.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
97	Fact Sheet	22	Part VIII. Part I.B.2.c	To be consistent with the language in the Permit, edit the sentence as follows: "The results of the inspections are to be reported to EPA annually **in the SDPPP**."
98	Fact Sheet	22	Part VIII. Part I.C.1	Remove the following sentence, as it is no longer applicable: "And a concentration of 100 mg/L TSS, based on the benchmark value in the MSGP, was used to calculate total-dissolved conversion factors in the AC permit, if necessary."
99	Fact Sheet	23	Part VIII. Part I.C.4.b	Remove the following sentence: "If the soil data demonstrate no significant amount of pollutants remains in the soil within 3-feet below the ground surface, it should be reasonable to assume that no pollutants of concern would be exposed to storm water." This statement is not included in the Permit and is not consistent with the Permit (Part I.C.4).
100	Fact Sheet	24	Part VIII. Part I.C.4.d	Edit the sentence as follows: "…exposed to storm water and/or demonstrating that no significant industrial materials from previous industrial activity remain at the Site." It is not always the case that soil removal is needed to demonstrate than no significant industrial materials remain at the Site.
101	Fact Sheet	24	Part VIII. Part I.C.4.d	Under this section EPA states that Sites are eligible for deletion from the permit when, "The Permittees certified corrective action complete by removing soil that contained a release of Sit-related pollutants that were exposed to storm water and demonstrating that no significant materials from previous industrial activity remain in the Site", this language covers Sites the Permittees certified corrective action complete through receipt of a COC from NMED under the 2010 IP. The Permittees have evaluated the Sites which were certified complete through this manner. Sites with a COC which qualify for Long-Term Stewardship in the draft Permit are being requested for deletion. Based on this evaluation, the Permittees are requesting the Sites included in Attachment 6 be deleted from the Permit.
102	Fact Sheet	24	Part VIII. Part I.C.4.e	Edit the sentence as follows: "…no applicable TAL ~~or BTV~~ exceedances are reasonably…" to be consistent with the Permit, which states that a Site is eligible for deletion from the Permit when there are no applicable TAL exceedances.
103	Fact Sheet	24	Part VIII. Part I.C.4.f	Delete: "When EPA considers a 3-year retention technology in the area could be an acceptable and complying with the corrective action requirements" This information is not in the Permit and seems out of place in this section.
104	Fact Sheet	24	Part VIII. Part I.C.4.f	In response to CCW's comment on the proposed site deletions, the Permittees have provided additional information on the 14 Sites noted in the comment made by CCW (see Attachment 10).

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
105	Fact Sheet	24	Part VIII. Part I.C.4.f	Regarding EPA's proposal to "...add a condition which requires the Permittees to certify that they will properly maintain BMPs in place, if applicable, and notify EPA for permit coverage if POCs re-exposed to storm water and trigger storm water discharge associated with industrial activity under 40 CFR 122.26(b)(14)." The Permittees strongly advise against this. If a Site is deleted from the Permit, BMPs will no longer need to be maintained because there will no longer be storm water discharges associated with industrial activities at that Site under 40 CFR 122.26(b)(14), as discussed in the Permit, Part I.C.4, Site Deletion.
106	Fact Sheet	25	Part VIII. Part I.D.1	Edit the sentence as follows: "Once a **composite BTV and/or TAL (Part I.C.2 of the Permit)** ~~TAL or BTV~~ has been exceeded for a Site related constituent…" This language describes the conditions that prompt Corrective Action.
107	Fact Sheet	25	Part VIII. Part I.D.1	In the 2nd paragraph of this section, the Permittees disagree with EPA's consideration of using the 5-year, 24-hour storm event, and request that this language be deleted from the Fact Sheet. Use of the 3-year, 24-hour storm event was negotiated and agreed upon in webinars and meetings with EPA, NMED, and CCW between September 2018 and January 2019.
108	Fact Sheet	26	Part VIII. Part I.D.1	In response to CCW's comment on "total retention", part (c), the Permittees would like to clarify that, for any soil removal, the Permittees follow the NMED-approved Sediment Management Decision Tree Guidance (LANL 2017).
109	Fact Sheet	26	Part VIII. Part I.D.1	In response to CCW's comment on "total retention", part (d), the Permittees are required to report annually to NMED regarding sediment management, as part of the NMED-approved Sediment Management Decision Tree Guidance (LANL 2017).
110	Fact Sheet	26	Part VIII. Part I.D.1	In response to CCW's comment on "total retention", part (g), the Permittees are providing information regarding design standards. The Permittees' Conduct of Engineering requires construction projects to be in compliance with N3B Engineering Standards as outlined in the N3B Engineering Standards Manual (N3B ESM, N3B-STD-342) which governs requirements for project design and construction documents (i.e., drawings and specifications), including construction testing and inspection plans. N3B Engineering Standards are in accordance with DOE Standard 1020. The N3B Storm Water BMP Manual provides additional guidance on storm water management, sediment and erosion control, and low impact development features design, inspection, and maintenance.
111	Fact Sheet	26	Part VIII. Part I.D.1	In response to CCW's comment on "total retention", part (h), the Permittees have an intensive internal peer review process on all engineering designs, as required by N3B quality control and assurance guidelines.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
112	Fact Sheet	26	Part VIII. Part I.D.1	Delete the following sentence in EPA's response to CCW's comment on soil removal: "If evidence show that contaminants…through the annual SIP process." The Sites in the Permit are linked to Sites in the Consent Order. During Consent Order investigations, the nature and extent of POCs is investigated, and under these circumstances, the SWMU or AOC boundary would change. These changes would be included in the SDPPP/SIP, sampler locations would be adjusted, and SMA boundaries would be updated, but would not result in the creation of a new SWMU or AOC.
113	Fact Sheet	27	Part VIII. Part I.D.2	In the Permit (Part I.D.2), EPA has set a deadline of 90 days for submittal of Alternative Compliance requests, which contradicts EPA's response in this section. Please remove the 90-day submission deadline from the Permit, as this period of time is too short for what is required for an Alternative Compliance request.
114	Fact Sheet	28	Part VIII. Part I.D.3	Edit language in this section as follows: "If additional corrective actions are required, the Permittees shall make reasonable efforts, in ~~a~~ good faith, to ~~achieve for completion of corrective actions~~ **install additional control measures** within the 24 months." Completion of corrective action requires collection of storm water samples and the Permittees cannot guarantee storm water samples will be collected within the 24-month timeframe.
115	Fact Sheet	29	Part VIII. Part I.D.3	Edit EPA's response as follows: "...EPA proposes that 'For Sites which require corrective actions prior to the effective date of the final permit, **installation of additional control measures** ~~corrective actions~~ shall be completed no later than **24** ~~12~~ months from the effective date of the final permit.' "The Permittees are requesting additional time to complete installation of additional control measures to allow for proper data screening per the initial SIP, pursuant to Part I.E.2, which allows the Permittees one year from the effective date of the final permit to submit the initial SIP. The edits to the quoted language here matches the Permittees' suggested edits to the Permit, Part I.D.3.
116	Fact Sheet	29	Part VIII. Part I.D.6	Part VIII, Part I.D.5 (should be I.D.6), Monitoring at Sites in Corrective Action. Please edit the sentence as follows: "If the Permittees have submitted requests ~~for either Alternative Compliance or Force Majeure to EPA~~ that are pending, the Permittees may complete a Site-Specific Demonstration pursuant to the permit." The Permittees would like this section to include all requests to EPA that are pending, the list of which can be found in Attachment 11.

Table 1 (continued)

Comment Number	Document	Page	Part	Comment
117	Fact Sheet	30	Part II.1	The Permittees are in favor of a Watershed Protection Approach as outlined in the Permit (with minor editorial suggestions from the Permittees) and the Fact Sheet. Indeed, the Permittees are in favor of in-stream sediment removal credits as part of the Watershed Protection approach; however, the Permittees request more information as to how credit for in-stream sediment removal would work and what the guidelines would be. In addition, please add the following sentence to this section: "Storm water results from samples collected downstream of the control will be treated as compliance samples and screened per the Site-Specific Demonstration (Part I.C.2 of the Permit)." Upon issuance of the final Permit, the Permittees welcome the chance to begin a Pilot Watershed Protection Approach Project in conjunction with DOE National Nuclear Security Administration Los Alamos Field Office/Triad National Security, LLC.
118	Fact Sheet	31	Part II.4	Regarding the EPA's proposal to replace the subtitle Water Quality-based Effluent Limits in the Permit with State Water Quality Standards, the Permittees are not in favor of this change because this Permit is based on non-numeric technology-based effluent limitations, not state water quality standards. Thus, the subtitle should be changed to Non-Numeric Technology-Based Effluent Limitations to be consistent throughout the Permit.
119	Fact Sheet	32	Part IX	The Permittees agree with EPA that the draft Permit conforms to the anti-backsliding provisions. The 2010 Permit contained non-numeric technology-based effluent limitations “as necessary to minimize pollutants in [LANL’s] storm water discharges.” Those limitations include erosion and sedimentation controls, management of run-on and runoff, employee training, elimination of non-storm water discharges not authorized in an NPDES permit, and other controls. The 2010 Permit included requirements for the installation and operation of the baseline control measures. Similarly, the draft permit continues the Permittees' requirement to “install and/or maintain structural and nonstructural control measures as necessary to meet the non-numeric technology-based effluent limits to minimize Site-related POCs in storm water discharges.” While the draft permit eliminates the requirement to install baseline control measures, it does so because those measures have already been installed. The draft continues the requirement to operate those measures. Since the draft permit does not impose less stringent effluent limits than the 2010 Permit, it conforms to the Clean Water Act anti-backsliding provisions and EPA’s anti-backsliding policy. The Permittees agree that the Permit conforms to the State’s anti-degradation policy; the draft Permit does not authorize new or increased discharges into the environment. It merely continues the requirements to control such discharges imposed by the 2010 Permit.
120	Fact Sheet		General	The Permittees request a list of references be included for documents called out in the Fact Sheet.
121	General		General	The Permittees request that Site and Sites be capitalized when referring to SWMUs and AOCs covered under the Permit.
122	General		General	The Permittees request that EPA review Permit cross-references, as many of them are incorrect or refer to parts of the Permit that do not exist.

Note: Bolded text in the Comment column indicates text the Permittees are requesting to add to the Permit, and strikeout text indicates text the Permittees are requesting to delete from the Permit.

Attachment 1

Proposed Changes to the Draft Permit
(Redline/Strikeout Version and Changes-Accepted Version)

Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

NPDES Permit No. NM0030759

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Los Alamos National Laboratory (LANL), managed and owned by Permittees

Newport News Nuclear BWXT-Los Alamos, LLC and U.S. Department of Energy

1200 Trinity Dr, Suite 150~~600 Sixth Street~~
Los Alamos, New Mexico 87544

Office of Environmental Management
Los Alamos Field Office
P.O. Box 1663
Los Alamos, New Mexico
87545-1663

is authorized to discharge storm water associated with industrial activities from specified solid waste management units (SWMUs) and areas of concern (AOCs) (as identified in Appendix A and referred to herein as "Sites") from the facility located at Los Alamos, New Mexico, to receiving waters named:

Tributaries or main channels of Mortandad Canyon, Canada del Buey, Los Alamos Canyon, DP Canyon, Sandia Canyon, Ten Site Canyon, Canyon de Valle, Water Canyon, Ancho Canyon, Bayo Canyon, Chaquehui Canyon, Fence Canyon, Pajarito Canyon, Twomile Canyon, Threemile Canyon, Potrillo Canyon, Pueblo Canyon, and Rendija Canyon, in Water Body Segment No. 20.6.4.98, 20.6.4.114, 20.6.4.126 or 20.6.4.128 of the Rio Grande Basin,

in accordance with this cover page and monitoring requirements, and other conditions set forth in the Requirements for NPDES Permits and Appendices, hereof.

This permit, prepared by Isaac Chen, Environmental Engineer, Permitting Section (6WDPE), supersedes and replaces the administratively continued ~~(AC)~~ NPDES Permit No. NM0030759 issued February 13, 2009, then modified September 30, 2010, with an expiration date of March 31, 2014.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

_____
Charles W. Maguire
Director
Water Division

LANL NPDES Storm Water Individual Permit (NM0030759)

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PART I. REQUIREMENTS FOR NPDES PERMITS

1. Purpose

This Permit contains non-numeric technology-based effluent limitations, coupled with a comprehensive, coordinated monitoring program and corrective action where necessary, to minimize pollutants of concern (POC), in Permittees' storm water discharges. As used in this Permit, "minimize" means to reduce and/or eliminate discharges of POCs in storm water to the extent achievable using Ssite-specific control measures (including best management practices) that reflect best industry practice considering their technological availability, economic achievability and practicability.

The Permittees are required to implement Ssite-specific control measures (including best management practices) to address the non-numeric technology-based effluent limits contained in this Permit, followed by confirmation monitoring screened against New Mexico water-quality criteria-equivalent target action levels (TALs) to determine the effectiveness of the Ssite-specific measures. Any TAL exceedances will be evaluated potentially taking into account background threshold values (BTVs) (see Part I.C.2) for those POCs that may be released by natural (undeveloped) or urban (developed) environments and may not be Site-related. The Permittees must also develop, maintain, and update a Site Discharge Pollution Prevention Plan (SDPPP) and Sampling Implementation Plan (SIP) consistent with Part I, subparts D.1E.1 and E.2F.1 of this Permit. Collectively, these plans describe the control measures used to meet the requirements of this Permit.

2. Coverage

This Permit authorizes only those storm water discharges associated with industrial activity from inactive solid waste management units (SWMUs) and areas of concern (AOCs) listed in Appendix A. The SWMUs and AOCs identified in Appendix A are collectively referred to throughout this Permit as "Sites." This Permit does not authorize storm water discharges associated with current conventional industrial activities at LANL. Storm water discharges associated with current conventional industrial activities are covered under U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) general permit for storm water discharges from industrial activity, also known as the Multi-Sector General Permit (MSGP). Unless otherwise specified, references to "industrial activity" or "industrial storm water" under this Permit refer to the definition of "storm water discharge associated with industrial activity" at 40 C.F.R. § 122.26(b)(14).

3. Permit Compliance

Any noncompliance with any of the requirements of this Permit, except for exceptions provided in the permit, constitutes a violation of the CWA. Failure to take any required corrective actions constitute an independent violation of this Permit and the CWA. Where corrective action is triggered by an event that does not itself constitute Permit noncompliance, such as an exceedance of applicable TALs or BTVscomposite BTVs and/or TALs (per Part I.C.2), there is no violation of the Permit, provided the Permittees take the required corrective action within the relevant deadlines.

PART I.A. NON NUMERIC TECHNOLOGY BASED EFFLUENT LIMITATIONS

For all Sites identified in Appendix A of this Permit, the Permittees shall install and/or maintain structural and nonstructural control measures as necessary to meet the non-numeric technology-based effluent limits to minimize Site-related POCs in storm water discharges. Nothing in this Permit relieves the Permittees of the obligation to implement additional control measures required by other Federal authorities or by a State

or local authority. Structural control measures, the installation of which involve the discharge of dredge or placement of fill material into any receiving waters (e.g., wetlands), may require a separate permit under section 404 of the Clean Water Act (CWA) before installation.

1. ~~Limits Required~~ Structural Control Measures

a. Basic structural control measures include:

(i) Erosion and Sedimentation Controls. The Permittees must minimize discharges of POCs caused by onsite erosion and sedimentation. The Permittees must implement structural, vegetative, and/or stabilization control measures as necessary to achieve this requirement.

(ii) Management of Run-on and Runoff. The Permittees must, to the extent practicable, divert, infiltrate, reuse, contain, detain, or otherwise reduce storm water run-on/runoff to minimize Site-related POCs from discharging to receiving waters.

(iii) Other Controls. The Permittees must do the following where applicable:

(a) Implement controls to prevent the discharge of waste, garbage, or floatable debris to receiving waters, except as authorized by a permit issued under section 404 of the CWA;

(b) Minimize the generation of dust, along with vehicles tracking raw, final, or waste materials or sediments off-site;

(c) Minimize the introduction of raw, final, or waste materials to exposed areas;

(d) Minimize the effects of any increase in downstream erosion resulting from the construction and operation of structural controls; and

(e) Place flow velocity dissipation devices at discharge locations and along the length of any discharge channel if the flows would otherwise create erosive conditions.

b. The Permittees must maintain control measures in effective operating condition. Failure to do so is a violation of this Permit. These maintenance requirements under this Permit do not apply to:

(i) A Site has been removed from the Permit so ~~that discharges from that Site are~~storm water discharges associated with industrial activity under 40 CFR 122.26(b)(14) are no longer authorized ~~under this permit~~, or

(ii) A control measure that has been replaced by another control measure, or

(iii) A control measure that has been retired because it is no longer necessary to perform the functions of a control as defined by Part I.A.1(a)(i) or (ii).

c. The Permittees must keep documentation onsite that describes procedures and a plan for inspection and preventative maintenance of all control measures and specifies backup practices to be used should a runoff event occur while a control measure is off-line. Nonstructural control measures must also be diligently maintained (e.g., employee training described in Part I.A.2). Nothing in this Permit shall be construed to prevent the Permittees from taking action(s) to modify control measures as appropriate to address deficiencies.

d. If, during an inspection or other event, a control measure is identified as not operating effectively, the Permittees must repair or replace the control before the next anticipated storm

event if possible, or as soon as practicable, following that storm event. In the interim, the Permittees must have backup measures in place.

e. Requirements of inspection and maintenance of existing control measures described in this part, Part I.A, also apply to additional, enhanced, or advanced control measures.

f. Soil Disturbance Associated with the Installation of Control Measures

If the installation of control measures at a Site involves soil disturbance of Site-affected soils, the Permittees shall temporarily suspend sampling activities and take all necessary steps to minimize migration of sediments and runoff from disturbed Ssites. Steps taken to minimize discharges of contaminated runoff during remediation activity shall be included in the SDPPP update. The Permittees shall conduct Ssite inspections once a week while installing control measures to ensure sediment and runoff control measures are maintained in good order. Corrective actions shall be taken ~~immediately~~ as soon as practicable if deficiencies of sediment and runoff control measures are noticed either by inspectors or contractors. After completion of such mitigation measures, the Permittees shall reactivate the sampler and analyze the storm water sample in accordance with Part I.B.1.

Storm water discharges associated with construction activity disturbing one (1) acre or more are not covered under this permit. Storm water discharges associated with construction activity disturbing one acre or more must be covered under EPA's Construction General Permit (CGP) or through a separate individual NPDES permit.

2. ~~Limits Required~~ Nonstructural Control Measures

a. Training. The Permittees must provide training at least once per year to employees who are responsible for implementing activities identified in the Permit and the SDPPP (e.g., inspectors, maintenance personnel), including members of the Site Discharge Pollution Prevention Team (referred to as Pollution Prevention Team in this Permit). Training must cover the specific components of the Permit, the scope of the SDPPP, and the control measures required under this Part. The Permittees shall maintain records of employee training with the SDPPP as detailed in ~~Section~~ Part I E.1.~~a (a)~~b below.

b. Unauthorized Discharges. The Permittees must eliminate non-storm water discharges (e.g., process wastewater, spills or leaks of toxic or hazardous materials, contaminated groundwater, or any contaminated non–storm water) not authorized by an NPDES permit. Minor non-storm water discharges such as uncontaminated fire hydrant/sprinkler test water, water line flushing (dechlorinated), fire-fighting, building washing (no cleaning agents), condensate, irrigation, etc. are allowed.

PART I.B. MONITORING REQUIREMENTS

The Permittees shall monitor POCs in storm water discharges from Sites at specified sampling points known as Ssite Mmonitoring Aareas (SMAs). The Permittees shall perform confirmation monitoring as detailed below following installation of each ~~site-specific~~certified control measure. The Permittees are also required to conduct regular inspections of all Sites as described under Part I.B.2 to ensure that all control measures are properly operating.~~.~~

1. Confirmation Sampling

If, during the previous Permit, all analytical results(s) for a particular POC at a particular SMA listed in Appendix A were at or below the maximum target action level (MTAL) and/or the geomean of all analytical sampling result(s) was at or below the average target action level (ATAL), monitoring of that POC at the same SMA is not required, unless the sampling location was moved or ~~constituents~~ POCs were added to the monitoring suite during the Sampling Implementation Plan (SIP) evaluation conducted in conjunction with NMED during 2016-2018.

If corrective action was initiated, but confirmation monitoring was not completed, during the previous Permit, the Permittees shall perform confirmation monitoring requirements based on the Annual Sampling Implementation Plan (SIP; Part I.E~~D~~.2~~1~~). Annual confirmation monitoring requirements shall be maintained in the SIP. If confirmation monitoring is required, the Permittees shall collect two confirmation samples. A Site will not be considered non-compliant if confirmation samples could not be collected.

Confirmation sampling is used to determine the effectiveness of baseline and enhanced control measure installations, and to inform the Permittees if additional corrective actions are necessary. There are several categories of confirmation monitoring required by this Permit;

(i~~a~~) After baseline or enhanced control measures are installed, the Permittees shall collect two confirmation samples within two years. If the P~~p~~ermittees are~~is~~ unable to collect a second sample within two years, the results of the single sample may be considered to be representative of the discharge from that S~~s~~ite. For samples collected under the previous Permit where the Permittees have been unable to collect a second sample, upon issuance of the final Permit the Permittees may use the results from a single sample.

(ii~~b~~) After construction of a cap or other engineered cover ~~(and opportunity for review by NMED and EPA)~~, one confirmation sample is required if the capped area is smaller than the SMA drainage area. Otherwise, no further confirmation sampling is required, unless required by Part I.B.1.d.

(iii~~c~~) Following certification of completion of soil removal in accordance with Part I.D.1.b,ii, the Permittees shall perform storm water confirmation sampling. The Permittees shall collect two confirmation samples. If a TAL is not exceeded for two samples, then further monitoring is not required for the remainder of Permit and the Permittees may seek to delete the Site or Sites from the Permit pursuant to Part I.C.4. If the permittee is unable to collect a second sample within two years, the results of the single sample may be considered to be representative of the discharge from that S~~s~~ite.

(iv~~d~~) After installation of control measures that retain a volume of storm water runoff from a Site or SMA that is equivalent to a 3-year, 24-hour storm event or greater, the Permittees will be in compliance with this Permit at that Site or SMA once they have certified through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to retain the appropriate design volume of storm water. No further confirmation monitoring is required post-certification, unless required by Part I.B.1.d.

a. Sampling Locations

All samples collected for purposes of confirmation monitoring shall be collected in accordance with the monitoring requirements specified below at the SMAs identified in Appendix A of this Permit. SMA locations are based on reasonable Ss~~s~~ite accessibility for sampling purposes and samples taken will be representative of discharges of storm water from Site-affected media (soil, sediment, or bedrock) as determined by the SIP. The drainage area of each SMA shall be representative of the Site or Sites within the SMA.

(i) Sampler location adjustments. 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, or adjustments due to logistical or security issues. Any such movement of a sampler shall be documented in the annual SIP and SDPPP.

(ii) Sampler additions: In case potential discharges from a Site within an SMA do not flow through the current monitoring location identified in the Annual SIP, the Permittees shall add additional sampling locations during the Permit term in order to collect ~~additional investigation~~ confirmation samples. Each additional sampling location and the corresponding sampling results are subject to the sampling, reporting, inspection, and corrective action requirements of this Permit.

b. Sampling Procedures

Any sampling performed for purposes of confirmation monitoring at a particular SMA must be performed after installation of applicable control measures and following a storm event that results in an actual discharge from the Site or Sites and that produces sufficient volume to perform the required analyses (referred to herein as a "measurable storm event"). For each sampling event, the Permittees must identify the date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff, and the duration between the storm event sample collection and the end of the previous measurable storm event. The Permittees may take meteorological information from the nearest meteorological tower or rain gage. Snowmelt samples shall not be used for purposes of confirmation monitoring.

Grab samples shall be taken within the first thirty (30) minutes of (or as soon after as practical but beginning no later than one (1) hour after) a measurable storm event.

Unless otherwise specified in this permit, the term "composite sample" means samples collected either by an automatic sampler or by manual, during the whole or part of a rainfall period, are composited prior to an analysis. The Permittees may use either grab samples or composite samples for monitoring purpose if it keeps practice consistency.

c. Collection of Partial Samples

In the event the volume of any storm water sample collected is insufficient to perform all required analyses listed in the SIP, the partial sample shall be analyzed in accordance with a

priority list of Site-specific POCs determined based upon a review of Ssite history, soil data, and other acceptable knowledge. The priority list for each Site is documented in the SIP.

In the event a partial sample is collected, the Permittees shall ~~immediately~~ reactivate the sampler as soon as practicable to attempt to complete the full Site-specific POC suite listed in the SIP.

d. Additional Sampling Requirements

(i) If soil disturbance within the Site-affected media occurs, storm water samples collected by the Permittees following these activities shall be analyzed for all POCs listed in the SIP for that SMA. Installation of controls and routine maintenance of monitoring devices are not subject to the requirements of this Part.

(ii) Notwithstanding the provisions of Parts I.B.1 and I.C.2~~1,~~ and except as provided in Part I.A.1.f~~I.1~~, if a Site for which monitoring has ceased later exhibits evidence of a discharge of contaminated runoff or conditions that could lead to a discharge of contaminated runoff, such as control measure failure, erosion problems, or re-exposure of "no exposure" Sites, ~~or if monitoring data (from the facility, state or local agency) show an exceedance of applicable TALs,~~ the Permittees shall initiate appropriate actions to correct the problems within ~~thirty~~ ninety (9~~3~~0) days of being made aware of such information and shall report the problem and the corrective actions taken to EPA, with a copy to the New Mexico Environment Department (NMED).

e. Sufficiently Sensitive Method (SSM)

The Permittees shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. The permittees shall use EPA-approved methods which are sufficiently sensitive, as defined under 40 CFR 122.44(i)(1)(iv)(A), to the TALs, except for parameters for which a specific test method has been required under this permit.

f. Data Averaging

The average refers to the geometric mean of applicable monitoring results at the SMA. If all analytical results are below analytical method detect level (MDL), a value of "zero" may be reported. If one or more data are above MDL, a value of ½ detect level shall be assigned to those below detect level data for calculation purpose. If the average value of a specific pollutant is below its MDL, a value of "zero" may be reported for the average.

If a new or an enhanced BMP is installed, the average shall be calculated based on analytical results from samples taken after installation of the BMP.

2. Inspections

The Permittees must conduct the following types of regular inspections. The Permittees may conduct a combined inspection for a Site, if appropriate.

a. Significant Event Inspections

The Permittees must inspect and re-evaluate all Sites after notice of a significant event, such as a fire or flood, which could significantly impact the control measures and environmental conditions in the affected area. Such inspection and reevaluation should be conducted, and any repairs or adjustments completed, before the next anticipated storm event or as early as practicable.

b. Post-Storm Inspection

The Permittees must inspect control measures ~~and storm water management devices~~ at any Site affected by a "storm rain event" defined below, within fifteen (15) days after such storm rain event. The occurrence of a "storm rain event" as defined below shall be determined based on data from the nearest meteorological tower to any particular Site. A "storm rain event" under this paragraph means a 0.50 inches or more intensive rain event within 30 - minutes.

If several storms exceeding the above intensity threshold occur over a period not to exceed fifteen (15) days from the first event, a single inspection following these storms is sufficient for compliance with this requirement, provided that the inspection occurs no more than fifteen (15) days from the date of the first storm. If adverse weather conditions prevent a Ssite inspection within the required time period, the Permittees shall inspect the Site as soon as practicable. Adverse weather events shall be documented, and this information shall be maintained with the SDPPP. Adverse weather conditions include dangerous weather-related events (e.g., flooding, wildfires, hail, or lightning) that make Ssite inspection dangerous for worker safety.

c. Long-Term Stewardship Inspections

When a Site and its associated controls are designated as a LTS location under Part I.C.3~~2(b)~~, Permittees shall inspect and evaluate each Site and its associated controls annually (a) for a 5-year period (a Permit cycle) and (b) after a 3-year, 24-hour return period storm. The reporting of inspection results shall meet all requirements set forth in Part II.2.~~G.~~4. An assessment shall be conducted around the end of each Permit cycle to determine if the storm water runoff or erosion potential at each Site is in a stable condition and if adjustments should be made to the control measure inspection frequency set forth in this Part. A determination of future inspection frequency or termination of LTS shall be included with subsequent re-application submittals. Sites in LTS will be tracked by Site, not to the individual control, and the inspection dates, maintenance dates, maintenance activities, and LTS listing date will be tracked for each Site.

d. Inspection Reports

All regular inspection reports shall include, at a minimum, the following items:

(i) The personnel who conduct the inspections;

(ii) Date(s) on which inspection was performed;

(iii) A written summary of major observations, including observation of deficiency;

(vi) A summary of evidence of potential contaminants, failure of a best management practice, or alteration of management structure or runoff pathway, etc;

(v) Actions that should be taken to correct noted deficiencies;

(vi) Photo documentation of findings at the Site, if necessary; and

(vii) The signature of the delegated official of the Permittees and certification of findings, including observation of no deficiency.

These inspection Reports will be submitted in accordance with Part I.E.3, Annual Compliance Status Report, and retained in accordance with Part II.2, Recordkeeping.

PART I.C. SITE EVALUATIONS

~~Results of site confirmation sampling are evaluated against the Target Action Levels (TALs).~~Site evaluations shall be performed as described in this section.

1. Target Action Levels (TALs)

Target Action Levels (TALs) are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. 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. Target Action Levels and Background Threshold Values are listed in Appendix B and Appendix C to this permit, respectively.

~~Corrective actions will occur if any validated analytical result for a particular POC from a confirmation sample at an individual SMA is greater than the Maximum Target Action Level (MTAL) or if the geomean of all applicable sampling results is greater than the Average Target Action Level (ATAL) or Background Threshold Value (BTV). Target Action Levels and Background Threshold Values are listed in Appendix C and Appendix B to this permit, respectively.~~

2. Site-Specific Demonstration (SSD)

The Permittees may use the Site History with either the run-on and runoff evaluation or the Site-specific information ~~one or more of the following methods~~ to perform a S~~s~~ite-specific demonstration (SSD) showing that the Site or Sites are not reasonably expected to be the source for one or more of the remaining POCs that have exceeded applicable BTVs and/or TALs. For Sites where data has been collected under the 2010 Permit, or requests have been submitted to EPA (e.g., Alternative Compliance or Force Majeure) that are pending, this demonstration must be conducted within 1 year of the effective date of this Permit. For Sites with a completed SSD, the tier results of the confirmation monitoring and soil data comparisons shall be used to determine annual sampling requirements. The results shall be provided in the initial SIP pursuant to Part I.E.2~~1~~ and annually thereafter.

a. Run-on and runoff evaluation

This approach may be used at Sites where run-on control cannot be reasonably or economically installed. This demonstration shall include the collection of storm water run-on data for all POCs that exceeded the TALs, from a sampler located above the Site. In addition, the Permittees shall collect additional runoff data below a Site or Sites. The runoff sampler may or may not be the SMA sampler location, but the runoff sampler location should be representative of runoff from Site-affected media for the Site(s) being evaluated by the SSD.

An example where a runoff sampler is not the SMA sampler is where two or more Sites exist within an SMA and the Permittees monitor runoff from a single Site in the SMA.

If the following condition is met, the Permittees will have demonstrated that the Site or Sites are or are not reasonably expected to be the ~~sole~~ source for one or more of the remaining POCs and the Permittees will have also demonstrated that discharges from the Site or Sites do or do not cause the exceedance of TALs. Further confirmation sampling for those POCs are not required.

(1) V(run-off) – V(run-on) ≤ TAL~~0~~; or

(2) [V(runoff)* total catchment area] – [V(run-on & precipitation)*Non-S~~s~~ite area] ≤ TAL
(S~~s~~ite area)

Where, V = Geomean of sampling results

b. Site-specific information

If the Permittees collect a minimum of one confirmation sample that exceeds a TAL, the Permittees may use this data, along with other Site-specific information, to determine if the Site or Sites are reasonably expected to be the source of the POC that exceeds the applicable TAL(s). Sources of S~~s~~ite-specific information include, but are not limited to, S~~s~~ite history, validated surface soil data (i.e., collected in top 3 feet), BTVs, information on land use upstream of and within the SMA, and relevant scientific literature.

(i) Storm Water (SW): When Permittees use Site-specific information in the SSD, confirmation storm water monitoring results shall be compared to the TALs (Appendix B~~C~~) and to the BTVs (Appendix C~~B~~) using the composite BTV formula below. Permittees shall compare the confirmation sample results to the composite BTV.

~~90th percentile~~ composite BTV = [(% impervious SMA area * 90th percentile developed landscape BTV) + (% pervious SMA area * 95-95 UTL ~~90th percentile~~ undeveloped landscape BTV)]/100%

where the % impervious SMA area is the % impervious, or developed~~,~~ area of the SMA, and the % pervious SMA area is the % pervious, or undeveloped~~,~~ area of the SMA. The % impervious and pervious SMA areas and the resulting composite BTV for each Site shall be listed in an appendix of the annual SIP. The Permittees shall provide the results of the screening process in the annual SIP based on the comparison of confirmation sample results with composite BTVs and TALs. The results of the comparison shall be sorted into the following tiers:

SW Tier 1: When the confirmation sample result ~~is less than~~does not exceed the TAL, the Permittees can cease monitoring for that POC for the remainder of the Permit.

SW Tier 2: When the confirmation sample result of one or more POCs exceeds the TAL but is less than the 90th percentile composite BTV, the SMA shall be assigned to long-term stewardship (LTS) and meet the requirements of Part I.C~~G~~.3. However, if the composite BTV and the confirmation sample result ~~are less than~~do not exceed the

TAL, SW Tier 1 applies.

SW Tier 3: When the confirmation sample result of one or more POCs exceeds the TAL and 90th percentile composite BTV, the SMA shall enter into corrective action per Part I.D. However, if the composite BTV and the confirmation sample result ~~are less than~~ do not exceed the TAL, SW Tier 1 applies.

(ii) Soil Data (SD): When Permittees use Site-specific information in the SSD, ~~Soil data can be used to help confirm site status, but cannot be the only factor in making a determination. Using~~ with validated surface soil data results (i.e., within 3 feet below ground surface) from Consent Order soil characterization efforts, the following comparison can be made: 95-95 upper tolerance limit (UTL) BTVs for inorganic POCs (LANL 1998, "Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory"), and 2019 NMED soil screening levels (SSLs) for organic POCs and inorganic POCs with no BTV (NMED 2019 "Risk Assessment Guidance for Site Investigations and Remediation; Volume 1 Soil Screening Guidance for Human Health Risk Assessments"). The results of the comparison shall be sorted into the following tiers:

SD Tier 1: When the soil sample result does not exceed the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the Permittees can cease monitoring for that POC and it is not considered as a Site-related POC. If SW Tier 1 conditions are also met, Permittees may request the Site be deleted from the permit. ~~When the soil sample result is less than the SSL for the particular POC, the POC can be removed from the monitoring suite for that site in the next SIP if all POC are Tier 1, Permittees may request the Site be deleted from the Permit.~~

SD Tier 2: When the soil sample result of one or more POCs exceed(s) the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the POC shall remain or be added to storm water monitoring requirements for that SMA if it is considered as a Site-related POC. ~~When the soil sample result is above SSL, but less than the 95-95 UTL BTV for inorganic POCs or less than 10% of the SSL for organic POCs and inorganic POCs with no BTV, the Permittees may assign the SMA to long-term stewardship (LTS) and meet the requirements of Part I.G.3.~~

~~**SD Tier 3:** When the soil sample result of one or more POCs is above the SSL and exceeds the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the POC shall remain or be added to storm water monitoring requirements for that SMA if it is considered as a Site-related POC.~~

~~The tier results of the confirmation and soil data comparisons shall be used to determine annual sampling requirements and whether POCs are reasonably expected to be the source for one or more of the POCs (see Part I.D).~~

Note: The 95-95 upper tolerance limit (UTL) is designed to contain, but not exceed, a large fraction (95%) of the possible background concentrations within a sampled population, thus providing a reasonable upper limit on what is likely to be observed in background with a 95% degree of confidence.

c. Site History

If the Permittees believe a POC is not Site-related and monitoring for that POC should not be required under the SIP, the Permittees may provide documentation to EPA to demonstrate that the POC was not potentially managed or released at the Site during historic industrial activities; or evidence to demonstrate that supports that the Site is not exposed to storm water. Upon provision of documentation to EPA that a POC is not Site related the Permittees may cease monitoring for the POC. If EPA provides a response that the POC is not to be removed, then the Permittees will initiate monitoring at that time. Relevant documentation of Site-related knowledge shall be reported in the SIP.

3. Long-Term Stewardship (LTS) Category

The Long-Term Stewardship (LTS) Category includes Sites that do not meet the requirements for Site deletion under Part I.C.4 and also do not currently require additional corrective action. Documentation of LTS Site categorization will be incorporated in the SDPPP. The Permittees may ~~submit a written request to EPA, with a copy to NMED, to~~ place a Site or Sites in the LTS Category if it meets one or more of the following conditions:

(a) Storm water sample results are greater than TALs because of background contribution as specified in Part I.C.~~1(a)(i)~~2(a)(i) SW Tier 2;

~~(b) Soil sample results meet conditions specified in Part I.C.1(a)(ii) SD Tier 2;~~

~~(c) Storm water sample results are greater than HH-OO based TALs, but below Wildlife Habitat TALs for discharges to non-perennial streams;~~

(b~~d~~) Storm water sample results are greater than Adjusted Gross Alpha (AGA) ATAL before monitoring requirement of AGA was~~is~~ removed from the 2010 permit; ~~or~~

(c~~e~~) Sites that have no evidence of storm water discharges (as required by Part I.B.2.b, Post Storm Rain Event Inspections) for the past five years; or

(d) A Site is deferred under the NMED Consent Order and Site investigations are delayed. When the Site is removed from the NMED Consent Order deferred list, active confirmation monitoring will resume at the Site per Part I.B.~~.~~

4. Deletion of Site

The Permittees may submit a written request to remove a Site from coverage under the Permit if the Permittees can demonstrate that the Site no longer has "storm water discharges associated with industrial activity" under 40 CFR 122.26(b)(14) as follows:

(a) No industrial activities as specified under 40 CRF 122.26(b)(14) ever took place at the Site;

(b) Site-related POCs have never been exposed, or will no longer be exposed, to storm water. A request to EPA to remove a Site meeting the conditions of this Part shall include documentation that demonstrates historic activities that led the Site to be a SWMU or AOC did not result in significant materials exposed to storm water (e.g. Site-related POCs are a minimum of 3 feet below the ground surface, below existing building);

(c) Sites have no significant industrial materials remaining that are exposed to storm water after installation of permanent control measures. For all SMAs that contain the Site, ~~a minimum of~~ two confirmation storm water samples were collected (or see Part I.B.1.i), no POCs exceeded the applicable TALs, and therefore, the Permittees 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);

(d) The Permittees certified corrective action complete under Part I.D.1(b) by removing soil that contained a release of Site-related POCs that were exposed to storm water and/or demonstrating that no significant materials from previous industrial activity remain in the Site. A request to EPA to remove a Site meeting the conditions of this Part shall include the certification of correction action complete under Part I.D.1(b) and storm water confirmation sampling results, if applicable;

(e) Storm water discharges associated with industrial activity no longer occur at the Site when the SSD shows that the data screening for all POCs resulted in a SW Tier 1 and SD Tier 1 result per Part I.C.2(b); or

(f) If, for Long-Term Stewardship Sites, no evidence of discharge is apparent at a Site after a 25-year, 24-hour storm event or, if the Site is being monitored, the following conditions are met:~~Insufficient storm water runoff results in confirmation samples not being collected at the associated SMA during the previous permit cycle. If the following criteria are met, the Sites are not discharging into a receiving stream or canyon~~:

(i) Active samplers are in representative locations;
(ii) No confirmation sample has been collected after a 25-year, 24-hour return period storm; and
(iii) Inspection records validate full operability of sampler.

~~Upon the Permittees certifying that they will properly maintain BMPs in place, if applicable, and notify EPA for permit coverage if POCs re-exposed to stormwater and trigger stormwater discharge associated with industrial activity under 40 CFR 122.26(b)(14), EPA may approve such a request in writing by issuing a minor permit modification pursuant to 40 CFR 122.63(e)(2). Documents to support such requests and decisions must be kept with facility's SDPPP and published on the Permittees' Individual Permit public website. Once a Site is removed from the Permit, a discharge of contaminated point-source runoff is no longer authorized by this Permit.~~ EPA may approve a Site deletion request as a minor modification to the Permit under 40 CFR 122.63(e) (2). If such a request 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.

PART I.D. CORRECTIVE ACTION

1. Determination of Corrective Action Measures

Once a ~~TAL or BTV~~composite BTV and/or TAL (per Part I.C.2) has been exceeded for a Site-related POC, the Permittees shall determine the appropriate corrective action. ~~At a minimum, this corrective action~~

~~determination shall consider the following: volume of storm water currently retained and the potential for additional retention of storm water; potential and physical limitation for installation of Site-appropriate storm water controls (with consideration of technological availability); evaluation of the efficacy, limitations, and predicted water quality improvement performance of any proposed storm water controls based on published literature; or distribution of contaminants in soil and the predicted efficacy of any proposed soil removal on removal of POCs from storm water.~~ The options for implementation of corrective action may include installation of enhanced control measures, elimination of exposure to POCs, or retention of a 3-year, 24-hour storm event as described below.

a. Installation of Enhanced Control Measures

Enhanced (i.e., additional, expanded or better-tailored) control measures may be used to complete corrective action. Where feasible, these enhanced controls shall incorporate low-impact design and green infrastructure design features (e.g., plunge pools, compost-filled wattles, and bio-retention basins).

The enhanced control process may include more than one iteration of control measure installation followed by confirmation monitoring, pursuant to Parts I.B and I.C.2~~1~~, after each control measure installation.

Permittees shall certify completion of installation of control measures under this subpart to EPA, with a copy to NMED, within 30 days of completion of all such measures at the Site. Such certification shall be signed in accordance with 40 CFR 122.22(b) and shall include a description and photographs of all completed measures and the results of the corrective action measures evaluation performed in Part I.D.1~~E.1~~. Except as provided in Part I.~~I.2~~C.4, the Permittees are required to continue to inspect the Site in accordance with Part I.B.2~~G~~ and to maintain all control measures in effective operating condition as required by Part I.A.

b. Elimination of Exposure of Site-Related POCs to Storm Water

To complete corrective action at a Site or Sites within an individual SMA, the Permittees may pursue elimination of exposure of Site-related POCs to storm water. Elimination of exposure of Site-related POCs to storm water may be achieved in one of two ways:

(i) Constructing a cap or other engineered cover. the Permittees shall demonstrate that a cap or other engineered cover has been constructed to address contamination at a SWMU that has adequate soil data to identify the entire area of contamination. The Permittees shall be in compliance with this Permit once they have certified and demonstrated to EPA, through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to eliminate exposure of Site-related POCs to storm water as plan. One confirmation sample is required if capped area is smaller than the SMA drainage area. Otherwise, no further confirmation sampling is required, unless required by Part I.B.1(d)~~ B.5~~.

(ii~~I~~) Soil removal. ~~the~~ The Permittees shall demonstrate and certify to EPA, with a copy to NMED, that soil removal meets the requirements of this Part through collection and evaluation of ~~confirmation~~ soil sampling results. Following certification of completion of soil removal, the Permittees shall perform storm water confirmation sampling.

If the Permittees certify that 3 feet or more depth of soils are removed and replaced with clean soils and EPA determines new soil data has demonstrated that no

significant amount of industrial materials remain on the Site, the Permittees will have demonstrated completion of corrective action. The Permittees may submit soil data for new fill soil, or soil data from upstream background soil to demonstrate no significant materials from past industrial activities would remain exposed to storm water. EPA may require soil testing for some radius outside the remediated area to ensure "no significant industrial materials remain" in the soil on the water pathway ~~(Note: If evidence shows that surface runoff from that Site will penetrate deeper than 3 feet, the Permittees may not use this approach.)~~

The Permittees shall certify elimination of exposure under this Part to EPA, with a copy to NMED, within 30-days of completion of all such measures at the Site. Such certification shall be signed in accordance with 40 CFR 122.22(b) and shall include a description and photographs of all completed measures and the results of the corrective action measures evaluation performed in Part I.D~~E~~.1. Except as provided in Part. I.C.4~~I.2~~, the Permittees are required to continue to inspect the Site in accordance with Part I.B.2~~G~~ and to maintain all control measures in effective operating condition as required by Part I.A.

c. Retention of a 3-Year, 24-Hour Storm

The Permittees may achieve completion of corrective action under this Part through installation of control measures that retain a volume of storm water runoff from a Site or SMA that is equivalent to a 3-year, 24-hour storm event based on the most representative rain gage historic records from the nearest meteorological tower or rain gage. The Permittees shall be in compliance with this Permit at that Site or SMA once they have certified and demonstrated to EPA, with a copy to NMED, through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to retain the appropriate design volume of storm water. No further confirmation sampling is required post-certification, unless required by Part I.B.1(d)~~5~~.

Identification of the rain gage applicable to each Site shall be maintained within the SDPPP. The Permittees shall provide, in the SDPPP, information (e.g., sediment removal, sediment depth, water level, estimated capacity remaining, evidence of discharges, or others) to demonstrate the retention facility maintains capacity to store runoff volume from a 3-year, 24-hour storm event.

The Permittees may install run-on control measures to reduce run-on and sediment (i.e., low impact development, green infrastructure, sediment detention basin or berm, etc.), and such installations shall minimize discharges to the equivalent of a 3-year, 24-hour storm event.

In an event of discharge, the Permittees shall report such a discharge in the annual SDPPP and demonstrate that such a discharge is caused by a storm event that is ~~equivalent to~~greater than a 3-year, 24-hour ~~or greater~~ storm event. The Permittees are required to continue to inspect the Site in accordance with Part I.B.2 (as applicable) and to maintain all control measures in effective operating condition as required by Part I.A. The S~~s~~ite shall be re-evaluated with the SIP process to determine if monitoring is required in the future.

2. Alternative Compliance

Where the Permittees believe, based upon a technical evaluation of existing control measures, that they will be unable to certify corrective actions under Part I.D~~E~~.1(a) through (c) above (individually or collectively)

due, for instance, to Ssite conditions that make it impracticable to install further control measures, or POCs that exceed ~~BTVs or TALs~~composite BTVs and/or TALs (per Part I.C.2) are contributed by sources beyond the Permittees control, the Permittees may seek to place a Ssite into Alternative Compliance, whereby completion of corrective action shall be accomplished on a case-by-case basis, and as necessary, pursuant to an individually tailored control measure by EPA.

To seek to place a Site or Sites into Alternative Compliance, the Permittees must file a written request with EPA and provide written notice to the public and opportunity for public comment~~, within 90 days of validated confirmation of TAL or BTV exceedance~~. Such a request must include the following:

(a) A comprehensive description of the control measures installed at the Site or Sites.

(b) A list of additional on-the-ground actions or a watershed protection approach (see Part II.1) which have resulted in a reduction in the potential for Site-related POC discharges to reach downstream canyons.

(c) 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 Parts I.D.5 (a) through (c~~d~~) (individually or collectively). And,

(d) A list of economically achievable BMPs with Ssite-tailored workplan and schedules which may further reduce discharges or exposure of POCs to the environment, if applicable.

Upon submitting such a request to EPA, the Permittees shall make the request and all supporting information available to NMED and the public for review and comment for a period of forty-five (45) days and shall develop and provide to the commenters a written response document addressing all relevant and significant concerns raised during the comment period. The Permittees' request under this Part, along with the complete record of public comment and the Permittees' response to comments, shall be submitted to EPA Region 6 for a final determination on the request. The Permittees' response to comments may include a revision to the Alternative Compliance request and/or the proposed individually tailored work plan.

The Permittees shall not be out of compliance with the applicable requirements for achieving completion of corrective action with respect to the Site or Sites covered by a request. The Permittees shall continue to conduct inspections and maintenance of existing control measures on those Sites.

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, in writing.

If EPA approves the request, EPA may set Ssite-specific requirements for inspection, maintenance, and/or monitoring.

(Note: Alternative Compliance requests submitted ~~in 2015~~ under the previous permit conditions may be resubmitted with all supporting documents, if applicable under this permit, without reopening a new public notice.)

3. Schedules for Corrective Actions

If ~~one or more POCs exceeding the applicable TALs or BTVs cannot be excluded as the source of the exceedance~~ corrective action is required at the Site, pursuant to Part I.C.~~.1~~, the Permittees shall take proper corrective actions and complete installation of additional control measures as soon as practicable, or within ~~no later than~~ 24 months from the date when the Permittees have knowledge of ~~TAL or BTV~~composite BTV and/or TAL exceedance (per Part I.C.2). ~~The Permittees shall make reasonable efforts, in good faith, to~~

~~achieve completion of corrective actions within the 24-month compliance schedule.~~ For Sites which require corrective actions prior to the effective date of the final permit, ~~corrective actions~~installation of additional control measures shall be completed no later than 24~~12~~ months from the effective date of the final permit.

4. Force Majeure

The Permittees may seek EPA approval for an extension if the Permittees can demonstrate that "force majeure" has resulted, or will result, in a delay in meeting the obligation to confirm completion of corrective action by the specified deadline. An event that constitutes "force majeure," includes, but is not limited to (a) Acts of God, natural disasters such as fire or flood, war, terrorism, insurrection, civil disturbance, or explosion; (b) a federal government shut down, such as the ones that occurred in 1996 and 2018; (c) unanticipated breakage or accident to machinery, equipment or lines of pipe; (d) restraint by court order; (e) inability to obtain the necessary authorizations, approvals, permits or licenses due to an action or inaction caused by another governmental authority; (f) unanticipated delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures; and (g) inability to secure the reasonable cooperation of any other property owner in addressing storm water run-on to a Site or Sites from such property.

To obtain an extension from EPA, the Permittees shall describe in detail (a) the cause or causes of the delay; (b) the expected duration of the delay, including any obligations that would be affected; (c) the actions taken or to be taken by the Permittees to minimize the delay; and (d) the timetable by which those actions are expected to be implemented. If EPA does not act within 60-days upon receipt of "force majeure" request, the request is deemed "granted." EPA may notify the Permittees whether an extension is reasonably justified and provide a new reasonable deadline that takes into account the actual delay resulting from the event, anticipated seasonal construction conditions, and any other relevant factors. If EPA does not agree to the extension, it will notify the Permittees in writing and provide the basis for its conclusion.

5. Completion of Corrective Action Certification

The Permittees must certify to EPA with a copy to NMED, pursuant to 40 CFR 122.22(b), upon completion of corrective actions. Under this Permit, completion of corrective action shall ~~mean~~occur when:

~~(a) No exceedances of applicable TAL or BTV which are reasonably expected to be Site-related as demonstrated under Part I.C.2 Site Specific Demonstrations; or~~

(a~~b~~) The installation of enhanced control measures under Part I.D.1~~2~~(a) with confirmation monitoring analytical results ~~less than~~that do not exceed the applicable ~~TALs or BTVs~~composite BTVs and/or TALs (per Part I.C.2) as demonstrated under Part I.B.1; or

(b~~c~~) The installation of control measures or the removal of soil that eliminate exposure of Site-related POCs to storm water under Part I.D.1~~2~~(b), with confirmation monitoring analytical results ~~less than~~that do not exceed the applicable ~~TALs or BTVs~~composite BTVs and/or TALs (per Part I.C.2) as demonstrated under Part I.B~~.~~, if confirmation monitoring is required; or

(c~~d~~) The installation of control measures that retains a volume of storm water runoff or minimize discharges from a Site or SMA that is equivalent to a 3-year, 24-hour storm event under Part I.D~~E~~.1(c).

~~6. Monitoring at Sites in Corrective Action~~

~~For each SMA with Sites in corrective action, the following requirements apply:~~

~~(a) If the Permittees have collected a confirmation sample and are currently in corrective action, they shall complete the corrective action and proceed to confirmation monitoring pursuant to Part I.B.~~

~~(b) If the Permittees have previously installed and certified enhanced controls, they shall collect two confirmation samples if no sample has been collected, or one confirmation sample if a sample has already been collected.~~

~~(c) If the Permittees have submitted requests (e.g., Alternative Compliance, or force majeure) to EPA that are pending, the Permittees may complete an SSD pursuant to Part I.C.2 to determine if the Site or Sites are reasonably expected to be the source of the POC that exceeds the applicable TALs or BTVs.~~

PART I.E. PLANS AND REPORTS

1. Site Discharge Pollution Prevention Plan (SDPPP)

The Permittees shall update the facility's SDPPP annually, submit it to EPA and copy NMED by May 1 of each calendar year of the Permit and post the SDPPP on the Permittees' Individual Permit public website within 30-days after the submittal. The reporting period is from January 1 to December 31.The annual update shall fully incorporate all changes made during the previous year and reflect any changes projected for the following year. The facility's SDPPP must remain compliant with relevant State, Tribal, and local regulations, if applicable.

a. Contents of SDPPP

The facility's SDPPP must describe all control measures installed to meet the requirements of this Permit. In addition, the facility's SDPPP must contain all the elements described below. The SDPPP must also address the inspection requirements set forth in Part I.B.2~~G~~ of this permit~~below~~.

(1) **Site Discharge Pollution Prevention Team.** The Permittees must identify the staff members (by name or title) that comprise the facility's Site Discharge Pollution Prevention Team (Pollution Prevention Team). The Permittees' Pollution Prevention Team is responsible for assisting the facility manager in developing and revising the facility's SDPPP as well as maintaining control measures and taking corrective actions for deficiencies. Specific responsibilities of each staff individual on the Team must be identified and listed in the SDPPP. Each member of the Pollution Prevention Team must have ready access to either an electronic or paper copy of applicable portions of this Permit and the facility's SDPPP.

(2) **Site Description.** The facility's SDPPP must include a description of historical activities at each Site, precipitation information, general location map, and Site maps.

(3) **Receiving Waters and Wetlands.** The SDPPP must include the name(s) of all receiving waters that receive discharges from Sites covered by this permit. The SDPPP must also include the size and description of wetlands or other special aquatic sites.

(4) **Summary of Potential POC Sources.** The SDPPP must identify each Site at

the facility where industrial materials or activities were previously exposed to storm water and from which allowable non–storm water discharges were released. The SDPPP must also identify the POCs associated with those activities.

(5) **Description of Control Measures.** The Permittees must update the SDPPP as needed to document all structural control measures installed at a Site as well as the dates installation was completed. The SDPPP must include sufficient detail to identify and describe the Site-specific control measures.

(6) **Schedules for Control Measure Installation.** The Permittees shall update the SDPPP as necessary to include schedules for additional control measure installation and implementation resulting from corrective action under Part I.D of this Permit.

(7) **Monitoring and Inspection Procedures.** The Permittees must document in the SDPPP schedules and planned procedures for sample collection and Ssite inspection. For each sample to be collected, the SDPPP must identify:

(a) Locations where samples are to be collected, including coordinates for sampling locations, and any determination that two or more Sites are substantially identical;

(b) Person(s) or positions of person(s) responsible for sample collection;

(c) Parameters to be sampled and frequency of sampling for each parameter;

(d) Procedures for gathering storm event data.

The Permittees must document in the SDPPP all tentative schedules and procedures for significant event and post-storm inspections as described in Parts I.B.2.a and I.B.2.b of this Permit.

(8) **SMA Maps.** The Permittees must include a map with the following information in their SDPPP regarding each SMA:

(a) Location of each Site within the SMA drainage area;

(b) Coordinates and locations of the SMA samplers (with updates as adjustments occur).

(c) Estimates of the size (in acres) of the SMA and of Site(s) within the SMA.

(d) Any adjustments/changes to sampler locations under Parts I.B.1.a2 and the associated documentation for the sampler move.

(e) Coordinates and identification of any run-on sampler locations.

(9) **Annual Compliance Status Reports.** Annual Compliance Status Reports as specified in Part I.E.3H shall be integrated into the SDPPP.

(10) **Annual SIP.** The annual SIP, as specified in Part I.E.2D shall be integrated into the SDPPP.

(11) **Signature Requirements.** The SDPPP shall be signed, certified and dated in accordance with 40 CFR 122.22(b) prior to submittal of annual updates.

b. SDPPP Documentation

The Permittees are required to maintain inspection, monitoring, and certification documentation with the SDPPP that together keep the records complete and support ongoing SDPPP implementation activities. These records are maintained alongside the SDPPP document, thereby providing a consolidated record of documented storm water requirements and implementation procedures.

The Permittees must, at a minimum, keep the following records and documentation alongside the SDPPP:

(1) Dates of training sessions, names of employees trained, and subject matter of training under Part I~~.A.~~2.;

(2) Sampling reports including sampling dates, analytical results, outfall locations, name and qualifications of technician;

(3) Annual SIP: monitoring location lists, monitoring requirements lists including storm water and sediment sample screening results, adjustments to annual monitoring plan, and re-initiating monitoring requirements where applicable;

(4) Inspection reports and any other information required to be included in an Inspection Report under Part I.B.2(d).

(5) An accounting and an explanation of the length of time it takes to modify control measures or implement additional control measures following the discovery of a deficiency or the need for modification;

(6) Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, the date(s) that control measure(s) were returned to full function and the justification for any extended maintenance/repair schedules.

c. Required Modifications

The Permittees must keep documents and records with the SDPPP as necessary to reflect:

(1) Construction or a change in design, operation, or maintenance at the facility having a significant impact on the discharge, or potential for discharge, of POCs from the facility;

(2) Findings of deficiencies in control measures during inspection or based on analytical monitoring results;

(3) Any change of monitoring requirement or compliance status;

(4) Any change of SMA location in accordance with Part I.B.1.a~~2~~; and

(5) Summary of changes from the last year's SDPPP.

If any of the circumstances described above occur at any Site, the Permittees must address these changes or deficiencies to ensure compliance with this Permit's conditions and applicable monitoring requirements. C~~All c~~hanges must be incorporated into the SDPPP. ~~and a summary of these changes must be included in the Annual Report.~~

d. SDPPP Availability

The Permittees must retain a paper copy of the current SDPPP required by this Permit at the facility, and it must be immediately available to EPA, a State, Tribal or local agency approving storm water management plans, the Pollution Prevention Team members, and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an on-site inspection or upon request. A copy of the SDPPP shall also be made available on the Permittees' Individual Permit public website.

2. Annual Sampling Implementation Plan (SIP)

Within 1 year of the effective date of the Permit, the Permittees, ~~in consultation with EPA and NMED Surface Water Quality Bureau (SWQB),~~ shall evaluate the appropriate monitoring requirements and representative sampling locations for all Sites covered under this permit. Monitoring as determined per the initial SIP will be initiated in the first full monitoring season proceeding the initial SIP. Before May 1 of subsequent years, the Permittees shall review all new available information to determine if the current SMA storm water sampling location is representative of storm water discharges from Site-affected media and submit the appropriate monitoring requirements list for the upcoming field season to NMED and EPA for review.

Changes to monitoring locations or POCs shall be documented in the annual SIP update. EPA may require the Permittees to submit additional information to justify proposed changes or document Ss~~s~~ite knowledge regarding a Site in the SIP. If sampler moves are required by the SIP, samplers shall be moved to more representative locations at the initiation of the storm water sampling season or as soon as practicable to facilitate sample collection.

The SIP shall include the following:

a. **Monitoring location list** – For each SMA, if the sampler location changed or a new location was added ~~as an investigative sample location~~ from the previous year, report any updated latitude and longitude and indicate the reason for the change in the appropriate SIP section. The representative sampling location review conducted in 2016–2018 resulted in new sample locations for several SMAs constitutes an initial review that shall be provided in the first SIP update following the issuance of this Permit. Monitoring locations shall be reviewed annually to ensure representative samples will continue to be collected.

When a Site and the associated controls are designated as a LTS location, monitoring is no longer required. The Permittees shall update the list of these Sites annually in the SIP. The Permittees shall meet the inspection requirements per Part I.B.2 and must track the status of inspections and maintenance completed.

(b) **Monitoring requirements list –** For each SMA, the Permittees must annually complete an SSD screening if~~?~~ n~~N~~ew confirmation samples or soil data are received during the previous year as required by Part I.C.2~~1~~.

If the SIP requires the addition of one or more POCs for monitoring and the Site has previously entered corrective action, the Permittees are required to complete all applicable requirements of Part I.B.1 and initiate confirmation monitoring for all added POCs.

If a POC that has been added for monitoring does not have a TAL or BTV listed in this Permit, the Permittees shall collect two samples. If there is an associated water quality standard for that water POC that is Site-related, the monitoring result shall be compared to that standard. ~~Permittees will~~

~~evaluate current and necessary best management practices to address any exceedance. The Permittees shall document analytical results and any voluntary actions taken in the SIP.~~

The results of the SIP updates must be presented in the annual update to the SDPPP as required by Part I.E~~F~~.1. Additionally, the SIP updates must be published on the IP Public website per Part I.~~7~~I.3(a).

3. Annual Compliance Status Reports (CSR)

The Permittees shall submit Annual Compliance Status Reporting (CSR) information. The reporting period is from January 1 to December 31. The reporting requirements shall be integrated into the SDPPP, due by May 1 of the following year, and shall include the following:

(a) For each SMA (or Site), a summary of the Site-specific compliance status during the report period;

(b) Monitoring information which shows the results available during the reporting period and that include the following information required in (i) through (iii) below;

(i) SMA and associated outfall and Site(s) numbers/identifications;

(ii) Monitoring results available during the reporting period;

(iii) Identification of POCs that exceed the applicable TAL or BTV;

(c) Description of control measures installed during the reporting period, including the certification of completion date;

(d) Description of corrective actions required under Part D~~E~~ of this Permit to be taken, or having been taken, including completion date or targeted completion date, and progress update;

(e) Description of sampler maintenance and identification of all missed sample opportunities during storm rain events and the cause of missed opportunity (i.e., sampling equipment malfunctioning, repairs, construction activities) with an explanation of circumstances;

(f) Highlights of any change of compliance status from the previous Annual Compliance Status Report;

(g) Lists of requests, including any requests for change of monitoring location or Site deletion and any requests to place a Site or Sites into Part I.D.2, Alternative Compliance; and

(h) A summary of inspections performed in accordance with Part I.B.2.

EPA may require the Permittees to submit additional information. This CSR information shall be signed, certified, and dated in accordance with 40 CFR 122.22(b). Only one signature is required to cover all CSR forms.

Part II. OTHER CONDITIONS

1. Watershed Protection Approach

EPA encourages the Permittees to voluntarily install watershed-based control measures, such as sediment barriers, to mitigate sediment or storm water runoff reaching the main channels of the canyons and/or the Rio Grande. The Permittees should include information and monitoring data regarding the installation of any such watershed-based control measures in the SDPPP. ~~If the Permittees submit to EPA a Watershed Protection Plan which can demonstrate significant reduction of nonpoint-source and point-source water POCs from being discharged into major canyons and therefore will result in improvement of receiving water quality,~~ EPA may consider ~~such~~ a Watershed Protection Plan as Alternative Compliance for ~~associated~~ Sites upstream of a watershed control. ~~within the scope of the Plan.~~ Storm water results from samples collected downstream of the control will be treated as compliance samples and screened per the Site-Specific Demonstration (Part I.C.2).

2. Record~~k K~~eeping

The Permittees shall retain records of all monitoring information and reports, Corrective action evaluations and certifications, Site inspections and reports, decision-making procedures and supporting documents and records, and annual SDPPP updates with supplemental information for at least three (3) years after the issuance of the next permit renewal.

3. Public Involvement

(a) **Individual Permit Public Website**: The Permittees shall maintain a public website where information on the Permit, including the SDPPP, Annual SIP, Annual Compliance Status Reports, Corrective action reports, transmittal correspondence including Alternative Compliance requests between Permittees and EPA, and other relevant data and documents, shall be made available. A copy (either paper or electronic) of these documents shall also be made available by the Permittees as soon as practicable to any member of the public who makes such a request in writing. Confidential Business Information (CBI) may not be withheld from regulatory agencies but may be withheld from the public. All portions of the SDPPP not identified as CBI, pursuant to 40 CFR Part 2, must be provided to the public upon request.

(b) **E-mail notification**: The Permittees shall provide the opportunity for members of the public to register for and receive e-mail notifications on compliance with the Permit on the public website. E-mail notifications shall provide notice of completion of installation of control measures, updates on Permit compliance, any requests for time extensions, spill information, and notification of any modification to the Permit, SIP, or SDPPP including changing SMA locations, removing, deleting, or adding Sites, and completion of corrective actions. Such notifications shall have a direct link to the specific document to which it relates. Notice shall also be provided for any request to complete correction action under Alternative Compliance, Part I.~~E.3~~ D.2 of this Permit.

(c) **Public Meetings**: The Permittees shall publish a public notice and send an e-mail notification to members of the public who have registered as provided in Part I~~.I.7(b)~~I.3(b) about public meetings that shall be held ~~approximately every six (6) months~~annually. The Permittees shall update the public on implementation of and compliance with the Permit and provide an opportunity for both written and oral public comment. The meetings may be combined with other public meetings, but the Permittees shall provide a discrete, separate time for comment and discussion of this Permit. The Permittees shall e-mail a draft agenda at least one (1) week before the meeting, publish the draft agenda on the Permittees' Individual Permit public website, and consider suggestions from the public for changes or additions to the

agenda. The Permittees shall publish the final agenda on the Permittees' Individual Permit public website no later than three (3) days before the meeting.

4. State Water Quality Standards

The Permittees must control discharges from all Sites (individually or collectively) 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.

5 Permit Reopener

The Permit may be reopened and modified during the life of the Permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new state water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission. The Permit also may be reopened and modified if new information, e.g., EPA approved TMDLs, etc., is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. EPA may choose not to reopen the Permit if changes of monitoring requirements could be incorporated into SIP or SDPPP.

Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

NPDES Permit No. NM0030759

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Los Alamos National Laboratory (LANL), managed and owned by Permittees

Newport News Nuclear BWXT-Los Alamos, LLC
1200 Trinity Dr, Suite 150
Los Alamos, New Mexico 87544

and

U.S. Department of Energy
Office of Environmental Management
Los Alamos Field Office
P.O. Box 1663
Los Alamos, New Mexico
87545-1663

is authorized to discharge storm water associated with industrial activities from specified solid waste management units (SWMUs) and areas of concern (AOCs) (as identified in Appendix A and referred to herein as "Sites") from the facility located at Los Alamos, New Mexico, to receiving waters named:

Tributaries or main channels of Mortandad Canyon, Canada del Buey, Los Alamos Canyon, DP Canyon, Sandia Canyon, Ten Site Canyon, Canyon de Valle, Water Canyon, Ancho Canyon, Bayo Canyon, Chaquehui Canyon, Fence Canyon, Pajarito Canyon, Twomile Canyon, Threemile Canyon, Potrillo Canyon, Pueblo Canyon, and Rendija Canyon, in Water Body Segment No. 20.6.4.98, 20.6.4.114, 20.6.4.126 or 20.6.4.128 of the Rio Grande Basin,

in accordance with this cover page and monitoring requirements, and other conditions set forth in the Requirements for NPDES Permits and Appendices, hereof.

This permit, prepared by Isaac Chen, Environmental Engineer, Permitting Section (6WDPE), supersedes and replaces the administratively continued NPDES Permit No. NM0030759 issued February 13, 2009, then modified September 30, 2010, with an expiration date of March 31, 2014.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

_____
Charles W. Maguire
Director
Water Division

LANL NPDES Storm Water Individual Permit (NM0030759)

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PART I. REQUIREMENTS FOR NPDES PERMITS

1. Purpose

This Permit contains non-numeric technology-based effluent limitations, coupled with a comprehensive, coordinated monitoring program and corrective action where necessary, to minimize pollutants of concern (POC), in Permittees' storm water discharges. As used in this Permit, "minimize" means to reduce and/or eliminate discharges of POCs 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.

The Permittees are required to implement Site-specific control measures (including best management practices) to address the non-numeric technology-based effluent limits contained in this Permit, followed by confirmation monitoring screened against New Mexico water-quality criteria-equivalent target action levels (TALs) to determine the effectiveness of the Site-specific measures. Any TAL exceedances will be evaluated potentially taking into account background threshold values (BTVs) (see Part I.C.2) for those POCs that may be released by natural (undeveloped) or urban (developed) environments and may not be Site-related. The Permittees must also develop, maintain, and update a Site Discharge Pollution Prevention Plan (SDPPP) and Sampling Implementation Plan (SIP) consistent with Part I, subparts E.1 and E.2of this Permit. Collectively, these plans describe the control measures used to meet the requirements of this Permit.

2. Coverage

This Permit authorizes only those storm water discharges associated with industrial activity from inactive solid waste management units (SWMUs) and areas of concern (AOCs) listed in Appendix A. The SWMUs and AOCs identified in Appendix A are collectively referred to throughout this Permit as "Sites." This Permit does not authorize storm water discharges associated with current conventional industrial activities at LANL. Storm water discharges associated with current conventional industrial activities are covered under U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) general permit for storm water discharges from industrial activity, also known as the Multi-Sector General Permit (MSGP). Unless otherwise specified, references to "industrial activity" or "industrial storm water" under this Permit refer to the definition of "storm water discharge associated with industrial activity" at 40 C.F.R. § 122.26(b)(14).

3. Permit Compliance

Any noncompliance with any of the requirements of this Permit, except for exceptions provided in the permit, constitutes a violation of the CWA. Failure to take any required corrective actions constitute an independent violation of this Permit and the CWA. Where corrective action is triggered by an event that does not itself constitute Permit noncompliance, such as an exceedance of applicable composite BTVs and/or TALs (per Part I.C.2), there is no violation of the Permit, provided the Permittees take the required corrective action within the relevant deadlines.

PART I.A. NON NUMERIC TECHNOLOGY BASED EFFLUENT LIMITATIONS

For all Sites identified in Appendix A of this Permit, the Permittees shall install and/or maintain structural and nonstructural control measures as necessary to meet the non-numeric technology-based effluent limits to minimize Site-related POCs in storm water discharges. Nothing in this Permit relieves the Permittees of the obligation to implement additional control measures required by other Federal authorities or by a State or local authority. Structural control measures, the installation of which involve the discharge of dredge or

placement of fill material into any receiving waters (e.g., wetlands), may require a separate permit under section 404 of the Clean Water Act (CWA) before installation.

1. Structural Control Measures

a. Basic structural control measures include:

(i) Erosion and Sedimentation Controls. The Permittees must minimize discharges of POCs caused by onsite erosion and sedimentation. The Permittees must implement structural, vegetative, and/or stabilization control measures as necessary to achieve this requirement.

(ii) Management of Run-on and Runoff. The Permittees must, to the extent practicable, divert, infiltrate, reuse, contain, detain, or otherwise reduce storm water run-on/runoff to minimize Site-related POCs from discharging to receiving waters.

(iii) Other Controls. The Permittees must do the following where applicable:

(a) Implement controls to prevent the discharge of waste, garbage, or floatable debris to receiving waters, except as authorized by a permit issued under section 404 of the CWA;

(b) Minimize the generation of dust, along with vehicles tracking raw, final, or waste materials or sediments off-site;

(c) Minimize the introduction of raw, final, or waste materials to exposed areas;

(d) Minimize the effects of any increase in downstream erosion resulting from the construction and operation of structural controls; and

(e) Place flow velocity dissipation devices at discharge locations and along the length of any discharge channel if the flows would otherwise create erosive conditions.

b. The Permittees must maintain control measures in effective operating condition. Failure to do so is a violation of this Permit. These maintenance requirements under this Permit do not apply to:

(i) A Site has been removed from the Permit so storm water discharges associated with industrial activity under 40 CFR 122.26(b)(14) are no longer authorized, or

(ii) A control measure that has been replaced by another control measure, or

(iii) A control measure that has been retired because it is no longer necessary to perform the functions of a control as defined by Part I.A.1(a)(i) or (ii).

c. The Permittees must keep documentation onsite that describes procedures and a plan for inspection and preventative maintenance of all control measures and specifies backup practices to be used should a runoff event occur while a control measure is off-line. Nonstructural control measures must also be diligently maintained (e.g., employee training described in Part I.A.2). Nothing in this Permit shall be construed to prevent the Permittees from taking action(s) to modify control measures as appropriate to address deficiencies.

d. If, during an inspection or other event, a control measure is identified as not operating effectively, the Permittees must repair or replace the control before the next anticipated storm

event if possible, or as soon as practicable, following that storm event. In the interim, the Permittees must have backup measures in place.

e. Requirements of inspection and maintenance of existing control measures described in this part, Part I.A, also apply to additional, enhanced, or advanced control measures.

f. Soil Disturbance Associated with the Installation of Control Measures

If the installation of control measures at a Site involves soil disturbance of Site-affected soils, the Permittees shall temporarily suspend sampling activities and take all necessary steps to minimize migration of sediments and runoff from disturbed Sites. Steps taken to minimize discharges of contaminated runoff during remediation activity shall be included in the SDPPP update. The Permittees shall conduct Site inspections once a week while installing control measures to ensure sediment and runoff control measures are maintained in good order. Corrective actions shall be taken as soon as practicable if deficiencies of sediment and runoff control measures are noticed either by inspectors or contractors. After completion of such mitigation measures, the Permittees shall reactivate the sampler and analyze the storm water sample in accordance with Part I.B.1.

Storm water discharges associated with construction activity disturbing one (1) acre or more are not covered under this permit. Storm water discharges associated with construction activity disturbing one acre or more must be covered under EPA's Construction General Permit (CGP) or through a separate individual NPDES permit.

2. Nonstructural Control Measures

a. Training. The Permittees must provide training at least once per year to employees who are responsible for implementing activities identified in the Permit and the SDPPP (e.g., inspectors, maintenance personnel), including members of the Site Discharge Pollution Prevention Team (referred to as Pollution Prevention Team in this Permit). Training must cover the specific components of the Permit, the scope of the SDPPP, and the control measures required under this Part. The Permittees shall maintain records of employee training with the SDPPP as detailed in Part I E.1.b below.

b. Unauthorized Discharges. The Permittees must eliminate non-storm water discharges (e.g., process wastewater, spills or leaks of toxic or hazardous materials, contaminated groundwater, or any contaminated non–storm water) not authorized by an NPDES permit. Minor non-storm water discharges such as uncontaminated fire hydrant/sprinkler test water, water line flushing (dechlorinated), fire-fighting, building washing (no cleaning agents), condensate, irrigation, etc. are allowed.

PART I.B. MONITORING REQUIREMENTS

The Permittees shall monitor POCs in storm water discharges from Sites at specified sampling points known as Site Monitoring Areas (SMAs). The Permittees shall perform confirmation monitoring as detailed below following installation of each certified control measure. The Permittees are also required to conduct regular inspections of all Sites as described under Part I.B.2 to ensure that all control measures are properly operating.

1. Confirmation Sampling

If, during the previous Permit, all analytical results(s) for a particular POC at a particular SMA listed in Appendix A were at or below the maximum target action level (MTAL) and/or the geomean of all analytical sampling result(s) was at or below the average target action level (ATAL), monitoring of that POC at the same SMA is not required, unless the sampling location was moved or POCs were added to the monitoring suite during the Sampling Implementation Plan (SIP) evaluation conducted in conjunction with NMED during 2016-2018.

If corrective action was initiated, but confirmation monitoring was not completed, during the previous Permit, the Permittees shall perform confirmation monitoring requirements based on the Annual Sampling Implementation Plan (SIP; Part I.E.2). Annual confirmation monitoring requirements shall be maintained in the SIP. If confirmation monitoring is required, the Permittees shall collect two confirmation samples. A Site will not be considered non-compliant if confirmation samples could not be collected.

Confirmation sampling is used to determine the effectiveness of baseline and enhanced control measure installations, and to inform the Permittees if additional corrective actions are necessary. There are several categories of confirmation monitoring required by this Permit;

(i) After baseline or enhanced control measures are installed, the Permittees shall collect two confirmation samples within two years. If the Permittees are unable to collect a second sample within two years, the results of the single sample may be considered to be representative of the discharge from that Site. For samples collected under the previous Permit where the Permittees have been unable to collect a second sample, upon issuance of the final Permit the Permittees may use the results from a single sample.

(ii) After construction of a cap or other engineered cover, one confirmation sample is required if the capped area is smaller than the SMA drainage area. Otherwise, no further confirmation sampling is required, unless required by Part I.B.1.d.

(iii) Following certification of completion of soil removal in accordance with Part I.D.1.b,ii, the Permittees shall perform storm water confirmation sampling. The Permittees shall collect two confirmation samples. If a TAL is not exceeded for two samples, then further monitoring is not required for the remainder of Permit and the Permittees may seek to delete the Site or Sites from the Permit pursuant to Part I.C.4. If the permittee is unable to collect a second sample within two years, the results of the single sample may be considered to be representative of the discharge from that Site.

(iv) After installation of control measures that retain a volume of storm water runoff from a Site or SMA that is equivalent to a 3-year, 24-hour storm event or greater, the Permittees will be in compliance with this Permit at that Site or SMA once they have certified through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to retain the appropriate design volume of storm water. No further confirmation monitoring is required post-certification, unless required by Part I.B.1.d.

a. Sampling Locations

All samples collected for purposes of confirmation monitoring shall be collected in accordance with the monitoring requirements specified below at the SMAs identified in Appendix A of this Permit. SMA locations are based on reasonable Site accessibility for sampling purposes and samples taken will be representative of discharges of storm water from Site-affected media (soil, sediment, or bedrock) as determined by the SIP. The drainage area of each SMA shall be representative of the Site or Sites within the SMA.

(i) Sampler location adjustments. 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, or adjustments due to logistical or security issues. Any such movement of a sampler shall be documented in the annual SIP and SDPPP.

(ii) Sampler additions: In case potential discharges from a Site within an SMA do not flow through the current monitoring location identified in the Annual SIP, the Permittees shall add additional sampling locations during the Permit term in order to collect confirmation samples. Each additional sampling location and the corresponding sampling results are subject to the sampling, reporting, inspection, and corrective action requirements of this Permit.

b. Sampling Procedures

Any sampling performed for purposes of confirmation monitoring at a particular SMA must be performed after installation of applicable control measures and following a storm event that results in an actual discharge from the Site or Sites and that produces sufficient volume to perform the required analyses (referred to herein as a “measurable storm event”). For each sampling event, the Permittees must identify the date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff, and the duration between the storm event sample collection and the end of the previous measurable storm event. The Permittees may take meteorological information from the nearest meteorological tower or rain gage. Snowmelt samples shall not be used for purposes of confirmation monitoring.

Grab samples shall be taken within the first thirty (30) minutes of (or as soon after as practical but beginning no later than one (1) hour after) a measurable storm event.

Unless otherwise specified in this permit, the term "composite sample" means samples collected either by an automatic sampler or by manual, during the whole or part of a rainfall period, are composited prior to an analysis. The Permittees may use either grab samples or composite samples for monitoring purpose if it keeps practice consistency.

c. Collection of Partial Samples

In the event the volume of any storm water sample collected is insufficient to perform all required analyses listed in the SIP, the partial sample shall be analyzed in accordance with a

priority list of Site-specific POCs determined based upon a review of Site history, soil data, and other acceptable knowledge. The priority list for each Site is documented in the SIP.

In the event a partial sample is collected, the Permittees shall reactivate the sampler as soon as practicable to attempt to complete the full Site-specific POC suite listed in the SIP.

d. Additional Sampling Requirements

(i) If soil disturbance within the Site-affected media occurs, storm water samples collected by the Permittees following these activities shall be analyzed for all POCs listed in the SIP for that SMA. Installation of controls and routine maintenance of monitoring devices are not subject to the requirements of this Part.

(ii) Notwithstanding the provisions of Parts I.B.1 and I.C.2and except as provided in Part I.A.1.f, if a Site for which monitoring has ceased later exhibits evidence of a discharge of contaminated runoff or conditions that could lead to a discharge of contaminated runoff, such as control measure failure, erosion problems, or re-exposure of "no exposure" Sites, the Permittees shall initiate appropriate actions to correct the problems within ninety (90) days of being made aware of such information and shall report the problem and the corrective actions taken to EPA, with a copy to the New Mexico Environment Department (NMED).

e. Sufficiently Sensitive Method (SSM)

The Permittees shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. The permittees shall use EPA-approved methods which are sufficiently sensitive, as defined under 40 CFR 122.44(i)(1)(iv)(A), to the TALs, except for parameters for which a specific test method has been required under this permit.

f. Data Averaging

The average refers to the geometric mean of applicable monitoring results at the SMA. If all analytical results are below analytical method detect level (MDL), a value of "zero" may be reported. If one or more data are above MDL, a value of ½ detect level shall be assigned to those below detect level data for calculation purpose. If the average value of a specific pollutant is below its MDL, a value of "zero" may be reported for the average.

If a new or an enhanced BMP is installed, the average shall be calculated based on analytical results from samples taken after installation of the BMP.

2. Inspections

The Permittees must conduct the following types of regular inspections. The Permittees may conduct a combined inspection for a Site, if appropriate.

a. Significant Event Inspections

The Permittees must inspect and re-evaluate all Sites after notice of a significant event, such as a fire or flood, which could significantly impact the control measures and environmental conditions in the affected area. Such inspection and reevaluation should be conducted, and any repairs or adjustments completed, before the next anticipated storm event or as early as practicable.

b. Post-Storm Inspection

The Permittees must inspect control measures at any Site affected by a "storm rain event" defined below, within fifteen (15) days after such storm rain event. The occurrence of a "storm rain event" as defined below shall be determined based on data from the nearest meteorological tower to any particular Site. A "storm rain event" under this paragraph means a 0.50 inches or more intensive rain event within 30 -minutes.

If several storms exceeding the above intensity threshold occur over a period not to exceed fifteen (15) days from the first event, a single inspection following these storms is sufficient for compliance with this requirement, provided that the inspection occurs no more than fifteen (15) days from the date of the first storm. If adverse weather conditions prevent a Site inspection within the required time period, the Permittees shall inspect the Site as soon as practicable. Adverse weather events shall be documented, and this information shall be maintained with the SDPPP. Adverse weather conditions include dangerous weather-related events (e.g., flooding, wildfires, hail, or lightning) that make Site inspection dangerous for worker safety.

c. Long-Term Stewardship Inspections

When a Site and its associated controls are designated as a LTS location under Part I.C.3, Permittees shall inspect and evaluate each Site and its associated controls annually (a) for a 5-year period (a Permit cycle) and (b) after a 3-year, 24-hour return period storm. The reporting of inspection results shall meet all requirements set forth in Part II.2. An assessment shall be conducted around the end of each Permit cycle to determine if the storm water runoff or erosion potential at each Site is in a stable condition and if adjustments should be made to the control measure inspection frequency set forth in this Part. A determination of future inspection frequency or termination of LTS shall be included with subsequent re-application submittals. Sites in LTS will be tracked by Site, not to the individual control, and the inspection dates, maintenance dates, maintenance activities, and LTS listing date will be tracked for each Site.

d. Inspection Reports

All regular inspection reports shall include, at a minimum, the following items:

(i) The personnel who conduct the inspections;

(ii) Date(s) on which inspection was performed;

(iii) A written summary of major observations, including observation of deficiency;

(vi) A summary of evidence of potential contaminants, failure of a best management practice, or alteration of management structure or runoff pathway, etc;

(v) Actions that should be taken to correct noted deficiencies;

(vi) Photo documentation of findings at the Site, if necessary; and

(vii) The signature of the delegated official of the Permittees and certification of findings, including observation of no deficiency.

These inspection Reports will be submitted in accordance with Part I.E.3, Annual Compliance Status Report, and retained in accordance with Part II.2, Recordkeeping.

PART I.C. SITE EVALUATIONS

Site evaluations shall be performed as described in this section.

1. Target Action Levels (TALs)

Target Action Levels (TALs) are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. 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. Target Action Levels and Background Threshold Values are listed in Appendix B and Appendix C to this permit, respectively.

2. Site-Specific Demonstration (SSD)

The Permittees may use the Site History with either the run-on and runoff evaluation or the Site-specific information to perform a Site-specific demonstration (SSD) showing that the Site or Sites are not reasonably expected to be the source for one or more of the remaining POCs that have exceeded applicable BTVs and/or TALs. For Sites where data has been collected under the 2010 Permit, or requests have been submitted to EPA (e.g., Alternative Compliance or Force Majeure) that are pending, this demonstration must be conducted within 1 year of the effective date of this Permit. For Sites with a completed SSD, the tier results of the confirmation monitoring and soil data comparisons shall be used to determine annual sampling requirements. The results shall be provided in the initial SIP pursuant to Part I.E.2 and annually thereafter.

a. Run-on and runoff evaluation

This approach may be used at Sites where run-on control cannot be reasonably or economically installed. This demonstration shall include the collection of storm water run-on data for all POCs that exceeded the TALs, from a sampler located above the Site. In addition, the Permittees shall collect additional runoff data below a Site or Sites. The runoff sampler may or may not be the SMA sampler location, but the runoff sampler location should be representative of runoff from Site-affected media for the Site(s) being evaluated by the SSD. An example where a runoff sampler is not the SMA sampler is where two or more Sites exist within an SMA and the Permittees monitor runoff from a single Site in the SMA.

If the following condition is met, the Permittees will have demonstrated that the Site or Sites are or are not reasonably expected to be the source for one or more of the remaining POCs and the Permittees will have also demonstrated that discharges from the Site or Sites do or do not cause the exceedance of TALs. Further confirmation sampling for those POCs are not required.

(1) V(run-off) – V(run-on) ≤ TAL; or

(2) $\frac{[V(\text{runoff})* \text{total catchment area}] – [V(\text{run-on \& precipitation})*\text{Non-Site area}]}{(\text{Site area})} \leq \text{TAL}$

Where, V = Geomean of sampling results

b. Site-specific information

If the Permittees collect a minimum of one confirmation sample that exceeds a TAL, the Permittees may use this data, along with other Site-specific information, to determine if the Site or Sites are reasonably expected to be the source of the POC that exceeds the applicable TAL(s). Sources of Site-specific information include, but are not limited to, Site history, validated surface soil data (i.e., collected in top 3 feet), BTVs, information on land use upstream of and within the SMA, and relevant scientific literature.

(i) Storm Water (SW): When Permittees use Site-specific information in the SSD, confirmation storm water monitoring results shall be compared to the TALs (Appendix B) and to the BTVs (Appendix C) using the composite BTV formula below. Permittees shall compare the confirmation sample results to the composite BTV.

composite BTV = [(% impervious SMA area * 90th percentile developed landscape BTV) + (% pervious SMA area * 95-95 UTL undeveloped landscape BTV)]/100%

where the % impervious SMA area is the % impervious, or developed area of the SMA, and the % pervious SMA area is the % pervious, or undeveloped area of the SMA. The % impervious and pervious SMA areas and the resulting composite BTV for each Site shall be listed in an appendix of the annual SIP. The Permittees shall provide the results of the screening process in the annual SIP based on the comparison of confirmation sample results with composite BTVs and TALs. The results of the comparison shall be sorted into the following tiers:

SW Tier 1: When the confirmation sample result does not exceed the TAL, the Permittees can cease monitoring for that POC for the remainder of the Permit.

SW Tier 2: When the confirmation sample result of one or more POCs exceeds the TAL but is less than the 90th percentile composite BTV, the SMA shall be assigned to long-term stewardship (LTS) and meet the requirements of Part I.C.3. However, if the composite BTV and the confirmation sample result do not exceed the TAL, SW Tier 1 applies.

SW Tier 3: When the confirmation sample result of one or more POCs exceeds the TAL and 90th percentile composite BTV, the SMA shall enter into corrective action per Part I.D. However, if the composite BTV and the confirmation sample result do not exceed the TAL, SW Tier 1 applies.

(ii) Soil Data (SD): When Permittees use Site-specific information in the SSD, with validated surface soil data results (i.e., within 3 feet below ground surface) from Consent Order soil characterization efforts, the following comparison can be made: 95-95 upper tolerance limit (UTL) BTVs for inorganic POCs (LANL 1998,

"Inorganic and Radionuclide Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory"), and 2019 NMED soil screening levels (SSLs) for organic POCs and inorganic POCs with no BTV (NMED 2019 "Risk Assessment Guidance for Site Investigations and Remediation; Volume 1 Soil Screening Guidance for Human Health Risk Assessments"). The results of the comparison shall be sorted into the following tiers:

SD Tier 1: When the soil sample result does not exceed the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the Permittees can cease monitoring for that POC and it is not considered as a Site-related POC. If SW Tier 1 conditions are also met, Permittees may request the Site be deleted from the permit.

SD Tier 2: When the soil sample result of one or more POCs exceed(s) the 95-95 UTL BTV for inorganic POCs or 10% of the SSL for organic POCs and inorganic POCs with no BTV, the POC shall remain or be added to storm water monitoring requirements for that SMA if it is considered as a Site-related POC.

Note: The 95-95 upper tolerance limit (UTL) is designed to contain, but not exceed, a large fraction (95%) of the possible background concentrations within a sampled population, thus providing a reasonable upper limit on what is likely to be observed in background with a 95% degree of confidence.

c. Site History

If the Permittees believe a POC is not Site-related and monitoring for that POC should not be required under the SIP, the Permittees may provide documentation to EPA to demonstrate that the POC was not potentially managed or released at the Site during historic industrial activities; or evidence to demonstrate that supports that the Site is not exposed to storm water. Upon provision of documentation to EPA that a POC is not Site related the Permittees may cease monitoring for the POC. If EPA provides a response that the POC is not to be removed, then the Permittees will initiate monitoring at that time. Relevant documentation of Site-related knowledge shall be reported in the SIP.

3. Long-Term Stewardship (LTS) Category

The Long-Term Stewardship (LTS) Category includes Sites that do not meet the requirements for Site deletion under Part I.C.4 and also do not currently require additional corrective action. Documentation of LTS Site categorization will be incorporated in the SDPPP. The Permittees may place a Site or Sites in the LTS Category if it meets one or more of the following conditions:

(a) Storm water sample results are greater than TALs because of background contribution as specified in Part I.C.2(a)(i) SW Tier 2;

(b) Storm water sample results are greater than Adjusted Gross Alpha (AGA) ATAL before monitoring requirement of AGA was removed from the 2010 permit;

(c) Sites that have no evidence of storm water discharges (as required by Part I.B.2.b, Post Storm Rain Event Inspections) for the past five years; or

(d) A Site is deferred under the NMED Consent Order and Site investigations are delayed. When the Site is removed from the NMED Consent Order deferred list, active confirmation monitoring will resume at the Site per Part I.B.

4. Deletion of Site

The Permittees may submit a written request to remove a Site from coverage under the Permit if the Permittees can demonstrate that the Site no longer has "storm water discharges associated with industrial activity" under 40 CFR 122.26(b)(14) as follows:

(a) No industrial activities as specified under 40 CRF 122.26(b)(14) ever took place at the Site;

(b) Site-related POCs have never been exposed, or will no longer be exposed, to storm water. A request to EPA to remove a Site meeting the conditions of this Part shall include documentation that demonstrates historic activities that led the Site to be a SWMU or AOC did not result in significant materials exposed to storm water (e.g. Site-related POCs are a minimum of 3 feet below the ground surface, below existing building);

(c) Sites have no significant industrial materials remaining that are exposed to storm water after installation of permanent control measures. For all SMAs that contain the Site, two confirmation storm water samples were collected (or see Part I.B.1.i), no POCs exceeded the applicable TALs, and therefore, the Permittees 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);

(d) The Permittees certified corrective action complete under Part I.D.1(b) by removing soil that contained a release of Site-related POCs that were exposed to storm water and/or demonstrating that no significant materials from previous industrial activity remain in the Site. A request to EPA to remove a Site meeting the conditions of this Part shall include the certification of correction action complete under Part I.D.1(b) and storm water confirmation sampling results, if applicable;

(e) Storm water discharges associated with industrial activity no longer occur at the Site when the SSD shows that the data screening for all POCs resulted in a SW Tier 1 and SD Tier 1 result per Part I.C.2(b); or

(f) If, for Long-Term Stewardship Sites, no evidence of discharge is apparent at a Site after a 25-year, 24-hour storm event or, if the Site is being monitored, the following conditions are met::

(i) Active samplers are in representative locations;
(ii) No confirmation sample has been collected after a 25-year, 24-hour return period storm; and
(iii) Inspection records validate full operability of sampler.

EPA may approve a Site deletion request as a minor modification to the Permit under 40 CFR 122.63(e)(2). If such a request 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.

PART I.D. CORRECTIVE ACTION

1. Determination of Corrective Action Measures

Once a composite BTV and/or TAL (per Part I.C.2) has been exceeded for a Site-related POC, the Permittees shall determine the appropriate corrective action. The options for implementation of corrective action may include installation of enhanced control measures, elimination of exposure to POCs, or retention of a 3-year, 24-hour storm event as described below.

a. Installation of Enhanced Control Measures

Enhanced (i.e., additional, expanded or better-tailored) control measures may be used to complete corrective action. Where feasible, these enhanced controls shall incorporate low-impact design and green infrastructure design features (e.g., plunge pools, compost-filled wattles, and bio-retention basins).

The enhanced control process may include more than one iteration of control measure installation followed by confirmation monitoring, pursuant to Parts I.B and I.C.2, after each control measure installation.

Permittees shall certify completion of installation of control measures under this subpart to EPA, with a copy to NMED, within 30 days of completion of all such measures at the Site. Such certification shall be signed in accordance with 40 CFR 122.22(b) and shall include a description and photographs of all completed measures and the results of the corrective action measures evaluation performed in Part I.D.1. Except as provided in Part I.C.4, the Permittees are required to continue to inspect the Site in accordance with Part I.B.2 and to maintain all control measures in effective operating condition as required by Part I.A.

b. Elimination of Exposure of Site-Related POCs to Storm Water

To complete corrective action at a Site or Sites within an individual SMA, the Permittees may pursue elimination of exposure of Site-related POCs to storm water. Elimination of exposure of Site-related POCs to storm water may be achieved in one of two ways:

(i) Constructing a cap or other engineered cover. the Permittees shall demonstrate that a cap or other engineered cover has been constructed to address contamination at a SWMU that has adequate soil data to identify the entire area of contamination. The Permittees shall be in compliance with this Permit once they have certified and demonstrated to EPA, through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to eliminate exposure of Site-related POCs to storm water as plan. One confirmation sample is required if capped area is smaller than the SMA drainage area. Otherwise, no further confirmation sampling is required, unless required by Part I.B.1(d).

(ii) Soil removal. The Permittees shall demonstrate and certify to EPA, with a copy to NMED, that soil removal meets the requirements of this Part through collection and evaluation of soil sampling results. Following certification of completion of soil removal, the Permittees shall perform storm water confirmation sampling.

If the Permittees certify that 3 feet or more depth of soils are removed and replaced with clean soils and EPA determines new soil data has demonstrated that no significant amount of industrial materials remain on the Site, the Permittees will have

demonstrated completion of corrective action. The Permittees may submit soil data for new fill soil, or soil data from upstream background soil to demonstrate no significant materials from past industrial activities would remain exposed to storm water. EPA may require soil testing for some radius outside the remediated area to ensure "no significant industrial materials remain" in the soil on the water pathway

The Permittees shall certify elimination of exposure under this Part to EPA, with a copy to NMED, within 30-days of completion of all such measures at the Site. Such certification shall be signed in accordance with 40 CFR 122.22(b) and shall include a description and photographs of all completed measures and the results of the corrective action measures evaluation performed in Part I.D.1. Except as provided in Part. I.C.4, the Permittees are required to continue to inspect the Site in accordance with Part I.B.2 and to maintain all control measures in effective operating condition as required by Part I.A.

c. Retention of a 3-Year, 24-Hour Storm

The Permittees may achieve completion of corrective action under this Part through installation of control measures that retain a volume of storm water runoff from a Site or SMA that is equivalent to a 3-year, 24-hour storm event based on the most representative rain gage historic records from the nearest meteorological tower or rain gage. The Permittees shall be in compliance with this Permit at that Site or SMA once they have certified and demonstrated to EPA, with a copy to NMED, through the submission of certified as-built drawings, that such measures have been properly installed to perform their function to retain the appropriate design volume of storm water. No further confirmation sampling is required post-certification, unless required by Part I.B.1(d).

Identification of the rain gage applicable to each Site shall be maintained within the SDPPP. The Permittees shall provide, in the SDPPP, information (e.g., sediment removal, sediment depth, water level, estimated capacity remaining, evidence of discharges, or others) to demonstrate the retention facility maintains capacity to store runoff volume from a 3-year, 24-hour storm event.

The Permittees may install run-on control measures to reduce run-on and sediment (i.e., low impact development, green infrastructure, sediment detention basin or berm, etc.), and such installations shall minimize discharges to the equivalent of a 3-year, 24-hour storm event.

In an event of discharge, the Permittees shall report such a discharge in the annual SDPPP and demonstrate that such a discharge is caused by a storm event that is greater than a 3-year, 24-hour storm event. The Permittees are required to continue to inspect the Site in accordance with Part I.B.2 (as applicable) and to maintain all control measures in effective operating condition as required by Part I.A. The Site shall be re-evaluated with the SIP process to determine if monitoring is required in the future.

2. Alternative Compliance

Where the Permittees believe, based upon a technical evaluation of existing control measures, that they will be unable to certify corrective actions under Part I.D.1(a) through (c) above (individually or collectively) due, for instance, to Site conditions that make it impracticable to install further control measures, or POCs that exceed composite BTVs and/or TALs (per Part I.C.2) are contributed by sources beyond the Permittees control, the Permittees may seek to place a Site into Alternative Compliance, whereby completion of

corrective action shall be accomplished on a case-by-case basis, and as necessary, pursuant to an individually tailored control measure by EPA.

To seek to place a Site or Sites into Alternative Compliance, the Permittees must file a written request with EPA and provide written notice to the public and opportunity for public comment. Such a request must include the following:

(a) A comprehensive description of the control measures installed at the Site or Sites.

(b) A list of additional on-the-ground actions or a watershed protection approach (see Part II.1) which have resulted in a reduction in the potential for Site-related POC discharges to reach downstream canyons.

(c) 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 Parts I.D.5 (a) through (c) (individually or collectively). And,

(d) A list of economically achievable BMPs with Site-tailored workplan and schedules which may further reduce discharges or exposure of POCs to the environment, if applicable.

Upon submitting such a request to EPA, the Permittees shall make the request and all supporting information available to NMED and the public for review and comment for a period of forty-five (45) days and shall develop and provide to the commenters a written response document addressing all relevant and significant concerns raised during the comment period. The Permittees' request under this Part, along with the complete record of public comment and the Permittees' response to comments, shall be submitted to EPA Region 6 for a final determination on the request. The Permittees' response to comments may include a revision to the Alternative Compliance request and/or the proposed individually tailored work plan.

The Permittees shall not be out of compliance with the applicable requirements for achieving completion of corrective action with respect to the Site or Sites covered by a request. The Permittees shall continue to conduct inspections and maintenance of existing control measures on those Sites.

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, in writing.

If EPA approves the request, EPA may set Site-specific requirements for inspection, maintenance, and/or monitoring.

(Note: Alternative Compliance requests submitted under the previous permit conditions may be resubmitted with all supporting documents, if applicable under this permit, without reopening a new public notice.)

3. Schedules for Corrective Actions

If corrective action is required at the Site, pursuant to Part I.C, the Permittees shall take proper corrective actions and complete installation of additional control measures as soon as practicable, or within 24 months from the date when the Permittees have knowledge of composite BTV and/or TAL exceedance (per Part I.C.2). For Sites which require corrective actions prior to the effective date of the final permit, installation of additional control measures shall be completed no later than 24 months from the effective date of the final permit.

4. Force Majeure

The Permittees may seek EPA approval for an extension if the Permittees can demonstrate that "force majeure" has resulted, or will result, in a delay in meeting the obligation to confirm completion of corrective action by the specified deadline. An event that constitutes "force majeure," includes, but is not limited to (a) Acts of God, natural disasters such as fire or flood, war, terrorism, insurrection, civil disturbance, or explosion; (b) a federal government shut down, such as the ones that occurred in 1996 and 2018; (c) unanticipated breakage or accident to machinery, equipment or lines of pipe; (d) restraint by court order; (e) inability to obtain the necessary authorizations, approvals, permits or licenses due to an action or inaction caused by another governmental authority; (f) unanticipated delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures; and (g) inability to secure the reasonable cooperation of any other property owner in addressing storm water run-on to a Site or Sites from such property.

To obtain an extension from EPA, the Permittees shall describe in detail (a) the cause or causes of the delay; (b) the expected duration of the delay, including any obligations that would be affected; (c) the actions taken or to be taken by the Permittees to minimize the delay; and (d) the timetable by which those actions are expected to be implemented. If EPA does not act within 60-days upon receipt of "force majeure" request, the request is deemed "granted." EPA may notify the Permittees whether an extension is reasonably justified and provide a new reasonable deadline that takes into account the actual delay resulting from the event, anticipated seasonal construction conditions, and any other relevant factors. If EPA does not agree to the extension, it will notify the Permittees in writing and provide the basis for its conclusion.

5. Completion of Corrective Action Certification

The Permittees must certify to EPA with a copy to NMED, pursuant to 40 CFR 122.22(b), upon completion of corrective actions. Under this Permit, completion of corrective action shall occur when:

(a) The installation of enhanced control measures under Part I.D.1(a) with confirmation monitoring analytical results that do not exceed the applicable composite BTVs and/or TALs (per Part I.C.2) as demonstrated under Part I.B.1; or

(b) The installation of control measures or the removal of soil that eliminate exposure of Site-related POCs to storm water under Part I.D.1(b), with confirmation monitoring analytical results that do not exceed the applicable composite BTVs and/or TALs (per Part I.C.2) as demonstrated under Part I.B, if confirmation monitoring is required; or

(c) The installation of control measures that retains a volume of storm water runoff or minimize discharges from a Site or SMA that is equivalent to a 3-year, 24-hour storm event under Part I.D.1(c).

PART I.E. PLANS AND REPORTS

1. Site Discharge Pollution Prevention Plan (SDPPP)

The Permittees shall update the facility's SDPPP annually, submit it to EPA and copy NMED by May 1 of each calendar year of the Permit and post the SDPPP on the Permittees' Individual Permit public website within 30-days after the submittal. The reporting period is from January 1 to December 31.The annual

update shall fully incorporate all changes made during the previous year and reflect any changes projected for the following year. The facility's SDPPP must remain compliant with relevant State, Tribal, and local regulations, if applicable.

a. Contents of SDPPP

The facility's SDPPP must describe all control measures installed to meet the requirements of this Permit. In addition, the facility's SDPPP must contain all the elements described below. The SDPPP must also address the inspection requirements set forth in Part I.B.2 of this permit.

(1) **Site Discharge Pollution Prevention Team.** The Permittees must identify the staff members (by name or title) that comprise the facility's Site Discharge Pollution Prevention Team (Pollution Prevention Team). The Permittees' Pollution Prevention Team is responsible for assisting the facility manager in developing and revising the facility's SDPPP as well as maintaining control measures and taking corrective actions for deficiencies. Specific responsibilities of each staff individual on the Team must be identified and listed in the SDPPP. Each member of the Pollution Prevention Team must have ready access to either an electronic or paper copy of applicable portions of this Permit and the facility's SDPPP.

(2) **Site Description.** The facility's SDPPP must include a description of historical activities at each Site, precipitation information, general location map, and Site maps.

(3) **Receiving Waters and Wetlands.** The SDPPP must include the name(s) of all receiving waters that receive discharges from Sites covered by this permit. The SDPPP must also include the size and description of wetlands or other special aquatic sites.

(4) **Summary of Potential POC Sources.** The SDPPP must identify each Site at the facility where industrial materials or activities were previously exposed to storm water and from which allowable non–storm water discharges were released. The SDPPP must also identify the POCs associated with those activities.

(5) **Description of Control Measures.** The Permittees must update the SDPPP as needed to document all structural control measures installed at a Site as well as the dates installation was completed. The SDPPP must include sufficient detail to identify and describe the Site-specific control measures.

(6) **Schedules for Control Measure Installation.** The Permittees shall update the SDPPP as necessary to include schedules for additional control measure installation and implementation resulting from corrective action under Part I.D of this Permit.

(7) **Monitoring and Inspection Procedures.** The Permittees must document in the SDPPP schedules and planned procedures for sample collection and Site inspection. For each sample to be collected, the SDPPP must identify:

(a) Locations where samples are to be collected, including coordinates for sampling locations, and any determination that two or more Sites are substantially identical;

(b) Person(s) or positions of person(s) responsible for sample collection;

(c) Parameters to be sampled and frequency of sampling for each parameter;

(d) Procedures for gathering storm event data.

The Permittees must document in the SDPPP all tentative schedules and procedures for significant event and post-storm inspections as described in Parts I.B.2.a and I.B.2.b of this Permit.

(8) **SMA Maps.** The Permittees must include a map with the following information in their SDPPP regarding each SMA:

(a) Location of each Site within the SMA drainage area;

(b) Coordinates and locations of the SMA samplers (with updates as adjustments occur).

(c) Estimates of the size (in acres) of the SMA and of Site(s) within the SMA.

(d) Any adjustments/changes to sampler locations under Part I.B.1.a and the associated documentation for the sampler move.

(e) Coordinates and identification of any run-on sampler locations.

(9) **Annual Compliance Status Reports.** Annual Compliance Status Reports as specified in Part I.E.3 shall be integrated into the SDPPP.

(10) **Annual SIP.** The annual SIP, as specified in Part I.E.2 shall be integrated into the SDPPP.

(11) **Signature Requirements.** The SDPPP shall be signed, certified and dated in accordance with 40 CFR 122.22(b) prior to submittal of annual updates.

b. SDPPP Documentation

The Permittees are required to maintain inspection, monitoring, and certification documentation with the SDPPP that together keep the records complete and support ongoing SDPPP implementation activities. These records are maintained alongside the SDPPP document, thereby providing a consolidated record of documented storm water requirements and implementation procedures.

The Permittees must, at a minimum, keep the following records and documentation alongside the SDPPP:

(1) Dates of training sessions, names of employees trained, and subject matter of training under Part II.2.;

(2) Sampling reports including sampling dates, analytical results, outfall locations, name and qualifications of technician;

(3) Annual SIP: monitoring location lists, monitoring requirements lists including storm water and sediment sample screening results, adjustments to annual monitoring plan, and re-initiating monitoring requirements where applicable;

(4) Inspection reports and any other information required to be included in an Inspection Report under Part I.B.2(d).

(5) An accounting and an explanation of the length of time it takes to modify control measures or implement additional control measures following the discovery of a deficiency or the need for modification;

(6) Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, the date(s) that control measure(s) were returned to full function and the justification for any extended maintenance/repair schedules.

c. Required Modifications

The Permittees must keep documents and records with the SDPPP as necessary to reflect:

(1) Construction or a change in design, operation, or maintenance at the facility having a significant impact on the discharge, or potential for discharge, of POCs from the facility;

(2) Findings of deficiencies in control measures during inspection or based on analytical monitoring results;

(3) Any change of monitoring requirement or compliance status;

(4) Any change of SMA location in accordance with Part I.B.1.a; and

(5) Summary of changes from the last year's SDPPP.

If any of the circumstances described above occur at any Site, the Permittees must address these changes or deficiencies to ensure compliance with this Permit's conditions and applicable monitoring requirements. Changes must be incorporated into the SDPPP.

d. SDPPP Availability

The Permittees must retain a paper copy of the current SDPPP required by this Permit at the facility, and it must be immediately available to EPA, a State, Tribal or local agency approving storm water management plans, the Pollution Prevention Team members, and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an on-site inspection or upon request. A copy of the SDPPP shall also be made available on the Permittees' Individual Permit public website.

2. Annual Sampling Implementation Plan (SIP)

Within 1 year of the effective date of the Permit, the Permittees, shall evaluate the appropriate monitoring requirements and representative sampling locations for all Sites covered under this permit. Monitoring as determined per the initial SIP will be initiated in the first full monitoring season proceeding the initial SIP. Before May 1 of subsequent years, the Permittees shall review all new available information to determine if the current SMA storm water sampling location is representative of storm water discharges from Site-affected media and submit the appropriate monitoring requirements list for the upcoming field season to NMED and EPA for review.

Changes to monitoring locations or POCs shall be documented in the annual SIP update. EPA may require the Permittees to submit additional information to justify proposed changes or document Site knowledge regarding a Site in the SIP. If sampler moves are required by the SIP, samplers shall be moved to more representative locations at the initiation of the storm water sampling season or as soon as practicable to facilitate sample collection.

The SIP shall include the following:

a. **Monitoring location list** – For each SMA, if the sampler location changed or a new location was added from the previous year, report any updated latitude and longitude and indicate the reason for the change in the appropriate SIP section. The representative sampling location review conducted in 2016–2018 resulted in new sample locations for several SMAs constitutes an initial review that shall be provided in the first SIP update following the issuance of this Permit. Monitoring locations shall be reviewed annually to ensure representative samples will continue to be collected.

When a Site and the associated controls are designated as a LTS location, monitoring is no longer required. The Permittees shall update the list of these Sites annually in the SIP. The Permittees shall meet the inspection requirements per Part I.B.2 and must track the status of inspections and maintenance completed.

(b) **Monitoring requirements list –** For each SMA, the Permittees must annually complete an SSD screening if new confirmation samples or soil data are received during the previous year as required by Part I.C.2.

If the SIP requires the addition of one or more POCs for monitoring and the Site has previously entered corrective action, the Permittees are required to complete all applicable requirements of Part I.B.1 and initiate confirmation monitoring for all added POCs.

If a POC that has been added for monitoring does not have a TAL or BTV listed in this Permit, the Permittees shall collect two samples. If there is an associated water quality standard for that water POC that is Site-related, the monitoring result shall be compared to that standard.

The results of the SIP updates must be presented in the annual update to the SDPPP as required by Part I.E.1. Additionally, the SIP updates must be published on the IP Public website per Part II.3(a).

3. Annual Compliance Status Reports (CSR)

The Permittees shall submit Annual Compliance Status Reporting (CSR) information. The reporting period is from January 1 to December 31. The reporting requirements shall be integrated into the SDPPP, due by May 1 of the following year, and shall include the following:

(a) For each SMA (or Site), a summary of the Site-specific compliance status during the report period;

(b) Monitoring information which shows the results available during the reporting period and that include the following information required in (i) through (iii) below;

(i) SMA and associated outfall and Site(s) numbers/identifications;

(ii) Monitoring results available during the reporting period;

(iii) Identification of POCs that exceed the applicable TAL or BTV;

(c) Description of control measures installed during the reporting period, including the certification of completion date;

(d) Description of corrective actions required under Part D of this Permit to be taken, or having been taken, including completion date or targeted completion date, and progress update;

(e) Description of sampler maintenance and identification of all missed sample opportunities during storm rain events and the cause of missed opportunity (i.e., sampling equipment malfunctioning, repairs, construction activities) with an explanation of circumstances;

(f) Highlights of any change of compliance status from the previous Annual Compliance Status Report;

(g) Lists of requests, including any requests for change of monitoring location or Site deletion and any requests to place a Site or Sites into Part I.D.2, Alternative Compliance; and

(h) A summary of inspections performed in accordance with Part I.B.2.

EPA may require the Permittees to submit additional information. This CSR information shall be signed, certified, and dated in accordance with 40 CFR 122.22(b). Only one signature is required to cover all CSR forms.

Part II. OTHER CONDITIONS

1. Watershed Protection Approach

EPA encourages the Permittees to voluntarily install watershed-based control measures, such as sediment barriers, to mitigate sediment or storm water runoff reaching the main channels of the canyons and/or the Rio Grande. The Permittees should include information and monitoring data regarding the installation of any such watershed-based control measures in the SDPPP. EPA may consider a Watershed Protection Plan as Alternative Compliance for Sites upstream of a watershed control.-Storm water results from samples collected downstream of the control will be treated as compliance samples and screened per the Site-Specific Demonstration (Part I.C.2).

2. Recordkeeping

The Permittees shall retain records of all monitoring information and reports, Corrective action evaluations and certifications, Site inspections and reports, decision-making procedures and supporting documents and records, and annual SDPPP updates with supplemental information for at least three (3) years after the issuance of the next permit renewal.

3. Public Involvement

(a) **Individual Permit Public Website**: The Permittees shall maintain a public website where information on the Permit, including the SDPPP, Annual SIP, Annual Compliance Status Reports, Corrective action reports, transmittal correspondence including Alternative Compliance requests between Permittees and EPA, and other relevant data and documents, shall be made available. A copy (either paper or electronic) of these documents shall also be made available by the Permittees as soon as practicable to any member of the public who makes such a request in writing. Confidential Business Information (CBI) may not be withheld from regulatory agencies but may be withheld from the public. All portions of the SDPPP not identified as CBI, pursuant to 40 CFR Part 2, must be provided to the public upon request.

(b) **E-mail notification**: The Permittees shall provide the opportunity for members of the public to register for and receive e-mail notifications on compliance with the Permit on the public website. E-mail notifications shall provide notice of completion of installation of control measures, updates on Permit compliance, any requests for time extensions, spill information, and notification of any modification to the Permit, SIP, or SDPPP including changing SMA locations, removing, deleting, or adding Sites, and completion of corrective actions. Such notifications shall have a direct link to the specific document to which it relates. Notice shall also be provided for any request to complete correction action under Alternative Compliance, Part I.D.2 of this Permit.

(c) **Public Meetings**: The Permittees shall publish a public notice and send an e-mail notification to members of the public who have registered as provided in Part II.3(b) about public meetings that shall be held annually. The Permittees shall update the public on implementation of and compliance with the Permit and provide an opportunity for both written and oral public comment. The meetings may be combined with other public meetings, but the Permittees shall provide a discrete, separate time for comment and discussion of this Permit. The Permittees shall e-mail a draft agenda at least one (1) week before the meeting, publish the draft agenda on the Permittees' Individual Permit public website, and consider suggestions from the public for changes or additions to the agenda. The Permittees shall publish the final agenda on the Permittees' Individual Permit public website no later than three (3) days before the meeting.

4. State Water Quality Standards

The Permittees must control discharges from all Sites (individually or collectively) 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.

5 Permit Reopener

The Permit may be reopened and modified during the life of the Permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new state water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission. The Permit also may be reopened and modified if new information, e.g., EPA approved TMDLs, etc., is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. EPA may choose not to reopen the Permit if changes of monitoring requirements could be incorporated into SIP or SDPPP.

Attachment 2

Proposed Changes to the Draft Permit, Appendixes A through C

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Los Alamos/ Pueblo	Rendija Canyon	R002	R-SMA-1	C-00-04[a]	Rendija Canyon
		R003	R-SMA-1.95	00-015	Rendija Canyon
		R004	R-SMA-2.3	00-011(e)	Rendija Canyon
		~~R006~~	~~R-SMA-2.5~~	~~00-011(a)[b]~~	~~Rendija Canyon~~
	Bayo Canyon	B002	B-SMA-1	00-011(d)	Bayo Canyon
	Pueblo Canyon	P002	ACID-SMA-2	01-002(b)-00	Acid Canyon-tributary to Pueblo Canyon
				45-001	
				45-002	
				45-004	
		P003	ACID-SMA-2.01	01-002(b)-00	Acid Canyon-tributary to Pueblo Canyon
				00-030(f)	
		P004	P-SMA-0.3	00-018(b)	Pueblo Canyon
		P005	P-SMA-1	73-001(a)	Pueblo Canyon
				73-004(d)	
		P007	P-SMA-2.15	31-001	Pueblo Canyon
		P008	P-SMA-2.2	00-019	Pueblo Canyon
		P009	P-SMA-3.05	00-018(a)	Pueblo Canyon
	Los Alamos Canyon	L001	LA-SMA-0.85	03-055(c)	Los Alamos Canyon
		L002	LA-SMA-0.9	00-017	Los Alamos Canyon
				C-00-044	
		L003	LA-SMA-1	00-017	Los Alamos Canyon
				C-00-044	
		L004	LA-SMA-1.1	43-001(b2)	Los Alamos Canyon
		L005	LA-SMA-1.25	C-43-001	Los Alamos Canyon
		L006	LA-SMA-2.1	01-001(f)	Los Alamos Canyon
		L007	LA-SMA-2.3	01-001(b)	Los Alamos Canyon
	Los Alamos Canyon	L008	LA-SMA-3.1	01-001(e)	Los Alamos Canyon
				01-003(a)	
		L009	LA-SMA-3.9	01-001(g)	Los Alamos Canyon
				01-006(a)	
		L010	LA-SMA-4.1	01-003(b2)	Los Alamos Canyon
				01-006(b)	
		L011	LA-SMA-4.2	01-001(c)	Los Alamos Canyon
				01-006(c)	
				01-006(d)	
		L012	LA-SMA-5.01	01-001(d1)	Los Alamos Canyon
				01-001(d2)	
				01-001(d3)	
				01-006(h1)	
				01-006(h2)	
				01-006(h3)	

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Los Alamos/ Pueblo	Los Alamos Canyon	L012A	LA-SMA-5.02	01-003(e)	Los Alamos Canyon
		L013	LA-SMA-5.2	01-003(d)	Los Alamos Canyon
		L015	LA-SMA-5.31	41-002(c)	Los Alamos Canyon
		L016	LA-SMA-5.33	32-004	Los Alamos Canyon
		L014	LA-SMA-5.35	C-41-004	Los Alamos Canyon
		L017	LA-SMA-5.361	~~32-002(b1)~~	Los Alamos Canyon
				32-002(b2)	
		L017A	LA-SMA-5.362	32-003	Los Alamos Canyon
		L018	LA-SMA-5.51	02-003(a)	Los Alamos Canyon
				02-003(e)	
				02-004(a)	
				02-005	
				02-006(b)	
				02-006(c)	
				02-006(d)	
				02-006(e)	
				02-008(a)	
				02-009(b)	
				02-011(a)	
				~~02-011(b)~~[c]	
				~~02-011(c)~~	
				02-011(d)	
				02-014	
		L018A	LA-SMA-5.52	02-003(b)	Los Alamos Canyon
				02-007	
				02-008(c)	
		L018B	LA-SMA-5.53	02-009(a)	Los Alamos Canyon
		L018C	LA-SMA-5.54	02-009(c)	Los Alamos Canyon
		L019	LA-SMA-5.91	21-021	BV Canyon - Tributary to Los Alamos Canyon
		L019A	LA-SMA-5.92	21-021	BV Canyon - Tributary to Los Alamos Canyon
				21-013(b)	
				21-013(g)	
				21-018(a)	
		L020	LA-SMA-6.25	21-021	Los Alamos Canyon
				21-024(d)	
				21-027(c)	
		~~L022~~	~~LA-SMA-6.3~~	~~21-006(b)~~	~~Los Alamos Canyon~~
		L022A	LA-SMA-6.31	21-027(a)	Los Alamos Canyon
		L023	LA-SMA-6.32	21-021	Los Alamos Canyon
		L024	LA-SMA-6.34	21-021	Los Alamos Canyon
				21-022(h)	
		L026	LA-SMA-6.38	21-021	Los Alamos Canyon

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SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Los Alamos/ Pueblo	Los Alamos Canyon			21-024(c)	
		L027	LA-SMA-6.395	21-021	Los Alamos Canyon
				21-024(j)	
		L028	LA-SMA-6.5	21-021	Los Alamos Canyon
				21-024(i)	
		L029	LA-SMA-9	26-001	Los Alamos Canyon
				26-002(a)	
				26-002(b)	
				26-003	
		~~L030A~~	~~LA-SMA-10.12~~	~~53-008~~ [d]	~~Los Alamos Canyon~~
Los Alamos/ Pueblo	DP Canyon	D001	DP-SMA-0.3	21-029	DP Canyon
		D002	DP-SMA-0.4	21-021	DP Canyon
		D003	DP-SMA-0.6	21-021	DP Canyon
				~~21-024(l)~~	
		D004	DP-SMA-1	21-011(k)	DP Canyon
				21-021	
		D005	DP-SMA-2	21-021	DP Canyon
				21-024(h)	
		D006	DP-SMA-2.35	21-021	DP Canyon
				21-024(n)	
		D007	DP-SMA-3	21-013(c)	DP Canyon
				21-021	
Sandia	Sandia Canyon	S001	S-SMA-0.25	03-013(a)	Sandia Canyon
				03-052(f)	
		S002	S-SMA-1.1	03-029	Sandia Canyon
		S003	S-SMA-2	03-012(b)	Sandia Canyon
				~~03-045(b)~~ [e]	
				~~03-045(c)~~	
				03-056(c)	
		S003A	S-SMA-2.01	03-052(b)	Sandia Canyon
		S004	S-SMA-2.8	03-014(c2)	Sandia Canyon
		S005	S-SMA-3.51	03-009(i)	Sandia Canyon
		S005A	S-SMA-3.52	03-021	Sandia Canyon
		S005B	S-SMA-3.53	03-014(b2)	Sandia Canyon
		S006	S-SMA-3.6	60-007(b)	Sandia Canyon
		S007	S-SMA-3.7	53-012(e)	Sandia Canyon
		S008	S-SMA-3.71	53-001(a)	Sandia Canyon
		S009	S-SMA-3.72	53-001(b)	Sandia Canyon
		S010	S-SMA-3.95	20-002(a)	Sandia Canyon
		~~S011~~	~~S-SMA-4.1~~	~~53-014~~	~~Sandia Canyon~~
		S013	S-SMA-5	20-002(c)	Sandia Canyon
		S014	S-SMA-5.2	20-003(c)	Sandia Canyon

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Sandia	Sandia Canyon	S015	S-SMA-5.5	20-005	Sandia Canyon
		S016	S-SMA-6	72-001	Sandia Canyon
Mortandad	Cañada del Buey	C001	CDB-SMA-0.15	04-003(a)	Cañada del Buey
				04-004	
		C002	CDB-SMA-0.25	46-004(c2)	Cañada del Buey
				46-004(e2)	
		C003	CDB-SMA-0.55	46-004(g)	Cañada del Buey
				~~46-004(m)~~	
				46-004(s)	
				46-006(f)	
		C004	CDB-SMA-1	46-003(c)	SWSC Canyon - Tributary to Canada del Buey
				46-004(d2)	
				46-004(f)	
				46-004(t)	
				46-004(w)	
				46-008(g)	
				46-009(a)	
		C005	CDB-SMA-1.15	46-004(b)	Cañada del Buey
				46-004(y)	
				46-004(z)	
				46-006(d)	
		C010	CDB-SMA-4	54-017	Cañada del Buey
				54-018	
				54-020	
	Mortandad Canyon	M001	M-SMA-1	03-050(a)	Mortandad Canyon
				03-054(e)	
		~~M002~~	~~M-SMA-1.2~~	~~03-049(a)~~	~~Mortandad Canyon~~
		M002A	M-SMA-1.21	03-049(e)	Mortandad Canyon
		M002B	M-SMA-1.22	03-045(h)	Mortandad Canyon
		M003	M-SMA-3	48-001	Mortandad Canyon
				48-005	
				48-007(c)	
		M004	M-SMA-3.1	48-001	Mortandad Canyon
				~~48-007(b)~~	
		M005	M-SMA-3.5	48-001	Mortandad Canyon
				48-003	
		M006	M-SMA-4	48-001	Effluent Canyon - Tributary to Mortandad Canyon
				48-005	
				48-007(a)	
				48-007(d)	
				48-010	

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Mortandad	Mortandad Canyon	M007	M-SMA-5	42-001(a)	Effluent Canyon - Tributary to Mortandad Canyon
				42-001(b)	
				42-001(c)	
				42-002(a)	
				42-002(b)	
		M008	M-SMA-6	35-016(h)	Effluent Canyon - Tributary to Mortandad Canyon
		M009	M-SMA-7	35-016(g)	Effluent Canyon - Tributary to Mortandad Canyon
		M010	M-SMA-7.9	50-006(d)	Effluent Canyon - Tributary to Mortandad Canyon
		~~M012~~	~~M-SMA-10~~	~~35-008~~	~~Mortandad Canyon~~
				~~35-014(e)~~	
		~~M012A~~	~~M-SMA-10.01~~	~~35-016(e)[f]~~	~~Mortandad Canyon~~
		M013	M-SMA-10.3	35-014(e2)	Mortandad Canyon
				~~35-016(i)~~	
		M014	M-SMA-11.1	35-016(o)	Mortandad Canyon
		~~M015~~	~~M-SMA-12~~	~~35-016(p)~~	~~Mortandad Canyon~~
		M016	M-SMA-12.5	05-005(b)	Mortandad Canyon
				05-006(c)	
		~~M017~~	~~M-SMA-12.6~~	~~05-004~~	~~Mortandad Canyon~~
		M018	M-SMA-12.7	05-002	Mortandad Canyon
				05-005(a)	
				05-006(b)	
				05-006(e)	
		M019	M-SMA-12.8	05-001(a)	Mortandad Canyon
				05-002	
		M020	M-SMA-12.9	05-001(b)	Mortandad Canyon
				05-002	
		M021	M-SMA-12.92	00-001	Mortandad Canyon
		~~M022~~	~~M-SMA-13~~	~~05-001(c)~~	~~Mortandad Canyon~~
	Ten-Site Canyon	T001	Pratt-SMA-1.05	35-003(h)	Pratt Canyon - Tributary to Ten-Site Canyon
				35-003(p)	
				35-003(r)	
		T001	Pratt-SMA-1.05	35-009(d)	Pratt Canyon - Tributary to Ten-Site Canyon
				~~35-016(k)~~	
				~~35-016(l)~~	
		T002	T-SMA-1	50-006(a)	Ten-Site Canyon
				50-009	
		T003	T-SMA-2.5	35-014(g3)	Ten-Site Canyon
		T004	T-SMA-2.85	35-014(g)	Ten-Site Canyon
				35-016(n)	
		T005	T-SMA-3	35-016(b)	Ten-Site Canyon

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Mortandad	Ten-Site Canyon	T006	T-SMA-4	35-004(a)	Ten-Site Canyon
				35-009(a)	
				~~35-016(c)~~	
				~~35-016(d)~~	
		T007	T-SMA-5	35-004(a)	Ten-Site Canyon
				35-009(a)	
				~~35-016(a)~~	
				35-016(q)	
		~~T008~~	~~T-SMA-6.8~~	~~35-010(c)~~	~~Ten-Site Canyon~~
		~~T009~~	~~T-SMA-7~~	~~04-003(b)~~	~~Ten-Site Canyon~~
		T010	T-SMA-7.1	04-001	Ten-Site Canyon
				04-002	
Pajarito	Twomile Canyon	E001	2M-SMA-1	03-010(a)	Twomile Canyon
		E002	2M-SMA-1.42	06-001(a)	Twomile Canyon
		E003	2M-SMA-1.43	22-014(a)	Twomile Canyon
				22-015(a)	
		E004	2M-SMA-1.44	06-001(b)	Twomile Canyon
		E005	2M-SMA-1.45	06-006	Twomile Canyon
		E006	2M-SMA-1.5	22-014(b)	Twomile Canyon
		E007	2M-SMA-1.65	40-005	Twomile Canyon
		E008	2M-SMA-1.67	06-003(h)	Twomile Canyon
		E009	2M-SMA-1.7	03-055(a)	Twomile Canyon
		E010	2M-SMA-1.8	03-001(k)	Twomile Canyon
		E011	2M-SMA-1.9	03-003(a)	Twomile Canyon
		E012	2M-SMA-2	03-050(d)	Twomile Canyon
				03-054(b)	
		E013	2M-SMA-2.2	03-003(k)	Twomile Canyon
		E014	2M-SMA-3	~~07-001(a)~~	Twomile Canyon
				~~07-001(b)~~	
				07-001(c)	
				~~07-001(d)~~	
	Twomile Canyon	E015	2M-SMA-2.5	40-001(c)	Twomile Canyon
	Threemile Canyon	H001	3M-SMA-0.2	15-010(b)	Threemile Canyon
		H002	3M-SMA-0.4	15-006(b)	Threemile Canyon
		H003	3M-SMA-0.5	15-006(c)	Threemile Canyon
				15-009(c)	
		H004	3M-SMA-0.6	15-008(b)	Threemile Canyon
		H005	3M-SMA-2.6	36-008	Threemile Canyon
				C-36-003	
		H006	3M-SMA-4	18-002(b)	Threemile Canyon
				18-003(c)	
				18-010(f)	

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Pajarito	Pajarito Canyon	J001	PJ-SMA-1.05	09-013	Pajarito Canyon
		J002	PJ-SMA-2	09-009	Pajarito Canyon
		J003	PJ-SMA-3.05	09-004(o)	Pajarito Canyon
		J004	PJ-SMA-4.05	09-005(g)	Pajarito Canyon
		J005	PJ-SMA-5	22-015(c)	Pajarito Canyon
		J006	PJ-SMA-5.1	22-010(b)	Pajarito Canyon
		J007	PJ-SMA-6	40-010	Pajarito Canyon
		J008	PJ-SMA-7	40-006(c)	Pajarito Canyon
		J009	PJ-SMA-8	40-006(b)	Pajarito Canyon
		J010	PJ-SMA-9	40-009	Pajarito Canyon
		J011[g]	PJ-SMA-9.2	40-001(c)	Pajarito Canyon
		J012	PJ-SMA-10	40-006(a)	Pajarito Canyon
		J013	PJ-SMA-11	40-003(a)	Pajarito Canyon
		J014	PJ-SMA-11.1	40-003(b)	Pajarito Canyon
		J016	PJ-SMA-13.7	18-010(b)	Pajarito Canyon
		J018	PJ-SMA-14.2	18-012(b)	Pajarito Canyon
		J019	PJ-SMA-14.3	18-003(e)	Pajarito Canyon
		J020	PJ-SMA-14.4	18-010(d)	Pajarito Canyon
		J021	PJ-SMA-14.6	18-010(e)	Pajarito Canyon
		~~J022~~	~~PJ-SMA-14.8~~	~~18-012(a)~~	~~Pajarito Canyon~~
		~~J023~~	~~PJ-SMA-16~~	~~27-002~~	~~Pajarito Canyon~~
		J024	PJ-SMA-17	54-018	Pajarito Canyon
		J026	PJ-SMA-18	54-014(d) 54-017	Pajarito Canyon
		J025	PJ-SMA-19	54-013(b) 54-017 54-020	Pajarito Canyon
		J027	PJ-SMA-20	54-017	Pajarito Canyon
		J028	STRM-SMA-1.05	08-009(f)	Pajarito Canyon/Starmers Gulch
		J029	STRM-SMA-1.5	08-009(d)	Pajarito Canyon/Starmers Gulch
		J030	STRM-SMA-4.2	09-008(b)	Pajarito Canyon/Starmers Gulch
		J031	STRM-SMA-5.05	09-013	Pajarito Canyon/Starmers Gulch
Water/ Cañon de Valle	Cañon de Valle	~~V001~~	~~CDV-SMA-1.2~~	~~16-017(b) 99~~ ~~16-029(k)~~	~~Cañon de Valle~~
		~~V002~~	~~CDV-SMA-1.3~~	~~16-017(a) 99~~ ~~16-026(m)~~	~~Cañon de Valle~~
		V003	CDV-SMA-1.4	16-020 ~~16-026(l)~~ 16-028(c)	Cañon de Valle
		V004	CDV-SMA-1.45	16-026(i)	Cañon de Valle
		V005	CDV-SMA-1.7	16-019	Cañon de Valle
		V006	CDV-SMA-2	16-021(c)	Cañon de Valle

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Water/ Cañon de Valle	Cañon de Valle	V007	CDV-SMA-2.3	13-001	Cañon de Valle
				13-002	
				16-003(n)	
				16-003(o)	
				16-029(h)	
				16-031(h)	
		~~V009~~	~~CDV-SMA-2.5~~	~~16-028(a)~~	~~Cañon de Valle~~
		V009A	CDV-SMA-2.51	16-010(i)	Cañon de Valle
		V010	CDV-SMA-3	14-009	Cañon de Valle
		V011	CDV-SMA-4	14-010	Cañon de Valle
		V012	CDV-SMA-6.01	14-001(g)	Cañon de Valle
				14-006	
		V012A	CDV-SMA-6.02	14-002(c)	Cañon de Valle
		V013	CDV-SMA-7	15-008(d)	Cañon de Valle
		V014	CDV-SMA-8	15-011(c)	Cañon de Valle
		V015	CDV-SMA-8.5	15-014(a)	Cañon de Valle
		V016	CDV-SMA-9.05	15-007(b)	Cañon de Valle
	Fence Canyon	F001	F-SMA-2	36-004(c)	Fence Canyon
	Potrillo Canyon	I001	PT-SMA-0.5	15-009(e)	Potrillo Canyon
				C-15-004	
		I002	PT-SMA-1	15-004(f)	Potrillo Canyon
				15-008(a)	
		I003	PT-SMA-1.7	15-003	Potrillo Canyon
		I004	PT-SMA-2	15-008(f)	Potrillo Canyon
				36-003(b)	
				36-004(e)	
		I004A	PT-SMA-2.01	C-36-001	Potrillo Canyon
				C-36-006(e)	
		I005	PT-SMA-3	36-004(a)	Potrillo Canyon
				36-006	
		I007	PT-SMA-4.2	36-004(d)	Potrillo Canyon
	Water Canyon	W001	W-SMA-1	16-017(j)-99	Water Canyon
				16-026(c2)	
				16-026(v)	
		W002	W-SMA-1.5	16-026(b2)	Water Canyon
				16-028(d)	
		W003	W-SMA-2.05	16-028(e)	Water Canyon
		W004	W-SMA-3.5	16-026(y)	Water Canyon
		W005	W-SMA-4.1	16-003(a)	Water Canyon

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Water/ Cañon de Valle	Water Canyon	W006	W-SMA-5	16-001(e)	S-Site Canyon - Tributary to Water Canyon
				16-003(f)	
				16-026(b)	
				16-026(c)	
				16-026(d)	
				16-026(e)	
		W007	W-SMA-6	11-001(c)	Water Canyon
		W008	W-SMA-7	16-029(e)	Water Canyon
		W009	W-SMA-7.8	16-031(a)	Water Canyon
		W010	W-SMA-7.9	16-006(c)	Water Canyon
		W011	W-SMA-8	16-016(g)	Water Canyon
				16-028(b)	Water Canyon
		W012	W-SMA-8.7	13-001	Water Canyon
				13-002	
				16-004(a)	
				16-026(j2)	
				16-029(h)	
				16-035	
		W012A	W-SMA-8.71	16-004(c)	Water Canyon
		W013	W-SMA-9.05	16-030(g)	Water Canyon
		W014	W-SMA-9.5	11-012(c)	S-Site Canyon - Tributary to Water Canyon
		W015	W-SMA-9.7	11-011(a)	S-Site Canyon - Tributary to Water Canyon
				11-011(b)	
		W016	W-SMA-9.8	11-005(c)	S-Site Canyon - Tributary to Water Canyon
		W017	W-SMA-9.9	11-006(b)	S-Site Canyon - Tributary to Water Canyon
		W018	W-SMA-10	11-002	S-Site Canyon - Tributary to Water Canyon
				11-003(b)	
				11-005(a)	
				11-005(b)	
				11-006(c)	
				11-006(d)	
				11-011(d)	
		W019	W-SMA-11.7	49-008(c)	Water Canyon
		W020	W-SMA-12.05	49-001(g)	Water Canyon
		W021	W-SMA-14.1	15-004(h)	Water Canyon
				15-014(l)	
		W022	W-SMA-15.1	49-005(a)	Water Canyon

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
Ancho	Ancho Canyon	A001	A-SMA-1.1	39-004(a)	North Ancho Canyon
				39-004(d)	
		A002	A-SMA-2	39-004(b)	North Ancho Canyon
				39-004(e)	
		A003	A-SMA-2.5	39-010	North Ancho Canyon
		A004	A-SMA-2.7	~~39-002(c)~~	North Ancho Canyon
				39-008	
		A005	A-SMA-2.8	39-001(b)	North Ancho Canyon
		A006	A-SMA-3	39-002(b)	North Ancho Canyon
				39-004(c)	
		A007	A-SMA-3.5	39-006(a)	South Ancho Canyon
		A008	A-SMA-4	33-010(d)	South Ancho Canyon
		A009	A-SMA-6	~~33-004(k)~~	South Ancho Canyon
				33-007(a)	
				33-010(a)	
Chaquehui	Chaquehui Canyon	Q001	CHQ-SMA-0.5	33-004(g)	Chaquehui Canyon
				33-007(c)	
				33-009	
		Q002	CHQ-SMA-1.01	33-002(d)	Chaquehui Canyon
		Q002A	CHQ-SMA-1.02	33-004(h)	Chaquehui Canyon
				33-008(c)	
Chaquehui	Chaquehui Canyon	Q002A	CHQ-SMA-1.02	33-011(d)	Chaquehui Canyon
				33-015	
		Q002B	CHQ-SMA-1.03	33-008(c)	Chaquehui Canyon
				33-012(a)	
				33-017	
				C-33-001	
				C-33-003	
		Q003	CHQ-SMA-2	33-004(d)	Chaquehui Canyon
				33-007(c)	
				C-33-003	
		Q004	CHQ-SMA-3.05	33-010(f)	Chaquehui Canyon
		Q005	CHQ-SMA-4	33-011(e)	Chaquehui Canyon
		Q006	CHQ-SMA-4.1	33-016	Chaquehui Canyon
		Q007	CHQ-SMA-4.5	33-011(b)	Chaquehui Canyon
		Q008	CHQ-SMA-5.05	33-007(b)	Chaquehui Canyon

APPENDIX A
SITE MONITORING AREA, SITE INFORMATION, AND FEATURE

Watershed	Canyon	Permitted Feature	Site Monitoring Area	Site ID	Receiving Water
		Q009	CHQ-SMA-6	~~33-004(j)~~	Chaquehui Canyon
				33-006(a)	
				33-007(b)	
				33-010(c)	
				33-010(g)	
				33-010(h)	
				33-014	
		Q010	CHQ-SMA-7.1	33-010(g)	Chaquehui Canyon

[a] Sites colored light-blue are non-DOE Sites which have been identified since the submission of the permit application and non-DOE Sites the Permittees are requesting to be added back onto the permit.

[b] Sites colored red are Sites which have received a COC from NMED Consent Order and there were no Site related TAL exceedances in storm water samples collected at the SMA.

[c] Sites colored purple are Sites where there is no known historic use of significant industrial materials at the Site.

[d] Sites colored light-green are Sites where two storm water samples were collected and yielded no TAL exceedances.

[e] Sites colored orange are active outfall Sites.

[f] Sites colored pink are Sites where there is no known historic use of significant industrial materials at the Site and the Site has received a COC from NMED Consent Order.

[g] Sites colored brown are Sites that are being requested for addition as a result of an administrative error.

Total, unless indicated	CAS No.		MQL (µg/l)(*1)	ATAL (µg/l)(*2)	MTAL (µg/l)(*3)
RADIOACTIVITIES					
Ra-226 and Ra-228 (pCi/l)				30.0	---
METALS					
Aluminum, total recoverable	7429-90-5		2.5	---	(*4)
Antimony, dissolved (P) (*5)	7440-36-0		60	640	---
Arsenic, dissolved (P)	7440-38-2		0.5	9.0	340
Boron, dissolved	7440-42-8		100	5000	---
Cadmium, dissolved	7440-43-9		1	---	(*4)
Chromium, dissolved	18540-29-9		10	---	(*4)~~(*5)~~(*6)
Cobalt, dissolved	7440-48-4		50	1000	---
Copper, dissolved	7440-50-8		0.5	---	(*4)
Lead, dissolved	7439-92-1		0.5	---	(*4)
Mercury, total	7439-97-6		0.005	0.77	---
Nickel, dissolved (P)	7440-02-0		0.5	---	(*4)
Selenium, total recoverable	7782-49-2		5	5.0	20
Silver, dissolved	7440-22-4		0.5	---	(*4)
Thallium, dissolved (P)	7440-28-0		0.5	0.47	---
Vanadium, dissolved	7440-62-2		50	100	---
Zinc, dissolved	7440-66-6		20	---	(*4)
CYANIDE					
Cyanide, total recoverable	57-12-5		10	5.2	22.0
DIOXIN					
2,3,7,8-TCDD (P)	1746-01-6		0.00001	5.1E-08	---
SEMIVOLATILE COMPOUNDS					
Pentachlorophenol	87-86-5		5	---	19
Benzo(a)pyrene (P)	50-32-8		5	0.18	---
Hexachlorobenzene (P)	118-74-1		5	0.0029	---
PESTICIDES					
Aldrin (P)	309-00-2		0.01	0.00050	3.0
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

Total, unless indicated	CAS No.		MQL (µg/l)(*1)	ATAL (µg/l)(*2)	MTAL (µg/l)(*3)
PCBS					
PCBs (P)	1336-36-3		0.2 ~~(*6)~~	(*7)	---
HIGH EXPLOSIVES					
RDX	121-82-4		---	200	---
2,4,6-Trinitrotoluene (TNT)	118-96-7		---	20	---

Note: The target action levels (TALs) are based on and equivalent to New Mexico State water quality criteria for the subject pollutants. 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.

Footnotes:

(*1) MQL is the minimum quantification level. EPA approved analytical methods with the same or more sensitive detectable level (DL) than MQL shall be used. If an individual analytical test result is smaller than the MQL or the more sensitive DL, a value of zero (0) or "ND" may be used for reporting and action purpose. A table of MQLs is attached as Appendix D.

~~The Permittees shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of POCs in a discharge for analyses of POCs or pollutant parameters under the permit. In case the minimum quantification levels (MQLs) are not sufficiently sensitive to the limits, the actual detected values, instead of zeros, need to be reported. If there is a sensitive method with MDL (method detection limit) below the TAL/BTV, but the MQL is above the TAL/BTV, they cannot report zero based on MQL but must report actual value. If any individual analytical test result is less than the MQL listed in Appendix C, or the more sensitive MDL, a value of zero (0) may be used for that individual result for reporting purpose.~~

~~The Permittees may develop an effluent specific method detection limit (MDL) in accordance with the monitoring requirements in the SIP and 40 CFR 136. For any POC for which the Permittees determine an effluent specific MDL, the Permittees shall send to the EPA Region 6 Permitting & Water Quality Branch (6WD-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation: MQL = 3.3 x MDL. Upon written approval by the EPA Region 6 Permitting & Water Quality Branch (6WD-P), the effluent specific MQL may be utilized by the Permittees for all future Compliance Status Report (CSR) reporting requirements. The PCB congener-specific MQLs are listed in footnote (*7) below.~~ [1]

(*2) ATAL stands for Average Target Action Level. ~~The average is the geometric mean of applicable monitoring results at the SMA. If all analytical results are below analytical method detect level, a value of "zero" may be reported. If one or more data are above detect level, a value of ½ detect level shall be assigned to those below detect level data for calculation purpose. If the average value of a specific POC is below its MQL, a value of "zero" may be reported for the average. If a new or an enhanced best management practice (BMP) is installed, the average is calculated based on analytical results from samples taken after installation of the BMP.~~ [2]

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

(*4) Hardness-dependent metals target action levels. See Table ~~C~~B-1 below.

(*5) P stands for persistent.

(*6)~~(*5)~~ While the 20.6.4.900 New Mexico Administrative Code (NMAC) aquatic life standard is for chromium III, analyzing this in storm water is operationally infeasible because of the 24-hr preservation requirement. Therefore, for the purposes of this Permit, total dissolved chromium will be analyzed and compared to the hardness-dependent criteria (see Table B~~C~~-1 below).

[1] The Permittees are requesting this part of the footnote be deleted as it is repeated elsewhere in the Permit and in Appendix D. The Permittees do not plan to develop an effluent specific method detection limit, and thus do not feel that it is necessary to be included in this Footnote.

[2] The Permittees are requesting this language be deleted from the footnote as it is included in the Permit and does not need to be repeated here.

~~(*6) Method 1668 Revision C or the most current revision of the Congener Method shall be used for PCB analysis. Per Appendix C of 2010 Permit, the MQLs for PCB congeners 4/10, 5/8, 6, 7/9, 11, 12/13, 14, and 15 will be 50 pg/l, and the MQLs for all other PCB Congeners will be 25 pg/l. If adjusted Reporting Limits (RL) are used to adjust MQLs due to laboratory's contemporary ambient background, such adjusted RL shall be updated no less than once per 6 mo. If laboratory method blank, field blank, or trip blank subtraction are used in calculation of sample analytical result, supporting document shall be submitted with the Annual Report.~~ [3]

(*7) If the stream reach that an SMA drains to is classified as non-perennial~~ephemeral~~ (Segment No. 20.6.4.128, Segment No. 20.6.4.98 per the 20.6.4 NMAC~~Clean Water Act 303(d)/305(b) Integrated Report~~), the total PCB wildlife habitat surface water quality criterion (0.014 µg/l from 20.6.4 NMAC) will be used as the ATAL; if the stream reach that an SMA drains to is classified as ~~intermittent or~~ perennial (Segment No. 20.6.4.126, Segment No. 20.6.4.114 per the 20.6.4 NMAC), the total PCB human health-organism only aquatic life criterion (0.00064 µg/l) will be used as the ATAL. [4]

[3] The Permittees are requesting to delete this footnote as they believe this information is not necessary to be included in this Appendix.

[4] The Permittees are requesting this part of the footnote be deleted as it is repeated elsewhere in the Permit and in Appendix D. The Permittees do not plan to develop an effluent specific method detection limit, and thus do not feel that it is necessary to be included in this Footnote.

Table ~~C~~B-1
Proposed Metals MTALs (*1)

Major Canyon	Hardness (*2) (mg/L)	Aluminum (total recoverable)	Cadmium (dissolved)	Chromium (dissolved)	Copper (dissolved)	Lead (dissolved)	Nickel (dissolved)	Silver (dissolved)	Zinc (dissolved)
Ancho	~~35.7~~ 37.2	~~830~~ 8820	~~0.69~~ 0.710	2503	~~5.1~~ 5.293	~~20.7~~ 33.3	2003	~~0.55~~ 0.5869	~~63~~ 65.0
Chaquehui	~~30.0~~ 26.9	~~660~~ 56670	~~0.59~~ 0.5394	~~210~~ 1940	~~4.3~~ 3.90	~~17.0~~ 21.92	~~170~~ 1540	~~0.41~~ 0.3364	~~54~~ 48.5
Los Alamos/Pueblo	~~34.5~~ 33.5	~~800~~ 7640	~~0.67~~ 0.6494	~~240~~ 2320	~~4.9~~ 4.798	~~19.9~~ 29.1	19085	~~0.52~~ 0.4899	~~61~~ 59.1
Mortandad	~~29.4~~ 29.5	64020	0.582	21009	~~4.2~~ 4.253	~~16.7~~ 24.75	17067	0.393	~~43~~ 52.73
Pajarito	30.2	66030	0.595	21014	4.35	~~17.2~~ 25.5	170	0.410	543.8
Sandia	~~44.8~~ 43.0	~~1140~~ 1080100	~~0.83~~ 0.804	~~300~~ 28590	~~6.3~~ 6.071	~~26.7~~ 40.2	~~240~~ 22930	~~0.81~~ 0.753	~~77~~ 74.3
Water/Cañon de Valle	47.7	~~1240~~ 124000	0.8879	3101	6.70	~~28.6~~ 46.0	250	0.902	821.7

(*1) MTALs are based on acute aquatic life criteria contained in New Mexico Water Quality Standards in 20.6.4.900 NMAC, computed at the hardness values listed.

(*2) Geometric mean receiving water hardness for each major canyon, based on calculated hardness using dissolved (0.45-µm filtered) calcium and magnesium results (SM 2340B).

Pollutant of Concern	Sample Preparation[1]	Landscape	SSC Normalized?	Units	BTV[2]
Aluminum (0.45-µm filter)	F	Developed	No	µg/L	1677~~0~~
Aluminum (0.45-µm filter)	F	Undeveloped	No	µg/L	4630~~0~~0
Aluminum	UF	Developed	Yes	mg/kg SSC	339004~~000~~
Aluminum	UF	Undeveloped	Yes	mg/kg SSC	869007~~000~~
Aluminum (10-µm filter)	F	Developed	Yes	mg/kg SSC	448015~~000~~
Aluminum (10-µm filter)	F	Undeveloped	Yes	mg/kg SSC	368007~~000~~
Cobalt	F	Developed	No	µg/L	2.26~~3~~
Cobalt	F	Undeveloped	No	µg/L	1.25~~6~~
Copper	F	Developed	No	µg/L	9.03
Copper	F	Undeveloped	No	µg/L	4.02
Gross alpha	UF	Developed	Yes	pCi/g SSC	49.6~~5~~0
Gross alpha	UF	Undeveloped	Yes	pCi/g SSC	78.0
Lead	F	Developed	No	µg/L	NR
Lead	F	Undeveloped	No	µg/L	3.80
Mercury	UF	Developed	No	µg/L	NR
Mercury	UF	Undeveloped	No	µg/L	0.209~~1~~
Nickel	F	Developed	No	µg/L	3.09~~1~~
Nickel	F	Undeveloped	No	µg/L	4.35
Radium-226 and Radium-228	UF	Developed	Yes	pCi/g SSC	10.4
Radium-226 and Radium-228	UF	Undeveloped	Yes	pCi/g SSC	18.8~~9~~
Selenium	UF	Developed	No	µg/L	NR
Selenium	UF	Undeveloped	No	µg/L	16.1
Total PCBs	UF	Developed	No	µg/L	0.01962~~0~~
Total PCBs	UF	Undeveloped	No	µg/L	0.0583
Uranium	F	Developed	No	µg/L	0.200
Uranium	F	Undeveloped	No	µg/L	0.679~~1~~
Vanadium	F	Developed	No	µg/L	5.64
Vanadium	F	Undeveloped	No	µg/L	5.32
Zinc	F	Developed	No	µg/L	200
Zinc	F	Undeveloped	No	µg/L	25.9~~6~~

~~Pollutant of Concern~~	~~Sample Preparation[1]~~	~~Landscape~~	~~Data Subset Description~~	~~SSC Normalized?~~	~~Units~~	~~90th Percentile BTV~~
~~Aluminum~~	~~F~~	~~Developed~~	~~All locations~~	~~Yes~~	~~mg/kg SSC~~	~~2100~~
~~Aluminum~~	~~F~~	~~Undeveloped~~	~~SEP Reference[2]~~	~~No~~	~~µg/L~~	~~3200~~
~~Aluminum~~	~~F~~	~~Undeveloped~~	~~Locations other than SEP Reference and E240 gage~~	~~No~~	~~µg/L~~	~~1200~~
~~Aluminum~~	~~F~~	~~Undeveloped~~	~~E240 gage~~	~~No~~	~~µg/L~~	~~2200~~
~~Aluminum~~	~~UF~~	~~Developed~~	~~All locations~~	~~Yes~~	~~mg/kg SSC~~	~~34,000~~
~~Aluminum~~	~~UF~~	~~Undeveloped~~	~~SEP and Western Reference~~	~~Yes~~	~~mg/kg SSC~~	~~36,000~~

~~Aluminum~~	~~UF~~	~~Undeveloped~~	~~Northern and Bandelier Reference~~	~~Yes~~	~~mg/kg SSC~~	~~12,000~~
~~Arsenic~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR[3]~~
~~Arsenic~~	~~F~~	~~Undeveloped~~	~~All locations~~	~~No~~	~~µg/L~~	~~6.0~~
~~Boron~~	~~F~~	~~Developed~~	~~Lab Developed~~	~~No~~	~~µg/L~~	~~NR~~
~~Boron~~	~~F~~	~~Developed~~	~~Town Developed~~	~~No~~	~~µg/L~~	~~NR~~
~~Boron~~	~~F~~	~~Undeveloped~~	~~Western and Northern Reference~~	~~No~~	~~µg/L~~	~~23~~
~~Boron~~	~~F~~	~~Undeveloped~~	~~SEP and Bandelier Reference~~	~~No~~	~~µg/L~~	~~21~~
~~Benzo(a)pyrene~~	~~UF~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~0.067~~
~~Cadmium~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Cadmium~~	~~F~~	~~Undeveloped~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Cobalt~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~5.0~~
~~Cobalt~~	~~F~~	~~Undeveloped~~	~~Western and Northern Reference~~	~~No~~	~~µg/L~~	~~4.3~~
~~Cobalt~~	~~F~~	~~Undeveloped~~	~~SEP and Bandelier Reference~~	~~No~~	~~µg/L~~	~~1.9~~
~~Chromium~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Chromium~~	~~F~~	~~Undeveloped~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Copper~~	~~F~~	~~Developed~~	~~Lab Developed~~	~~No~~	~~µg/L~~	~~11~~
~~Copper~~	~~F~~	~~Developed~~	~~Town Developed~~	~~No~~	~~µg/L~~	~~8.0~~
~~Copper~~	~~F~~	~~Undeveloped~~	~~All Reference except Bandelier~~	~~No~~	~~µg/L~~	~~3.3~~
~~Gross alpha~~	~~UF~~	~~Developed~~	~~All locations~~	~~Yes~~	~~pCi/g SSC~~	~~47~~
~~Gross alpha~~	~~UF~~	~~Undeveloped~~	~~All locations~~	~~Yes~~	~~pCi/g SSC~~	~~66~~
~~Mercury~~	~~UF~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Mercury~~	~~UF~~	~~Undeveloped~~	~~Western and Northern Reference, excluding E240 gage~~	~~No~~	~~µg/L~~	~~0.21~~
~~Mercury~~	~~UF~~	~~Undeveloped~~	~~SEP and Bandelier Reference~~	~~No~~	~~µg/L~~	~~0.10~~
~~Nickel~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~3.1~~
~~Nickel~~	~~F~~	~~Undeveloped~~	~~Chupaderos, Garcia, and Mortandad Watersheds~~	~~No~~	~~µg/L~~	~~3.1~~
~~Nickel~~	~~F~~	~~Undeveloped~~	~~Watersheds other than Chupaderos, Garcia, and Mortandad~~	~~No~~	~~µg/L~~	~~1.7~~
~~Lead~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~2.0~~
~~Lead~~	~~F~~	~~Undeveloped~~	~~All Reference except Bandelier~~	~~No~~	~~µg/L~~	~~1.5~~
~~Total PCBs~~	~~UF~~	~~Developed~~	~~All watersheds except South Fork Acid~~	~~No~~	~~µg/L~~	~~0.028~~
~~Total PCBs~~	~~UF~~	~~Developed~~	~~South Fork Acid watershed~~	~~No~~	~~µg/L~~	~~NR~~
~~Total PCBs~~	~~UF~~	~~Undeveloped~~	~~Northern and Western Reference~~	~~No~~	~~µg/L~~	~~0.012~~

~~Total PCBs~~	~~UF~~	~~Undeveloped~~	~~SEP Reference~~	~~No~~	~~µg/L~~	~~NR~~
~~Radium-226 and radium-228~~	~~UF~~	~~Developed~~	~~All locations~~	~~Yes~~	~~pCi/g SSC~~	~~10~~
~~Radium-226 and radium-228~~	~~UF~~	~~Undeveloped~~	~~All locations~~	~~Yes~~	~~pCi/g SSC~~	~~7.5~~
~~Antimony~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Selenium~~	~~UF~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~5.6~~
~~Selenium~~	~~UF~~	~~Undeveloped~~	~~Watersheds other than Mortandad~~	~~No~~	~~µg/L~~	~~4.8~~
~~Thallium~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~NR~~
~~Vanadium~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~5.5~~
~~Vanadium~~	~~F~~	~~Undeveloped~~	~~Watersheds other than Mortandad~~	~~No~~	~~µg/L~~	~~4.3~~
~~Zinc~~	~~F~~	~~Developed~~	~~All locations~~	~~No~~	~~µg/L~~	~~77~~
~~Zinc~~	~~F~~	~~Undeveloped~~	~~Watersheds other than Garcia~~	~~No~~	~~µg/L~~	~~10~~

[1] Sample preparation: F = filtered using a 0.45 µm filter (i.e., dissolved), UF = not filtered (i.e., total).

[2] BTV = Background Threshold Value, for Developed landscapes this is the 90th Percentile, for Undeveloped Landscapes this is the 95-95 UTL.

~~[2] SEP = Supplemental Environmental Project.~~

[3] NR = not recommended.

Attachment 3

Revised List of Sites Not to Be Included In the Permit Renewal

In the Fact Sheet, Part VII.J "List of Sites Not to Be Included In the Permit Renewal," the U.S. Environmental Protection Agency (EPA) has provided a Site deletion table. Based on additional information provided in the Individual Permit (Permit or IP) and Fact Sheet, the Permittees have updated this table, included as Table 3-1 below. All changes made to the table presented in the Fact Sheet are in red. Changes made to this table have also been made to Appendix A in Attachment 2.

Table 3-1
List of Sites Not to Be Included In the Permit Renewal

Site Monitoring Area	Site ID	Administrative changes discussed in the IP Annual report since 2010	Not on DOE Property and meets Long-Term Stewardship criteria (Attachment 4) [a]	Significant industrial materials were not used or significant industrial materials were remediated such that storm water is not impacted (Attachment 5)	No longer RCRA Corrective Action Units, but are Hazardous Waste Management Units, and cannot be regulated under the Permit	SMA samplers were operational during a 25-year, 24-hour storm event but did not collect a sample	Certificate of completion from New Mexico Environment Department Consent Order and meets Long-Term Stewardship criteria (Attachment 6)	Active Outfall currently permitted under LANL Industrial Wastewater Permit No. NM0028355	Confirmation sample results from at least two storm water samples are less than target action level (Attachment 8)
R-SMA-2.5	00-011(a)						X		
R-SMA-2.05	00-011(c)			X		X			
~~B-SMA-1~~ [b]	~~00-011(d)~~		~~X~~						
~~R-SMA-2.3~~	~~00-011(e)~~		~~X~~						
~~P-SMA-3.05~~	~~00-018(a)~~		~~X~~						
~~P-SMA-0.3~~	~~00-018(b)~~		~~X~~						
~~P-SMA-2.2~~	~~00-019~~		~~X~~						
~~ACID-SMA-2.01~~	~~00-030(f)~~		~~X~~						
ACID-SMA-1.05	00-030(g)		X						
LA-SMA-5.01	01-001(d)	X							
~~LA-SMA-5.01~~	~~01-001(d1)~~		~~X~~						
~~LA-SMA-5.01~~	~~01-001(d2)~~		~~X~~						
~~LA-SMA-3.1~~	~~01-001(e)~~		~~X~~						
~~ACID-SMA-2/ ACID-SMA-2.1~~	~~01-002(b)-00~~		~~X~~						
LA-SMA-4.1	01-003(b)	X							
~~LA-SMA-4.1~~	~~01-003(b1)~~		~~X~~						
~~LA-SMA-3.9~~	~~01-006(a)~~		~~X~~						
LA-SMA-4.1	01-006(b)	X	~~X~~						
~~LA-SMA-4.2~~	~~01-006(c)~~		~~X~~						
~~LA-SMA-4.2~~	~~01-006(d)~~		~~X~~						
LA-SMA-5.01	01-006(h)	X		X					
~~LA-SMA-5.01~~	~~01-006(h1)~~		~~X~~						
~~LA-SMA-5.01~~	~~01-006(h2)~~		~~X~~						
~~LA-SMA-5.01~~	~~01-006(h3)~~		~~X~~						
LA-SMA-5.51	02-011(b)			X					
LA-SMA-5.51	02-011(c)			X					
S-SMA-2	03-045(b)							X	
S-SMA-2	03-045(c)							X	
M-SMA-1.2	03-049(a)							X	
T-SMA-7	04-003(b)						X		

Table 3-1 (continued)

Site Monitoring Area	Site ID	Administrative changes discussed in the IP Annual report since 2010	Not on DOE Property and meets Long-Term Stewardship criteria (Attachment 4) [a]	Significant industrial materials were not used or significant industrial materials were remediated such that storm water is not impacted (Attachment 5)	No longer RCRA Corrective Action Units, but are Hazardous Waste Management Units, and cannot be regulated under the Permit	SMA samplers were operational during a 25-year, 24-hour storm event but did not collect a sample	Certificate of completion from New Mexico Environment Department Consent Order and meets Long-Term Stewardship criteria (Attachment 6)	Active Outfall currently permitted under LANL Industrial Wastewater Permit No. NM0028355	Confirmation sample results from at least two storm water samples are less than target action level (Attachment 8)
M-SMA-13	05-001(c)						X		
M-SMA-12.6	05-004						X		
2M-SMA-3	07-001(a)								X
2M-SMA-3	07-001(b)								X
2M-SMA-3	07-001(d)								X
PJ-SMA-4.05	09-004(g)	X							
B-SMA-0.5	10-001(a)		X				X		
B-SMA-0.5	10-001(b)		X				X		
B-SMA-0.5	10-001(c)		X				X		
B-SMA-0.5	10-001(d)		X				X		
B-SMA-0.5	10-004(a)		X				X		
B-SMA-0.5	10-004(b)		X				X		
B-SMA-0.5	10-008		X				X		
B-SMA-0.5	10-009		X				X		
CDV-SMA-6.02	14-002(d)	X							
CDV-SMA-6.02	14-002(e)	X							
PT-SMA-1.7	15-006(a)	X							
CDV-SMA-2.42	16-010(b)				X				
CDV-SMA-2.5	16-010(c)				X				X
CDV-SMA-2.5	16-010(d)				X				X
CDV-SMA-1.3	16-017(a)-99						X		
CDV-SMA-1.2	16-017(b)-99						X		
CDV-SMA-2.41	16-018				X				
W-SMA-7	16-026(h2)	X							
CDV-SMA-1.4	16-026(l)			X					
CDV-SMA-1.3	16-026(m)						X		
CDV-SMA-2.5	16-028(a)								X
CDV-SMA-1.2	16-029(k)						X		
CDV-SMA-1.4	16-030(c)			X					
PJ-SMA-13	18-002(a)					X			
PJ-SMA-14.8	18-012(a)								X
S-SMA-4.5	20-002(d)					X			
LA-SMA-6.3	21-006(b)						X		
LA-SMA-5.91	21-009		X				X		

Table 3-1 (continued)

Site Monitoring Area	Site ID	Administrative changes discussed in the IP Annual report since 2010	Not on DOE Property and meets Long-Term Stewardship criteria (Attachment 4) [a]	Significant industrial materials were not used or significant industrial materials were remediated such that storm water is not impacted (Attachment 5)	No longer RCRA Corrective Action Units, but are Hazardous Waste Management Units, and cannot be regulated under the Permit	SMA samplers were operational during a 25-year, 24-hour storm event but did not collect a sample	Certificate of completion from New Mexico Environment Department Consent Order and meets Long-Term Stewardship criteria (Attachment 6)	Active Outfall currently permitted under LANL Industrial Wastewater Permit No. NM0028355	Confirmation sample results from at least two storm water samples are less than target action level (Attachment 8)
~~LA-SMA-5.92~~	~~21-013(b)~~		~~X~~						
LA-SMA-6.27/ LA-SMA-6.36/ DP-SMA-4	21-021					X			
LA-SMA-5.91	21-023(c)		X				X		
LA-SMA-6.36	21-024(a)					X			
DP-SMA-0.6	21-024(l)						X		
LA-SMA-6.27	21-027(c)					X			
LA-SMA-5.91	21-027(d)		X						
PJ-SMA-5.1	22-016	X							
PJ-SMA-16	27-002								X
LA-SMA-5.361	32-002	X							
LA-SMA-5.361	32-002(b1)		X				X		
CHQ-SMA-6	33-004(j)			X					
A-SMA-6	33-004(k)			X					
Pratt-SMA-1.05	35-004(h)			X					
M-SMA-10	35-008						X		
T-SMA-6.8	35-010(e)						X		
M-SMA-10	35-014(e)						X		
T-SMA-5	35-016(a)			X					
T-SMA-4	35-016(c)			X					
T-SMA-4	35-016(d)			X					
M-SMA-10.01	35-016(e)			X			X		
M-SMA-9.1	35-016(f)					X			
M-SMA-10.3	35-016(i)			X					
Pratt-SMA-1.05	35-016(k)			X					
Pratt-SMA-1.05	35-016(l)			X					
Pratt-SMA-1.05	35-016(m)			X					
M-SMA-12	35-016(p)			X					
A-SMA-2.7	39-002(c)						X		
~~ACID-SMA-2~~	~~45-001~~		~~X~~						
~~ACID-SMA-2~~	~~45-002~~		~~X~~						
~~ACID-SMA-2~~	~~45-004~~		~~X~~						
CDB-SMA-1.65	46-003(b)					X			
CDB-SMA-1.55	46-003(e)					X			
CDB-SMA-1.35	46-004(a2)					X			

Table 3-1 (continued)

Site Monitoring Area	Site ID	Administrative changes discussed in the IP Annual report since 2010	Not on DOE Property and meets Long-Term Stewardship criteria (Attachment 4) [a]	Significant industrial materials were not used or significant industrial materials were remediated such that storm water is not impacted (Attachment 5)	No longer RCRA Corrective Action Units, but are Hazardous Waste Management Units, and cannot be regulated under the Permit	SMA samplers were operational during a 25-year, 24-hour storm event but did not collect a sample	Certificate of completion from New Mexico Environment Department Consent Order and meets Long-Term Stewardship criteria (Attachment 6)	Active Outfall currently permitted under LANL Industrial Wastewater Permit No. NM0028355	Confirmation sample results from at least two storm water samples are less than target action level (Attachment 8)
CDB-SMA-0.55	46-004(e2)	X							
CDB-SMA-1.54	46-004(h)					X			
CDB-SMA-0.55	46-004(m)			X					
CDB-SMA-1.54	46-004(q)					X			
CDB-SMA-1.35	46-004(u)					X			
CDB-SMA-1.35	46-004(v)					X			
CDB-SMA-1.35	46-004(x)			X		X			
CDB-SMA-1.35/ CDB-SMA-1.54	46-006(d)					X			
CDB-SMA-1.35	46-008(f)					X			
M-SMA-3.1	48-007(b)			X					
LA-SMA-10.11	53-002(a)					X			
LA-SMA-10.12	53-008								X
S-SMA-4.1	53-014						X		
PJ-SMA-14	54-004					X			
~~P-SMA-1~~	~~73-001(a)~~		~~X~~						
P-SMA-2	73-002		X				X		
~~P-SMA-1~~	~~73-004(d)~~		~~X~~						
P-SMA-2	73-006		X				X		
R-SMA-0.5	C-00-020		X	X			X		
~~R-SMA-1~~	~~C-00-041~~		~~X~~						
CDB-SMA-1	C-46-001			X					

[a] Text in red indicates additions of content (including Sites and Deletion Categories) which have been added to the table originally provided by the EPA in the Fact Sheet.

[b] Text which is struck out and red indicates the removal of content (Sites proposed for deletion) which are no longer being requested for deletion from the Permit by the Permittees and should be removed from the table originally provided by the EPA in the Fact Sheet.

Attachment 4

Sites Not on DOE Property that Qualify for Long-Term Stewardship and Site Descriptions

In the 2019 Individual Permit (Permit or IP) reapplication, the Permittees requested deletion of all Sites that are not located on U.S. Department of Energy (DOE) property. The 2019 draft IP includes a new compliance category, Long-Term Stewardship, for Sites that do not require corrective action yet also do not meet the requirements for deletion from the Permit (Part I.C.3). All Sites not on DOE property were evaluated using the criteria laid out in this section of the Permit. In addition to evaluating the storm water data, where available, decision-level Compliance Order on Consent (Consent Order) soil data located at the surface to 3 ft below ground surface (bgs) (due to erosion potential from storm water runoff) was evaluated for each Site. If there were exceedances of the soil background threshold value (BTV) or, for instances where the pollutant of concern (POC) did not have a BTV, an exceedance of 10% of the soil screening level (SSL), then the Permittees ensured that the POC had been monitored for in storm water. There were no Sites with a soil exceedance of a POC that had not been monitored for in storm water, using criteria in the new Permit (Part I.C.2.b.ii). The Sites included in Table 4-1 qualify for Long-Term Stewardship in the draft Permit. The Permittees are requesting these Sites be removed from the Permit. Sites that are not on DOE property and are not included in Table 4-1 will be added back onto the red line/strikeout of Appendix A provided in Attachment 2.

Table 4-1
Sites Not on DOE Property that Qualify for Long-Term Stewardship

SMA	Site ID	Los Alamos County Property Identification Number	Ownership	Consent Order Status
R-SMA-0.5	C-00-020	1031114455540	Santa Fe National Forest	COC without Controls
B-SMA-0.5	10-001(a)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-001(b)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-001(c)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-001(d)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-004(a)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-004(b)	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-008	1036113098289	Los Alamos County	COC without Controls
B-SMA-0.5	10-009	1036113098289	Los Alamos County	COC without Controls
ACID-SMA-1.05	00-030(g)	1033112233444	Private Owner	In progress
P-SMA-2	73-002	1035112281366	Los Alamos County	COC with Controls
P-SMA-2	73-006	1035112259374	Los Alamos County	COC with Controls
LA-SMA-5.91	21-009	1034112467331	Los Alamos County	COC without Controls
LA-SMA-5.91	21-023(c)	1034112467331	Los Alamos County	COC without Controls
LA-SMA-5.91	21-027(d)	1034112467331	Los Alamos County	Pending receipt of COC
LA-SMA-5.361	32-002(b1) *	1034112267263	Los Alamos School Board	COC with Controls

* This Site has been identified as not being on DOE property since the Permittees submitted their permit reapplication package; the Site description for this Site is included in this attachment.

Site ID: **32-002(b1)**
Site Name: **Septic System**
SMA: **LA-SMA-5.361**

SMA Overview:
LA-SMA-5.361 monitors storm water discharges from SWMUs 32-002(b1) and 32-002(b2). The SMA currently does not receive runoff from areas where industrial activities associated with SWMU 32-002(b1) were reported to have occurred. This SMA is a 1.7-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
Former SWMU 32-002(b) is a former septic system that served former buildings 32-1 and 32-2 (LANL 2011, 111806.23). In 2012, former SWMU 32-002(b) was split into SWMU 32-002(b1), which is the portion located on Los Alamos Public Schools property, and SWMU 32-002(b2), which is the portion on DOE property, in order to expedite completion of corrective actions at SWMU 32-002(b1) (NMED 2012, 521773). The septic system was installed directly northwest and slightly upgradient of the SWMU 32-002(a) septic tank, near the edge of Los Alamos Canyon. This system was installed when the SWMU 32-002(a) septic system could no longer meet the usage requirement of the laboratory (building 32-1) and consisted of a reinforced concrete tank, 9 ft wide by 5 ft long by 6 ft deep, (former structure 32-8) (Engineering drawing A5-C116, LASL 1948, 700234) with an outlet drainline that discharged to an outfall at the edge of Los Alamos Canyon (Engineering Drawing A5-C117, LASL 1948, 091749; LANL 1992, 007668; LANL 2011, 111806.23). The influent line from the SWMU 32-002(a) septic system was diverted to the former SWMU 32-002(b) septic system, which also received effluent from former building 32-2, the medical research annex (LANL 2011, 111806.23). The septic tank was decommissioned in 1954 (LANL 1992, 007668). Before the septic tank was removed in 1988, samples of the sludge and liquid were removed and analyzed and found to contain low concentrations of volatile organics and phenols (LANL 1992, 007668). The influent drainline was removed in 1996 (LANL 1996, 059178). Research activities in former building 32-1 involved radionuclides and potentially involved inorganic and organic chemicals (LANL 2011, 111806.23). Because no industrial waste line served former TA-32, it is possible that chemical and radioactive wastes may have been disposed of in sinks and drains connected to the SWMU 32-002(b1) septic system. After LANL activities at the property, the Site was used by Los Alamos County to store equipment and materials used for road work and maintenance, including street sweepings (LANL 2011, 111806.23).

Consent Order investigations are complete for SWMU 32-002(b1); the Site meets industrial risk levels. NMED issued a COC with controls for new SWMU 32-002(b1) in December 2012 (NMED 2012, 521746).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Laboratory chemicals	Radionuclides, volatile organics, phenols
Sanitary wastewater	Low concentrations of inorganic and organic chemicals

Attachment 5

Sites Where No Significant Industrial Materials Were Used and Site Descriptions

The Permittees have reviewed the Site history and historical documents for the Sites included in Table 5-1 and found that significant industrial materials were not used at the Sites. Per the Fact Sheet, Part VII.J, "Sites which are claimed to have no industrial materials remaining will be evaluated and EPA will make the final decision during the permit final decision process." The Permittees are proposing these Sites be deleted from the Individual Permit (Permit or IP) and have provided the Site Monitoring Area (SMA) Overview, Site History Overview, and Potential Use of Industrial Materials for each Site for U.S. Environmental Protection Agency's (EPA's) consideration. Please note this list of Sites was identified as having no significant industrial materials after the IP reapplication was submitted; the list in Table 5-1 is in addition to the Sites identified as having no significant industrial materials initially requested for deletion in the application.

Table 5-1
Sites Where Significant Industrial Materials Were Not Used, or Site Remediation Does Not Impact Storm Water

SMA	Site
LA-SMA-5.51	02-011(b)
LA-SMA-5.51	02-011(c)
CDV-SMA-1.4	16-026(l)
CHQ-SMA-6	33-004(j)
A-SMA-6	33-004(k)
T-SMA-5	35-016(a)
T-SMA-4	35-016(c)
T-SMA-4	35-016(d)
M-SMA-10.01	35-016(e)
M-SMA-10.3	35-016(i)
Pratt-SMA-1.05	35-016(k)
Pratt-SMA-1.05	35-016(l)
M-SMA-12	35-016(p)
CDB-SMA-0.55	46-004(m)
CDB-SMA-1.35	46-004(x)*
M-SMA-3.1	48-007(b)

* Site was removed from the draft Permit as a no discharge Site, SMA samplers were operational during a 25-year, 24-hour storm event but did not collect a sample.

Site ID: **02-011(b)**
Site Name: **Former Drains**
SMA: **LA-SMA-5.51**

SMA Overview:
LA-SMA-5.51 monitors storm water discharges from SWMUs 02-005, 02-006(b), 02-008(a), and 02-009(b) and AOCs 02-003(a), 02-003(e), 02-004(a), 02-006(c), 02-006(d), 02-006(e), 02-011(a), 02-011(b), 02-011(c), and 02-011(d). The SMA currently does not receive runoff from areas where industrial activities associated with AOC 02-011(b) were reported to have occurred. This SMA is a 9.6-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
AOC 02-011(b) consists of two former drains, outfalls, and associated potential soil contamination affiliated with former building 02-19, the stack-gas valve house. One drain was a 9-ft-long × 15-in.-diameter CMP between former building 02-19 and a former drainage basin (former structure 02-35), and the second drain was a 9-ft-long × 24-in.-diameter CMP from former structure 02-35 that drained outside the east fence (LANL 2005, 090631). The drains and structures are shown on engineering drawing C-1718 (LASL 1947, 089677). The stack-gas valve house was in use through 1974 when it became inactive and was removed during 1985 D&D activities (Elder and Knoell 1986, 006670; LANL 2011, 205220). The drains and outfalls remained in place until they were removed and disposed of during 2003 D&D activities (LANL 2005, 090631). There is no information to indicate the drains received anything other than storm water (LANL 1990, 007511).

AOC 02-011(b) was investigated as part of the “Phase II Investigation Report for Middle Los Alamos Canyon Aggregate Area, Revision 2” (N3B 2018, 700091).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Storm water	None

Site ID: **02-011(c)**
Site Name: **Storm Drain**
SMA: **LA-SMA-5.51**

SMA Overview
LA-SMA-5.51 monitors storm water discharges from SWMUs 02-005, 02-006(b), 02-008(a), and 02-009(b) and AOCs 02-003(a), 02-003(e), 02-004(a), 02-006(c), 02-006(d), 02-006(e), 02-011(a), 02-011(b), 02-011(c), and 02-011(d). The SMA currently does not receive runoff from areas where industrial activities associated with AOC 02-011(b) were reported to have occurred. This SMA is a 9.6-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
AOC 02-011(c) is a former storm drain at TA-02 associated with the OWR equipment building [former building 02-44, AOC 02-004(f)] (LANL 2005, 090631). The OWR equipment building operated from 1954 to 1993. The drainline was a 4-in.-diameter VCP installed in 1954 that was approximately 12 ft long and drained to the surface west of the west fence (Engineering drawing C-14930,LASL 1954, 090076). The line was removed and disposed of in 2003 (WD-3 2003, 082646). There is no information to indicate the drains received anything other than storm water (LANL 1990, 007511).

AOC 02-011(c) was investigated as part of the "Phase II Investigation Report for Middle Los Alamos Canyon Aggregate Area, Revision 2" (N3B 2018, 700091).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Storm water	None

Site ID: **16-026(l)**
Site Name: **Outfalls Associated with Former Building 16-220**
SMA: **CDV-SMA-1.4**

SMA Overview:
CDV-SMA-1.4 monitors storm water discharges from SWMUs 16-020, 16-026(l), 16-028(c), and 16-030(c). The SMA receives runoff from SWMU 16-026(l) where industrial activities were reported to have occurred. This SMA is a 15.3-acre watershed consisting of 89% pervious surfaces and 11% impervious surfaces.

Site History Overview:
SWMU 16-026(l) consists of two former outfalls and associated drainlines originating from roof drains on former building 16-220, which was an x-ray facility for HE components (LANL 1995, 057225). Both outfalls received storm water discharges from separate roof drains on the building (LASL 1951, 204459). Engineering drawing ENG-C 15660 shows roof drainage originated from the northeastern and southeastern corners of the building and the east wall contained a steam pit drain (LASL 1951, 204459; LANL 1995, 057225). Floor drains in the building discharged to another outfall [SWMU 16-028(c)]. The SWMU 16-026(l) outfalls could not be located in the field (LANL 1995, 057225). No potential contaminants are listed in the RFI work plan, Addendum 2 (LANL 1995, 057225), although HE was handled in the building. Building 16-220 underwent D&D in 2003 (LANL 2003, 092460).

Consent Order investigations have not yet started for this Site; no decision-level data are available for SWMU 16-026(l). SWMU 16-026(l) will be sampled during the future Cañon de Valle Aggregate Area TA-16 investigation.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Roof drain and steam pit drain discharge	None

Site ID: **33-004(j)**
Site Name: **Drainline and Outfall from Building 33-26**
SMA: **CHQ-SMA-6**

SMA Overview:
CHQ-SMA-6 monitors storm water discharges from SWMUs 33-004(j), 33-006(a), 33-007(b), 33-010(c), 33-010(g), 33-010(h), and 33-014. The SMA receives runoff from areas where industrial activities associated with SWMU 33-004(j) were reported to have occurred. This SMA is an 11.3-acre watershed consisting of 98% pervious surfaces and 2% impervious surfaces.

Site History Overview:
SWMU 33-004(j) consists of a 4-in. steel drainpipe and outfall connected to structure 33-26, a culvert located immediately east of building 33-26, and a drainage channel that trends to the south and empties into Chaquehui Canyon (LANL 1990, 007513; LANL 1995, 051903). The upper portion of the drainage channel where both the outfall pipe and the culvert discharged was cut into tuff (LANL 1990, 007513). The drainpipe is connected to a drain located on the belowgrade concrete pad at the entrance to building 33-26 (LANL 1995, 051903; LANL 2010, 111298.9). The drainline received only storm water as there were no drains within building 33-26 (Santa Fe Engineering Ltd. 1992, 062036). The culvert is situated beneath the unpaved portion of the road that extends beyond building 33-26 (LANL 1995, 051903; LANL 2010, 111298.9). Building 33-26 was an x-unit vault that formerly housed electronic equipment used to control experiments conducted on the shot pad [SWMU 33-006(a)] located directly above the structure (LANL 1995, 051903). Building 33-26 was constructed in 1950 and associated experiments were conducted until the mid-1950s; the vault is now empty (LANL 1990, 007513; LANL 1995, 051903).

SWMU 33-004(j) is included in the Consent Order as part of the Chaquehui Canyon Aggregate Area. Consent Order investigations for this aggregate area have not yet begun. The investigation work plan for Chaquehui Canyon Aggregate Area was approved in March 2011 (LANL 2010, 111298.9). No decision-level data are available for SWMU 33-004(j).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Storm water run-on	None

Site ID: **33-004(k)**
Site Name: **Reported Drainline and Outfall Associated with Building 33-87**
SMA: **A-SMA-6**

SMA Overview:
A-SMA-6 monitors storm water discharges from SWMUs 33-004(k), 33-007(a), and 33-010(a). The SMA currently receives runoff from areas where industrial activities associated with SWMU 33-004(k) were reported to have occurred. This SMA is a 6.4-acre watershed consisting of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMU 33-004(k) is described in the 1990 SWMU report as two parallel drainlines for building 33-87 that merged and discharged to a single outfall located near gun mount 33-116 [SWMU 33-007(a)] (LANL 1990, 007513). The outfall reportedly received discharge from a toilet, sink, floor drains, and an electrical water cooler within the building (LANL 2015, 600531). Engineering drawing ENG C-3304 (LASL 1955, 600499) depicts a cast-iron drainpipe exiting the south wall of the building and extending approximately 125 ft southeast of the building. Building 33-87 was constructed in 1955 to support firing-site experiments that were conducted until the early 1970s (LANL 1997, 071478; LANL 2015, 600531). Attempts to locate the drainline and outfall in 1994 and 1995 using geophysics and test trenches were unsuccessful (LANL 1997, 071478). An inspection of the building performed in 1996 revealed that no floor drains existed in the building. The sink and toilet in the building discharge to septic tank 33-96 [SWMU 33-004(c)], located north of the building (LANL 1997, 071478). Therefore, it is likely that the drainline and outfall never existed (LANL 2015, 600531).

SWMU 33-004(k) is included in the Consent Order as part of the South Ancho Canyon Aggregate Area. Consent Order investigations for this aggregate area have not yet begun. The proposed investigation for this Site is presented in the South Ancho Canyon Aggregate Area investigation work plan, submitted to NMED in August 2015 (LANL 2015, 600531). No decision-level data are available for SWMU 33-004(k).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
None	Not applicable

Site ID: **35-016(a)**
Site Name: **Drain and Outfall from Building 35-34**
SMA: **T-SMA-5**

SMA Overview:
T-SMA-5 monitors storm water discharges from SWMUs 35-004(a), 35-009(a), 35-016(a), and 35-016(q). The SMA currently does not receive runoff from areas where industrial activities associated with SWMU 35-016(a) were reported to have occurred. This SMA is a 1.4-acre watershed consisting of 70% pervious surfaces and 30% impervious surfaces.

Site History Overview:
SWMU 35-016(a) is a former NPDES-permitted outfall (04A089) that originally consisted of an 8-in.-diameter metal pipe with a valve and a 6-in. VCP placed in a trench cut into the tuff that discharged into Ten Site Canyon (LASL 1955, 602059; LANL 1996, 055075). The outfall was established in 1958 to handle noncontact cooling water from the sodium testing building (35-34) and was eliminated from the NPDES permit in 1985 when discharges to the outfall ceased (LANL 1992, 007666). The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). The trench now serves as a storm water collection channel for a small area on the south side of Ten Site Mesa at TA-35. SWMU 35-016(a) discharges to the same location as the SWMU 35-016(q) storm water outfall in Ten Site Canyon. Aerial photographs from 1965 show a diagonal trench extending from the north end of SWMU 35-016(a) in a southeasterly direction that appears to connect with the north end of SWMU 35-016(q). Aerial photographs from 1974 show that the diagonal trench and approximately two-thirds of the northern portion of the SWMU were no longer present and may have been backfilled. The mid-90s aerial photographs show this Site to be much the same as it appeared in 1974 (LANL 1996, 055075). The outfall was inspected during the RFI and the metal pipe and valve were seen to be extending from a trench at the edge of the mesa (Koch 1994, 045284).

Consent Order investigations are complete for SWMU 35-016(a). The Site meets residential risk levels. A request for a COC was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **35-016(c)**
Site Name: **Drainlines and Outfalls from Building 35-67**
SMA: **T-SMA-4**

SMA Overview:
T-SMA-4 monitors storm water discharges from SWMUs 35-004(a), 35-009(a), 35-016(c), and 35-016(d). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-016(c) were reported to have occurred. This SMA is a 3.2-acre watershed consisting of 70% pervious surfaces and 30% impervious surfaces.

Site History Overview:
SWMU 35-016(c) consists of two former NPDES-permitted outfalls (04A088 and 04A012), established in 1964 to discharge noncontact cooling water from building 35-67, which was a warehouse (LANL 1992, 007666). The drainline to one outfall (NPDES No. 04A088) ran about 75 ft southward to its point of discharge into Ten Site Canyon. The other outfall (NPDES No. 04A012) ran about 125 ft from building 35-67 to its point of discharge into Ten Site Canyon (LANL 1992, 007666). The two outfalls were combined by 1985. The noncontact cooling water was from building cooling systems and was not process specific. The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). During the 1995-1996 RFI, the outfall was not located and believed to be covered with construction debris. A sign labeled “NPDES EPA 04A012” was noted at the edge of the paved parking area between building 35-67 and the southern edge of Ten Site Mesa (LANL 1996, 055075). No other outfalls or pipelines were located south of building 35-67 (Koch 1994, 045284). The outfall was deactivated in 1987 (LANL 1990, 007511).

The Consent Order investigation for SWMU 35-004(a) is complete; the Site meets residential risk levels. A COC was requested from NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **35-016(d)**
Site Name: **Drain and Outfall from Building 35-46**
SMA: **T-SMA-4**

SMA Overview:
T-SMA-4 monitors storm water discharges from SWMUs 35-004(a), 35-009(a), 35-016(c), and 35-016(d). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-016(d) were reported to have occurred. This SMA is a 3.2-acre watershed consisting of 70% pervious surfaces and 30% impervious surfaces.

Site History Overview:
SWMU 35-016(d) is a former NPDES-permitted outfall (04A087) constructed in 1962 to handle noncontact cooling water from the reactor components development building (35-46) (LASL 1961, 602058; LANL 1992, 007666). The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454).

By 1990, this outfall had been removed from the NPDES permit (LANL 1990, 007513). The drainline runs about 50 ft southward to its point of discharge into Ten Site Canyon (LANL 1992, 007666). During the 1995–1996 RFI, the outfall was located and found to be a 6- to 8-in.-diameter VCP pipe, located approximately 3 ft below and west of a CMP that discharges runoff from the access road above the outfall (Koch 1994, 045284; LANL 1996, 055075). Engineering drawing ENG-C 30154 shows the location of the outfall south of building 35-46 (LASL 1961, 602058).

SWMU 35-016(d) was investigated along with SWMU 35-016(c). The Consent Order investigation for SWMU 35-016(d) is complete. A COC was requested from NMED in August 2011. NMED granted the Site a COC with controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **35-016(e)**
Site Name: **Inactive Outfall**
SMA: **M-SMA-10.01**

SMA Overview:
M-SMA-10.01 monitors storm water discharges from AOC 35-016(e). The SMA currently receives runoff from areas where industrial activities associated with AOC 35-016(e) were reported to have occurred. This SMA is a 0.35-acre watershed consisting of 99.8% pervious surfaces and 0.2% impervious surfaces.

Site History Overview:
AOC 35-016(e) is a former NPDES-permitted outfall (04A090) established in 1977 to discharge only noncontact cooling water from the chemical laser facility (building 35-85) (LANL 1990, 007513; LANL 1992, 007666). The outfall consists of two adjacent 6-in.-diameter steel pipes, insulated with fiberglass and wrapped with protective aluminum coating, that originate from cooling towers on the roof of building 35-85. The outfall is located north of building 35-85 on the rim of Mortandad Canyon (Engineering Drawing C44221, LANL 1983, 602090). The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). The volume of water released is not documented, but significant erosion was evident below the outfall during the 1995 RFI (LANL 1996, 054402). The outfall operated until the early 1990s (LANL 1996, 054402).

The AOC 35-016(e) outfall is collocated with SWMU 35-008, a former canyon-side disposal area north of building 35-6, and SWMU 35-014(e1), a former dielectric oil spill north of building 35-85. Consent Order samples collected in 2004 to characterize SWMUs 35-008 and 35-014(e1) were also used to characterize AOC 35-016(e). All detected inorganic and organic chemical concentrations and radionuclide activities from the 2004 samples for SWMUs 35-008 and 35-014(e) were below residential SSLs and SALs. A COC request for AOC 35-016(e) was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **35-016(i)**
Site Name: **Operational Release**
SMA: **M-SMA-10.3**

SMA Overview:
M-SMA-10.3 monitors storm water discharges from SWMU 35-016(i) and AOC 35-014(e2). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-016(i) were reported to have occurred. This SMA is a 1.6-acre watershed consisting of 37% pervious surfaces and 63% impervious surfaces.

Site History Overview:
SWMU 35-016(i) is a storm water outfall that originates from storm water drains south of building 35-85 along Pecos Drive. This outfall is an 18-in.-diameter CMP that discharges to Mortandad Canyon and was installed around 1977 when building 35-85 was constructed (LANL 1985, 602093). The area below the outfall also receives surface runoff from the eastern part of AOC 35-014(e2) and may have provided a pathway for oil spills associated with the former waste-oil impoundment (LANL 1996, 054402).

Previous investigations were performed at SWMU 35-005(a), which was the source for contamination for AOC 35-014(e2) and ultimately SWMU 35-016(i). In 1985, soil samples were collected from oil-stained areas around the impoundment and analyzed for PCBs. The samples did not contain PCB concentrations greater than the detection limit of 1 ppm (LANL 1990, 007513). In 1990, investigations were performed after decommissioning and removal of the impoundment. After the impoundment was removed, soil beneath the impoundment was found to contain VOCs. Therefore, the soil was excavated and removed to a depth of 1 ft to 2 ft. To verify the cleanup, soil samples were collected at the surface and from 5-ft intervals from a borehole that was drilled to a depth of 45 ft. TPH was detected in the surface samples. It was not detected in the subsurface samples (LANL 1996, 054402).

In September 2013, NMED granted SWMU 35-016(i) a COC with controls for storm water monitoring under the Consent Order.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
None (storm water)	None

Site ID: **35-016(k)**
Site Name: **Inactive Outfall**
SMA: **Pratt-SMA-1.05**

SMA Overview:
Pratt-SMA-1.05 monitors storm water discharges from SWMUs 35-003(h), 35-003(p), 35-004(h), 35-009(d), 35-016(k), and 35-016(m) and AOCs 35-003(r) and 35-016(l). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-016(k) were reported to have occurred. This SMA is a 10.3-acre watershed consisting of 86% pervious surfaces and 14% impervious surfaces.

Site History Overview:
SWMU 35-016(k) is a formerly NPDES permitted inactive outfall (04A116) that handled cooling water from the gas laser building (building 35-29). The outfall was installed in 1961 and deactivated in 1987 (LANL 1990, 007513). It handled once-through cooling water from a closed heat-exchange system that served a gas laser in building 35-29 (LANL 1992, 007666). The NPDES permit outfall category 04A was

for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did not have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). The drainline runs eastward and discharges into a riprap-lined channel as AOC 35-016(l), which drains into a small tributary of Ten Site Canyon informally known as Pratt Canyon (LANL 2002, 073092). Stained areas from past dielectric oil spills [AOCs 35-014(c) and 35 014(d)] are present in the source areas for the AOC 35-016(l) storm drain channels (LANL 1992, 007666).

In August 2011, a COC request under the Consent Order was submitted to NMED for SWMU 35-016(k). NMED granted SWMU 35-016(k) a COC with controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **35-016(l)**
Site Name: **Storm Drain**
SMA: **Pratt-SMA-1.05**

SMA Overview:
Pratt-SMA-1.05 monitors storm water discharges from SWMUs 35-003(h), 35-003(p), 35-004(h), 35-009(d), 35-016(k), and 35-016(m) and AOCs 35-003(r) and 35-016(l). The SMA currently receives runoff from areas where industrial activities associated with AOC 35-016(l) were reported to have occurred. This SMA is a 10.3-acre watershed consisting of 86% pervious surfaces and 14% impervious surfaces.

Site History Overview:
AOC 35-016(l) consists of active daylight discharge channels that were established in 1961 to handle storm water runoff from building 35-29 and sterilized water leaks from an ultraviolet water sterilizer in room 001A of building 35-29 (LANL 1992, 007666). The 1990 SWMU report indicated oil spills have occurred near building 35-29 (LANL 1990, 007513). Stained areas from past dielectric oil spills [AOCs 35-014(c) and 35-014(d)] are present in the source areas for these channels (LANL 2002, 073092). Another area at the head of the channel, AOC 35-018(a), is the site of a transformer near the southwest corner of building 35-29 that leaked transformer oil. A VCA conducted there removed soil contaminated with PCBs and PAHs (LANL 2002, 073092). During a 1988 site visit, the concrete catch basin for these drains had gamma radiation readings that exceeded FVs. The drainages flow eastward to a 24-in. CMP outfall located on the north side of the security fence for building 35-27, discharging to a riprap-lined channel draining into Pratt Canyon [the same channel that SWMU 35-016(k) discharges to] (LANL 2002, 073092).

Consent Order Phase I investigation sampling is complete. A COC request for AOC 35-016(l) was submitted to NMED in August 2011. NMED granted AOC 35-016(l) a COC with controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Storm water and sterilized water	None

Site ID: **35-016(p)**
Site Name: **Outfall from Building 35-27**
SMA: **M-SMA-12**

SMA Overview:
M-SMA-12 monitors storm water discharges from SWMU 35-016(p). The SMA currently encompasses approximately 90% of SWMU 35-016(p) where any industrial activities were reported to have occurred. This SMA is a 0.45-acre watershed consisting of 30% pervious surfaces and 70% impervious surfaces.

Site History Overview:
SWMU 35-016(p) is an active storm water system that has handled storm water runoff from the roof of the Nuclear Safeguards Research Building (35-27) since it was constructed in 1964. The north and east sides of building 35-27 are equipped with 6-in.-diameter roof leaders, which direct roof runoff into CMP storm drains. The storm drains connect to a storm drain manhole located approximately 25 ft northeast of the northeast corner of building 35-27. An 18-in.-diameter CMP storm drain originates at this manhole and extends northward toward the edge of Ten Site Mesa. The outfall is located 40 ft below the mesa edge on the south slope of Mortandad Canyon, approximately 60 ft north of the security fence around building 35-27 (Koch 1994, 045284; LANL 1996, 055075; Sontag et al. 1996, 054766). The roof drains, drainline, and outfall are shown in engineering drawing ENG-C 35314 (LASL 1964, 602055).

Phase I Consent Order investigations are complete for SWMU 35-016(p); the Site meets residential risk levels. NMED issued a COC without controls in October 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Storm water	None

Site ID: **46-004(m)**
Site Name: **Outfall from Building 46-30**
SMA: **CDB-SMA-0.55**

SMA Overview:
CDB-SMA-0.55 monitors storm water discharges from SWMUs 46-004(g), 46-004(m), 46-004(s), and 46-006(f). The SMA currently receives runoff from areas where industrial activities associated with SWMU 46-004(m) were reported to have occurred. This SMA is a 3.6-acre watershed consisting of 54% pervious surfaces and 46% impervious surfaces.

Site History Overview:
SWMU 46-004(m) is a former NPDES-permitted outfall (04A013) located approximately 60 ft north of building 46-30 at TA-46. The outfall protrudes from a 10-ft-deep bank on the hillside north of building 46-30 (LANL 1993, 020952; Santa Fe Engineering Ltd. 1994, 101839). The outfall discharged effluent from an industrial drainline in building 46-30 to a ditch at the foot of the bank (LANL 1993, 020952). The ditch channeled wastewater to a storm drain culvert that discharges into Cañada del Buey (LANL 1993, 020952). Building 46-30 was constructed as a hydraulics laboratory and contained a high-bay area with a crane, an actuator test area, and a small machine shop (LANL 1993, 020952). Drains contributing to this outfall included four floor sinks, a floor drain, a trench drain, and four roof drains (Santa Fe Engineering Ltd. 1994, 101839). During a 1994 inspection, only the floor drain and roof drains were being used (Santa Fe Engineering Ltd. 1994, 101839). The floor sinks were plugged and the trench drain was not being used (Santa Fe Engineering Ltd. 1994, 101839). The floor drain received once-

through noncontact cooling water from an air compressor and the roof drains received storm water (Santa Fe Engineering Ltd. 1994, 101839).

The NPDES permit required monitoring four times per year for total residual chlorine and annually for water quality parameters (EPA 1994, 243473). In December 1995, the outfall was removed from the NPDES permit (LANL 1999, 064617). Before the outfall was removed from the NPDES permit, all discharges to the outfall from building 46-30 ceased (LANL 2008, 101803).

NMED issued a COC without controls under the Consent Order for this Site in July 2013.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None
Roof drainage	None

Site ID: **46-004(x)**
Site Name: **Outfall from Building 46-31**
SMA: **CDB-SMA-1.35**

SMA Overview:
CDB-SMA-1.35 monitors storm water discharges from SWMUs 46-004(a2), 46-004(u), 46-004(v), 46-004(x), 46-006(d), and 46-008(f). The SMA currently receives runoff from areas where industrial activities associated with SWMU 46-004(x) were reported to have occurred. This SMA is a 0.65-acre watershed consisting of 84% pervious surfaces and 16% impervious surfaces.

Site History Overview:
SWMU 46-004(x) is an outfall located approximately 30 ft north of building 46-31 at TA-46. The outfall consists of a 6-in.-diameter pipe that extends approximately 1 ft beyond the steep canyon slope and discharges to a 1- to 2-ft-wide drainage that stretches to the toe of the slope of Cañada del Buey (LANL 1996, 054929). The OU 1140 RFI work plan indicated that this outfall was probably an industrial drain that serviced floor and/or sink drains in building 46-31 (LANL 1993, 020952; LANL 1996, 054763). An inspection of the drains in building 46-31 showed that this drainline only received roof drainage and was not connected to floor drains or sink drains (Santa Fe Engineering Ltd. 1994, 101839). Sink and floor drains were formerly discharged to outfall 03A043 [SWMU 46-004(y)].

Phase I Consent Order sampling is complete for SWMU 46-004(x). SWMU 46-004(x) was recommended for corrective action complete in the “Supplemental Investigation Report for Upper Cañada del Buey Aggregate Area,” submitted to NMED in 2016 (LANL 2016, 601745). SWMU 46-004(x) will be eligible for a COC upon approval of the report by NMED.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Roof drains	None

Site ID: **48-007(b)**
Site Name: **Operational Release**
SMA: **M-SMA-3.1**

SMA Overview:
M-SMA-3.1 monitors storm water discharges from SWMU 48-007(b) and AOC 48-001. The SMA currently encompasses all of SWMU 48-007(b) where industrial activities were reported to have occurred. This SMA is a 0.011-acre watershed consisting of 85% pervious surfaces and 15% impervious surfaces.

Site History Overview:
SWMU 48-007(b) is an outfall that formerly discharged noncontact cooling water used to cool a magnet and laser housed in the main radiochemistry laboratory (building 48-1) (LANL 2010, 109180.28). Previously, the outfall discharged noncontact cooling water used to cool magnets in building 48-1 (LANL 1992, 007666; LANL 1995, 050289). This outfall is located north of building 48-1 and formerly discharged up to 4300 gal./day of cooling water (LANL 1990, 007513, ENG-R5125; LANL 2010, 109180.28). A sample of water being discharged from the outfall was collected during the 1993 RFI. Metals detected in the water sample were barium (11 µg/L), copper (10 µg/L), lead (2.7 µg/L), silver (13 µg/L), and zinc (30 µg/L) (LANL 1995, 050289). Water discharged from the outfall flowed into Mortandad Canyon (LANL 1992, 007666). According to the "Investigation Report for Upper Mortandad Canyon Aggregate Area, Revision 1," this outfall formerly operated as an NPDES-permitted outfall (04A016) but was removed from the NPDES permit on September 19, 1997, because industrial wastewater discharges were discontinued (LANL 2010, 109180). The NPDES permit required quarterly monitoring for residual chlorine and annual monitoring for water quality parameters but did not require monitoring for any process-specific constituents (EPA 1994, 243473). Presently, the outfall receives only storm water (LANL 2007, 098955).

Phase I Consent Order investigations are complete for SWMU 48-007(b). All detected constituents were below residential SSLs and SALs, except benzo(a)pyrene, which was detected slightly above the residential SSL in one surface sample. SWMU 48-007(b) meets residential risk levels and was recommended for corrective action complete without controls in the Upper Mortandad Canyon Aggregate Area supplemental investigation report, submitted to NMED in December 2015 (LANL 2015, 601063). SWMU 48-007(b) will be eligible for a COC upon approval of the report by NMED.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Attachment 6

Sites with a Certificate of Completion from the New Mexico Environment Department under the Compliance Order on Consent that Qualify for Long-Term Stewardship and Site Descriptions

The following sites have received a certificate of completion (COC) from the New Mexico Environment Department (NMED) under the Compliance Order on Consent (Consent Order), and at least one compliance storm water sample has been collected at the site monitoring area (SMA). The 2019 Draft Individual Permit (Permit or IP) includes a new compliance category, Long-Term Stewardship, for Sites that do not require corrective action yet also do not meet the requirements for deletion from the Permit (Part I.C.3). All Sites with COCs from NMED and storm water sample results were evaluated using the criteria laid out in Part I.C.3 of the Permit. In addition to evaluating the storm water data, decision-level Consent Order soil data located at the surface to 3 ft below ground surface (bgs) (due to erosion potential from storm water runoff) was evaluated for each Site. If there were exceedances of the soil background threshold value (BTV), or, for instances where the pollutant of concern (POC) did not have a BTV, an exceedance of 10% of the soil screening level (SSL), then the Permittees ensured that that POC had been monitored for in storm water. The Sites included in Table 6-1 qualify for long-term stewardship in the draft Permit. The Permittees are requesting these Sites be removed from the Permit. Site descriptions and additional information about these Sites is included after Table 6-1; these Sites have been removed from the redline/strikeout version of Appendix A included in Attachment 2.

Table 6-1
Sites with COC from NMED and Non-Site-Related Target Action Level Exceedance

SMA	Site	COC Type	Control	Site on DOE Property?[a]
R-SMA-2.5	00-011(a)	COC with Controls (NMED 2013, 522505)	Conduct one additional biennial survey in December 2013; Install a kiosk sign at the entrance to Rendija Canyon that describes the history of the site and identifies the types of potential ordnance and associated debris that may be encountered, safety precautions and contact information, if ordnance encountered; Install signage within the Rendija parcel to guide and communicate safety practices to visitors; Conduct explosive and unexploded ordnance awareness training to LAC officials	Yes
T-SMA-7	04-003(b)	COC without Controls (NMED 2015, 600446)		Yes
M-SMA-13[b]	05-001(c)	COC without Controls (NMED 2015, 600917)		Yes
M-SMA-12.6	05-004	COC without Controls (NMED 2019, 700344)		Yes
B-SMA-0.5	10-001(a)	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-001(b)	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-001(c)	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-001(d)	COC without Controls (NMED 2017, 602136)		No

Table 6-1 (continued)

SMA	Site	COC Type	Control	Site on DOE Property?[a]
B-SMA-0.5	10-004(a)	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-004(b)	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-008	COC without Controls (NMED 2017, 602136)		No
B-SMA-0.5	10-009	COC without Controls (NMED 2017, 602136)		No
CDV-SMA-1.3	16-017(a)-99	COC without Controls (NMED 2016, 601692)		Yes
CDV-SMA-1.2[b]	16-017(b)-99	COC without Controls (NMED 2016, 601692)		Yes
CDV-SMA-1.3	16-026(m)	COC without Controls (NMED 2016, 601692)		Yes
CDV-SMA-1.2[b]	16-029(k)	COC without Controls (NMED 2016, 601692)		Yes
LA-SMA-6.3	21-006(b)	COC without Controls (NMED 2018, 700067)		Yes
LA-SMA-5.91	21-009	COC without Controls (NMED 2016, 601146)		No
LA-SMA-5.91	21-023(c)	COC without Controls (NMED 2019, 700486)		No
DP-SMA-0.6	21-024(l)	COC with Controls (NMED 2018, 700067)	Site use restricted to industrial use only	Yes
LA-SMA-5.361	32-002(b1)[c]	COC with Controls (NMED 2012, 521746)	Land must be maintained as industrial	No
M-SMA-10	35-008	COC without Controls (NMED 2015, 600985)		Yes
T-SMA-6.8	35-010(e)	COC without Controls (NMED 2015, 600985)		Yes
M-SMA-10	35-014(e)	COC without Controls (NMED 2015, 600985)		Yes
M-SMA-10.01	35-016(e)	COC without Controls (NMED 2015, 600985)		Yes
A-SMA-2.7	39-002(c)	COC without Controls (NMED 2010, 110430)		Yes
S-SMA-4.1	53-014	COC without Controls (NMED 2013, 523159)		Yes
P-SMA-2	73-002	COC with Controls (NMED 2007, 098441)	Permittees shall therefore install permanent and appropriate storm water controls, which will prevent the down gradient transport of contaminants via storm water. The Permittees must submit a work plan for installation of the storm water controls by September 20, 2007. The work plan shall include a description of all controls proposed for installation at CU 73-002-99 and a proposed inspection schedule for the proposed controls.	No

Table 6-1 (continued)

SMA	Site	COC Type	Control	Site on DOE Property?[a]
P-SMA-2	73-006	COC with Controls (NMED 2007, 098441)	Permittees shall therefore install permanent and appropriate storm water controls, which will prevent the down gradient transport of contaminants via storm water. The Permittees must submit a work plan for installation of the storm water controls by September 20, 2007. The work plan shall include a description of all controls proposed for installation at CU 73-002-99 and a proposed inspection schedule for the proposed controls.	No
R-SMA-0.5	C-00-020	COC without Controls (NMED 2012, 520388)		No

[a] Sites not on DOE property that qualify for Long-Term Stewardship have been removed from the draft Permit, Site descriptions of these Sites are included below.

[b] Storm water samples collected at these SMAs yielded no target action level exceedances.

[c] 32-002(b1) was identified as a Site not on DOE property following the application submission, the Permittees are requesting this Site be removed from the final Permit because it is not on DOE property, has a COC without controls, and qualifies for Long-Term Stewardship.

Site ID: **00-011(a)**
Site Name: **Former Mortar Impact Area**
SMA: **R-SMA-2.5**

SMA Overview:
R-SMA-2.5 monitors storm water discharges from SWMU 00-011(a). The SMA currently receives runoff from areas where industrial activities associated with SWMU 00-011(a) (i.e., mortar impacts) were reported to have occurred. This SMA is a 29.3-acre watershed that consists of 96% pervious surfaces and 4% impervious surfaces.

Site History Overview:
SWMU 00-011(a) is a 29-acre former mortar-impact area located on GSA land about 0.4 mi east of the Sportsmen's Club small-arms firing range (AOC 00-015) in Rendija Canyon. The Site was a mortar-impact area in the mid-1940s for 60- and 81-mm-rounds 0; operations ceased in the late 1940s (LANL 1990, 007511). SWMU 00-011(a) is located in a relatively flat open grassland with scattered shrubs and trees (LANL 2007, 099954). The Site is bisected east to west by Rendija Road (unpaved) (LANL 2007, 099954). On the north side of the road, the Site has a gradual to steep slope to the ephemeral stream channel (LANL 2007, 099954). The slope is covered by mulch consisting of downed trees that burned during the 2000 Cerro Grande fire (LANL 2007, 099954). Although the Site is fenced and posted with DOE "No Trespassing" signs, evidence indicates the Site is used for recreational activities such as dirt-biking and target practice (LANL 2007, 099954). During the 1993 Phase I RFI conducted at SWMU 00-011(a), the Site was surveyed for UXO and ordnance explosive waste; two live mortar rounds were found and destroyed (LANL 1994, 059427). Other materials recovered during the ordnance sweep included approximately 2400 pieces of ordnance fragments and three times as much scrap material (LANL 1994, 059427). The recovered fragments appear to be made of iron, copper, lead, and other metals. UXO materials would also contain HE. Geomorphic mapping was conducted including mapping of all drainage channels that drained the area enclosed within the boundaries of the Site and the areas with large quantities of ordnance fragments (LANL 1994, 059427).

Consent Order investigations are complete for SWMU 00-011(a); the Site meets residential risk levels. NMED issued a COC with controls for SWMU 00-011(a) in May 2013. The controls require performance of triennial ordnance surveys, which were performed in 2013 and 2016.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
UXO	Copper, Lead, Iron, HE
Exploded Ordnance	Copper, Lead, Iron, HE

Site ID: **04-003(b)**
Site Name: **Former Drainline and Outfall**
SMA: **T-SMA-7**

SMA Overview:
T-SMA-7 monitors storm water discharges from SWMU 04-003(b). The SMA currently receives runoff from areas where industrial activities associated with SWMU 04-003(b) were reported to have occurred. This SMA is a 0.44-acre watershed that consists of 100% pervious surfaces.

Site History Overview:
SWMU 04-003(b) is the former drainline and outfall from former laboratory control building 04-3. A 6-in.-diameter VCP, placed into tuff, directed sanitary wastewater from building 04-3 to an outfall in

Mortandad Canyon, approximately 20 ft north of building 04-3 (LANL 2004, 086540). Building 04-3 was abandoned in 1946 making the outfall inactive. No radioactivity was detected at the outfall during a 1953 survey (LANL 1990, 007511). Building 04-3 was demolished and partially removed in 1956. In 1985, as part of the LASCP, the SWMU 04-003(b) drainline was removed. During a 1988 radiation survey, gross gamma activity was detected at approximately two times background (LANL 2004, 086540).

Consent Order investigations for SWMU 04-003(b) are complete; the Site meets residential and recreational risk levels. A request for a COC for SWMU 04-003(b) was submitted to NMED in August 2011. NMED granted the Site a COC without controls on May 18, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used or Managed at the Site	Associated Constituents
Sanitary wastewater	Low concentrations of metals and organic chemicals; low activities of radionuclides

Site ID: **05-001(c)**
Site Name: **Former Firing Site**
SMA: **M-SMA-13**

SMA Overview:
M-SMA-13 monitors storm water discharges from AOC 05-001(c). The SMA currently encompasses approximately a quarter of the SWMU 05-001(c) area. This SMA is a 4.11-acre watershed that consists of 100% pervious surfaces.

Site History Overview:
AOC 05-001(c) is a former firing point designated as the larger Beta Far Point Site at TA-05. The Site is located approximately 20 to 30 ft below the edge of the mesa and above an unnamed tributary to Mortandad Canyon. A depression in the tuff bedrock, probably caused by the test shots, marks the firing point location. The Site was used for half-scale tests of the Trinity device. Between 1944 and 1945, two to three tests were conducted, each of which involved approximately 2500 lb of HE. Typical test devices contained natural uranium. The Site was closed in the spring of 1945 (Ulery 1995, 049934). A Site inspection in 1995 revealed numerous pieces of wire, cable, and deformed metal fragments at and around the Site (Ulery 1995, 049934). The Consent Order investigation documented that the Site poses no risk under a residential scenario, and AOC 05-001(c) was recommended for corrective action complete without controls in the approved investigation report (LANL 2008, 102187). A COC without controls was received in September 2015 (NMED 2015, 600917).

AOC 05-001(c) was investigated in 1995 and later as part of the Middle Mortandad/Ten Site Aggregate Area investigation in 2004 and 2005. The approved 2010 investigation report concluded that based on the human health risk-screening assessment results, no potential unacceptable risks or doses from COPCs exist at AOC 05-001(c). Additionally, no potential ecological risk was found for any receptor. All detected chemicals concentrations and radionuclides activities were below residential SSLs and SALs.

No further investigation or remediation activities are warranted at AOC 05-001(c); LANL recommended this Site as corrective action complete consistent with residential use in the approved investigation report in 2011. NMED granted the Site a COC without controls on September 16, 2015.

Potential Site Use of Industrial Materials

Known or Potential Industrial Material Used at the Site	Associated Constituents
Test Devices	Uranium
Debris (wire, cable, metal fragments, exploded ordnance)	Aluminum, barium, copper, iron, lead, and HE

Site ID: **05-004**
Site Name: **Former Septic System**
SMA: **M-SMA-12.6**

SMA Overview:
M-SMA-12.6 monitors storm water discharges from SWMU 05-004. The SMA currently receives runoff from areas where industrial activities associated with SWMU 05-004 were reported to have occurred. This SMA is a 0.37-acre watershed that consists of 100% pervious surfaces.

Site History Overview:
SWMU 05-004 consists of a former septic system that served former building 05-1 (a laboratory). The septic system consisted of a septic tank (former structure 05-13), associated drainlines, and an outfall at the west end of former TA-05 near the edge of Mortandad Canyon. The septic tank was constructed of reinforced concrete and measured 5 ft × 5 ft × 7 ft deep (LANL 1990, 007511) and the outfall consists of a 2-ft-wide × 1-ft-deep trench cut into the tuff at the edge of the mesa top (Koch 1994, 048943.12). As-built drawings showed an inlet line running from building 05-1 to the septic tank and an outlet line discharging south to an unnamed tributary of Mortandad Canyon (LANL 1992, 007666). A 1952 memorandum states that the septic system was no longer needed to support use of building 05-1; structure 05-13 was returned to the Engineering Division for deposition (Vogt 1952, 004379). The septic system was constructed in May 1948 and was abandoned in place in 1959 and the septic tank and drainlines were subsequently removed (LANL 1992, 007666). Activities conducted during the 1985 LASCP at TA-05 confirmed the removal of the septic tank and drainlines (NUS Corporation 1990, 012571). SWMU 05-004 has been investigated under the Consent Order and recommended for corrective action complete without controls in the approved investigation report for Lower Mortandad/Cedro Canyons Aggregate Area.

A request for COC was submitted to NMED in June 2015. In October 2015, NMED responded with the requirement of submitting a construction worker scenario human health risk assessment before obtaining a COC. A construction worker risk assessment and request for COC without controls was submitted to NMED in December 2018. NMED granted the Site a COC without controls in May 2019.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Industrial wastewater	Metals, organic chemicals

Site ID: **10-001(a)**
Site Name: **Firing Site (inactive)**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-001(a) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMUs 10-001(a–d) are the former asphalt shot pads that made up two firing sites located in the western third of former TA-10 in Bayo Canyon. The firing sites associated with SWMUs 10-001(a–d) each consisted of five structures: a battery building (power source), a fire control building, an electronics chamber, an X-unit chamber, and an inspection building (LANL 2008, 102793). The SWMU 10-001(a) shot pad was used in rotation with the SWMU 10-001(b–d) shot pads from 1943–1961 for experiments using HE in conjunction with nuclear weapons research (LANL 2005, 089658). Because of the residual radioactive material remaining at the Site after a shot, the Site could not be used again for approximately 1 mo, so shots were rotated among the four sites (LASL 1947, 021563). Materials used in the shots included HE, natural uranium, uranium-238, strontium-90, lanthanum-140 (now decayed), lead, aluminum, steel, and possibly beryllium (LANL 1990, 007512). After a shot, residual material was moved to the SWMU 10-005 disposal pit located near the firing sites. Because of the proximity and overlapping dispersion areas of each firing site and use of the disposal pit, source terms cannot be separated by SWMU or AOC. Former TA-10 underwent extensive D&D, including razing all structures, from 1961 to 1963 (LANL 2005, 089658). All excavations were backfilled and the Site graded. All concrete structures associated with each firing site were demolished using dynamite (Courtright 1963, 004771). All explosives testing ceased in 1961 (LANL 1992, 007668).

The Site was released to Los Alamos County in 1967 (LANL 1992, 007668). SWMU 10-001(a) was investigated along with SWMUs 10-001(b–d) and AOC 10-008. Consent Order investigations are complete for SWMU 10-001(a). The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Experimental shot debris	HE, natural uranium, uranium-238, strontium-90, lead, aluminum, steel, and possibly beryllium

Site ID: **10-001(b)**
Site Name: **Firing Site (inactive)**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-001(b) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMUs 10-001(a–d) are the former asphalt shot pads that made up two firing sites located in the western third of former TA-10 in Bayo Canyon. The firing sites associated with SWMUs 10-001(a–d) each consisted of five structures: a battery building (power source), a fire control building, an electronics chamber, an X-unit chamber, and an inspection building (LANL 2008, 102793). The SWMU 10-001(b) shot pad was used in rotation with the SWMU 10-001(a, c, d) shot pads from 1943–1961 for experiments using HE in conjunction with nuclear weapons research (LANL 2005, 089658). Because of the residual radioactive material remaining at the Site after a shot, the Site could not be used again for approximately 1 mo, so shots were rotated among the four sites (LASL 1947, 021563). Materials used in the shots included HE, natural uranium, uranium-238, strontium-90, lanthanum-140 (now decayed), lead, aluminum, steel, and possibly beryllium (LANL 1990, 007512). After a shot, residual material was moved to the SWMU 10-005 disposal pit located near the firing sites. Because of the proximity and overlapping

dispersion areas of each firing site and use of the disposal pit, source terms cannot be separated by SWMU or AOC. Former TA-10 underwent extensive D&D, including razing all structures, from 1961 to 1963 (LANL 2005, 089658). All excavations were backfilled and the Site graded. All concrete structures associated with each firing site were demolished using dynamite (Courtright 1963, 004771). All explosives testing ceased in 1961 (LANL 1992, 007668).

The Site was released to Los Alamos County in 1967 (LANL 1992, 007668). SWMU 10-001(b) was investigated along with SWMUs 10-001(a, c, d) and AOC 10-008. Consent Order investigations are complete for SWMU 10-001(b). The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Experimental shot debris	HE, natural uranium, uranium-238, strontium-90, lead, aluminum, steel, and possibly beryllium

Site ID: **10-001(c)**
Site Name: **Firing Site (inactive)**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-001(c) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMUs 10-001(a–d) are the former asphalt shot pads that made up two firing sites located in the western third of former TA-10 in Bayo Canyon. The firing sites associated with SWMUs 10-001(a–d) each consisted of five structures: a battery building (power source), a fire control building, an electronics chamber, an X-unit chamber, and an inspection building (LANL 2008, 102793). The SWMU 10-001(c) shot pad was used in rotation with the SWMU 10-001(a, b, d) shot pads from 1943–1961 for experiments using HE in conjunction with nuclear weapons research (LANL 2005, 089658). Because of the residual radioactive material remaining at the Site after a shot, the Site could not be used again for approximately 1 mo, so shots were rotated among the four sites (LASL 1947, 021563). Materials used in the shots included HE, natural uranium, uranium-238, strontium-90, lanthanum-140 (now decayed), lead, aluminum, steel, and possibly beryllium (LANL 1990, 007512). After a shot, residual material was moved to the SWMU 10-005 disposal pit located near the firing sites. Because of the proximity and overlapping dispersion areas of each firing site and use of the disposal pit, source terms cannot be separated by SWMU or AOC. Former TA-10 underwent extensive D&D, including razing all structures, from 1961 to 1963 (LANL 2005, 089658). All excavations were backfilled and the Site graded. All concrete structures associated with each firing site were demolished using dynamite (Courtright 1963, 004771). All explosives testing ceased in 1961 (LANL 1992, 007668). The Site was released to Los Alamos County in 1967 (LANL 1992, 007668).

SWMU 10-001(c) was investigated along with SWMUs 10-001(a, b, d) and AOC 10-008. Consent Order investigations are complete for SWMU 10-001(c). The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Experimental shot debris	HE, natural uranium, uranium-238, strontium-90, lead, aluminum, steel, and possibly beryllium

Site ID: **10-001(d)**
Site Name: **Firing Site (inactive)**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-001(a) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMUs 10-001(a–d) are the former asphalt shot pads that made up two firing sites located in the western third of former TA-10 in Bayo Canyon. The firing sites associated with SWMUs 10-001(a–d) each consisted of five structures: a battery building (power source), a fire control building, an electronics chamber, an X-unit chamber, and an inspection building (LANL 2008, 102793). The SWMU 10-001(d) shot pad was used in rotation with the SWMU 10-001(a–c) shot pads from 1943–1961 for experiments using HE in conjunction with nuclear weapons research (LANL 2005, 089658). Because of the residual radioactive material remaining at the Site after a shot, the Site could not be used again for approximately 1 mo, so shots were rotated among the four sites (LASL 1947, 021563). Materials used in the shots included HE, natural uranium, uranium-238, strontium-90, lanthanum-140 (now decayed), lead, aluminum, steel, and possibly beryllium (LANL 1990, 007512). After a shot, residual material was moved to the SWMU 10-005 disposal pit located near the firing sites. Because of the proximity and overlapping dispersion areas of each firing site and use of the disposal pit, source terms cannot be separated by SWMU or AOC. Former TA-10 underwent extensive D&D, including razing all structures, from 1961 to 1963 (LANL 2005, 089658). All excavations were backfilled and the Site graded. All concrete structures associated with each firing site were demolished using dynamite (Courtright 1963, 004771). All explosives testing ceased in 1961 (LANL 1992, 007668). The Site was released to Los Alamos County in 1967 (LANL 1992, 007668).

SWMU 10-001(d) was investigated along with SWMUs 10-001(a–c). Consent Order investigations are complete for SWMU 10-001(d). The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Experimental shot debris	HE, natural uranium, uranium-238, strontium-90, lead, aluminum, steel, and possibly beryllium

Site ID: **10-004(a)**
Site Name: **Former Septic System**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-004(a) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMU 10-004(a) is a former septic system that received sanitary wastewater and other liquids from former personnel building 10-21 from 1949 to 1963. The system consisted of a 550-gal. septic tank (former structure 10-40) that discharged to a pit measuring 8 ft × 8 ft × 12 ft deep (LANL 1990, 007512). The septic system handled primarily sanitary waste but may have potentially received laboratory waste, which could have contained strontium-90, barium, cadmium, platinum, benzene, carbon tetrachloride, acids, and organics (LANL 1990, 007512). Engineering drawing ENG R-637 (LASL 1958, 023899) indicates the septic system also discharged to a drainline and outfall in a stream channel approximately 200 ft northeast of the former septic tank. The septic system was removed during the 1963 D&D activities (LANL 1990, 007512, LANL 1992, 007668). No information is available regarding the removal of the 4-in.-diameter tile drainline or the soil surrounding the outfall (LANL 1990, 007512); however, a 2007 geophysical survey did not identify subsurface anomalies (LANL 2008, 102424), indicating the buried drainline was removed during previous D&D activities.

Consent Order investigations are complete for SWMU 10-004(a). The Site meets residential risk levels. SWMU 10-004(a) was recommended for corrective action complete without controls in May 2008. A request for COC was submitted to NMED in June 2015. The delay between the initial recommendation for COC in 2008 and request for COC in 2015 was the result of NMED's request to perform additional cleanup at another SWMU. This work was completed in 2011. LANS waited for a response from NMED before submitting a COC request in 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Sanitary wastewater	Low concentrations of metals and organic chemicals
Laboratory wastes	Strontium-90, barium, cadmium, platinum, benzene, carbon tetrachloride, acids, and organics

Site ID: **10-004(b)**
Site Name: **Former Septic System**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), and 10-004(b) and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 10-004(b) were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
SWMU 10-004(b) is a former septic system that consisted of a reinforced concrete septic tank (former structure 10-38) measuring 4 ft × 10 ft × 4 ft deep (LANL 1990, 007512). The system received sanitary waste from former building 10-1, a radiochemistry laboratory, and is suspected to have also received liquid waste from radiochemistry laboratory operations. Laboratory wastes could have contained strontium-90, barium, cadmium, platinum, benzene, carbon tetrachloride, acids, and organics (LANL 1990, 007512). Engineering drawing ENG C-25683 (LASL 1954, 602473) indicates overflow from the tank drained through a 4-in., open-joint, VCP drainline to an outfall in the stream channel approximately 100 ft north-northeast of former septic tank 10-38 (LANL 1990, 007512; LANL 1992, 007668). The tank was removed during D&D activities in 1963 and disposed of at TA-54, Area G (LANL 1990, 007512). A 2007 geophysical survey did not identify subsurface anomalies (LANL 2008, 102424), indicating the buried pipe was removed during previous D&D activities in 1963. SWMU 10-004(b) was investigated along with 18 other SWMUs that are not IP Sites.

Consent Order investigations are complete for SWMU 10-004(b). The Site meets residential risk levels. SWMU 10-004(b) was recommended for corrective action complete without controls in May 2008. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Sanitary wastewater	Low concentrations of metals and organic chemicals
Laboratory wastes	Strontium-90, barium, cadmium, platinum, benzene, carbon tetrachloride, acids, and organics

Site ID: **10-008**
Site Name: **Firing Point (inactive)**
SMA: **B-SMA-0.5**

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), 10-004(b), and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with AOC 10-008 were reported to have occurred. This SMA is a 1052-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
AOC 10-008 is a former satellite firing point located approximately 1400 ft northwest of the former primary firing points associated with SWMUs 10-001(a–d). AOC 10-008 was not included in the 1990 SWMU report but was discovered in 1994 during surface shrapnel characterization activities (LANL 1995, 046265). During a 1994 IA, shrapnel was found embedded in the northwestern sides of trees in this area (opposite the known primary firing points) (LANL 1997, 056660.423). After the Site was discovered, archival interviews were conducted and a former employee indicated that some explosive tests were conducted outside the firing pad area using devices that did not contain radioactive diagnostic elements. AOC 10-008 was identified as such a site based on the density of shrapnel in the area (LANL 1995, 046265). All explosives testing at TA-10 ceased in 1961 and site-wide D&D activities were completed in 1963 (LANL 1997, 056660.423).

AOC 10-008 was investigated along with SWMUs 10-001(a–d). Consent Order investigations are complete for AOC 10-008. The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Firing site shrapnel	Metals

Site ID: 10-009
Site Name: Former Bayo Canyon Landfill
SMA: B-SMA-0.5

SMA Overview:
B-SMA-0.5 monitors storm water discharges from SWMUs 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), 10-004(b), and AOCs 10-008 and 10-009. The SMA currently receives runoff from areas where industrial activities associated with AOC 10-009 were reported to have occurred. This SMA is a 1052.7-acre watershed that consists of 93% pervious surfaces and 7% impervious surfaces.

Site History Overview:
AOC 10-009 is a former landfill located in Bayo Canyon. AOC 10-009 was not included in the 1990 SWMU report but was discovered in 1994 during routine surface shrapnel characterization activities in Bayo Canyon. A small depression was noted that contained materials including asbestos siding, heavy-gauge and coaxial wire and cable, glass laboratory equipment, and other debris (LANL 1995, 046265). A geophysical survey conducted in the area showed additional anomalies (LANL 1996, 054491). The landfill area differed from the surrounding area; interviews conducted with former area workers confirmed the area had been used for disposal. EPA was notified of a new AOC in May 1995 (LANL 1995, 046265). The Site was fenced in 1995 pending further investigation and/or remediation (LANL 2005, 089658).

Consent Order investigations are complete for AOC 10-009. The Site meets recreational risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 31, 2017.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Building materials, laboratory equipment, cables	Asbestos, metals, organic chemicals, radionuclides

Site ID: 16-017(a)-99
Site Name: Soil Contamination from Former HE Machining Building 16-92
SMA: CDV-SMA-1.3

SMA Overview:
CDV-SMA-1.3 monitors storm water discharges from SWMU 16-017(a)-99. The SMA does not receive runoff from SWMU 16-017(a)-99 where industrial activities were reported to have occurred. This SMA is a 0.047-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
SWMU 16-017(a)-99 consists of a former HE machining building (structure 16-92) that was located at TA-16. Constructed in 1950, the wooden building measured 1332 ft^2 and was surrounded by an earthen berm that was packed against steel pilings (LANL 2005, 089331). The building was originally used for HE machining and was later used to clean and refurbish HE-contaminated equipment. Operations at structure 16-92 may have resulted in uranium contamination because disassembled items may have contained uranium (LANL 1994, 039440). Likely operational wastes include HE, barium, and possibly uranium, organic cleaning agents, and machine oil (LANL 1999, 063175; LANL 2005, 089331). By 1970,

the building was used entirely for storage and was abandoned by 1991 (LANL 1994, 039440). The building was removed in 1996 (LANL 2005, 089331).

NMED issued a COC for SWMU 16-017(a)-99 without controls on August 1, 2016 (NMED 2016, 601692). SWMUs 16-017(a)-99 and 16-026(m), along with numerous other SWMUs and AOCs, the former 90s Line, were investigated under the Consent Order as a single site. The same surface sampling data set applies to both Sites.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE equipment and machining	HE, barium, metals, uranium, oil
Cleaners, solvents	Organic chemicals

Site ID: **16-017(b)-99**
Site Name: **Soil Contamination from Former HE Machining Building 16-93**
SMA: **CDV-SMA-1.2**

SMA Overview:
CDV-SMA-1.2 monitors storm water discharges from SWMUs 16-017(b)-99 and 16-029(k). The SMA receives runoff from SWMU 16-017(b)-99 where industrial activities were reported to have occurred. This SMA is a 2.8-acre watershed consisting of 90% pervious surfaces and 10% impervious surfaces.

Site History Overview:
SWMU 16-017(b)-99 is a former HE machining building (former structure 16-93) that was located at TA-16. Constructed in 1950, the wooden building measured 20 ft wide × 60 ft long × 11 ft high and was surrounded by an earthen berm that was packed against steel pilings. The building was also used as an electroplating facility (LANL 1994, 039440). Likely operational wastes were HE, barium, and possibly uranium, organic cleaning agents, machine oil, and copper and chromium sulfates (LANL 1994, 039440; LANL 2005, 089331). Building 16-93 was abandoned by 1991 and was removed in 1996 (LANL 1994, 039440; LANL 2005, 089331).

NMED issued a COC without controls for 16-017(b)-99 in August 2016 (NMED 2016, 601692). SWMU 16-017(b)-99, along with numerous other SWMUs and AOCs, the former 90s Line, was investigated and remediated under the Consent Order as a single Site. Consent Order investigations are complete for SWMU 16-017(b). NMED granted the Site a COC without controls on August 1, 2016.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE machining materials	HE, barium, uranium, oils
Electroplating chemicals	Metals, chromium, copper
Organic cleaning agents	SVOCs, VOCs

Site ID: **16-026(m)**
Site Name: **Outfall Associated with Former Building 16-92**
SMA: **CDV-SMA-1.3**

SMA Overview:
CDV-SMA-1.3 monitors storm water discharges from SWMU 16-017(a)-99. The SMA does not receive runoff from SWMU 16-026(m) where industrial activities were reported to have occurred. This SMA is a 0.047-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
SWMU 16-026(m) consists of two outfalls and associated drainlines from two sumps [SWMU 16-029(l)] that served former HE machining building 16-92 at TA-16 (LANL 1996, 062537). The sumps were located on the east and west sides of building 16-92. The eastern sump discharged to a VCP drainline that extended north and west to its discharge point approximately 260 ft north of the building. The western sump discharged to a VCP that extended north and then west of the building where it discharged to an open drainage channel (LASL 1949, 601904-6; LASL 1959, 024171). The building was originally used for HE machining and was later used to clean and refurbish HE-contaminated equipment. Likely operational wastes include HE, barium, and possibly uranium, organic cleaning agents, and machine oil (LANL 2005, 089331; LANL 1994, 039440). The sumps were filled with gravel during the mid-1960s and by 1970; the building was devoted entirely to storage. The building was abandoned by 1991(LANL 1996, 062537). The building, sumps and drainlines were all removed in 1996 (LANL 2005, 089331). NMED issued a COC for SWMU 16-026(m) without controls on August 1, 2016 (NMED 2016, 601692).

Consent Order investigations are complete for SWMU 16-026(m). NMED granted the Site a COC without controls on August 1, 2016.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE equipment and machining	HE, barium, metals, uranium, oil
Cleaners, solvents	Organic chemicals

Site ID: **16-029(k)**
Site Name: **Sumps**
SMA: **CDV-SMA-1.2**

SMA Overview:
CDV-SMA-1.2 monitors storm water discharges from SWMUs 16-017(b)-99 and 16-029(k). The SMA receives runoff from SWMU 16-029(k) where industrial activities were reported to have occurred. This SMA is a 2.8-acre watershed consisting of 90% pervious surfaces and 10% impervious surfaces.

Site History Overview:
SWMU 16-029(k) consists of two former HE sumps that served former electroplating building 16-93 at TA-16. Constructed in 1950, the 5-ft-wide × 15-ft-long × 5-ft-deep concrete sumps were situated on the northeast and southeast corners of the building (LASL 1959, 024171). Two VCP drainlines extended north from each sump and eventually merged into a single drainline that continued for approximately 500 ft to an outfall located north of the K-Site Road. The SWMU 16-029(k) sumps were filled with gravel in 1960 and building 16-93 was abandoned by 1991 (LANL 1994, 039440). Likely operational wastes were HE, barium, and possibly uranium, organic cleaning agents, machine oil, and copper and chromium sulfates (LANL 1994, 039440; LANL 2005, 089331). Building 16-93, the sumps, and associated drainlines were

removed during D&D operations in 1996 (LANL 1997, 087847). NMED issued a COC without control for 16-029(k) in August 2016 (NMED 2016, 601692).

SWMU 16-029(k), along with numerous other SWMUs and AOCs, the former 90s Line, was investigated and remediated under the Consent Order as a single Site. Consent Order investigations are complete for SWMU 16-029(k). NMED granted the Site a COC without controls on August 1, 2016.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE machining materials	HE, barium, uranium, oils
Electroplating chemicals	Metals, chromium, copper
Organic cleaning agents	SVOCs, VOCs

Site ID: **21-006(b)**
Site Name: **Disposal Pit**
SMA: **LA-SMA-6.3**

SMA Overview:
LA-SMA-6.3 monitors storm water discharges from SWMU 21-006(b). The SMA currently receives runoff from areas where industrial activities associated with SWMU 21-006(b) were reported to have occurred. This SMA is a 1.63-acre watershed consisting of 96% pervious surfaces and 4% impervious surfaces.

Site History Overview:
SWMU 21-006(b) was a seepage pit (former structure 21-118), drainline, and outfall installed in 1945 during the construction of building 21-2 (Engineering Drawing ENG-R 1194, LASL 1961, 106966) (Christensen and Maraman 1969, 004779; LANL 1991, 007529). Waste from the plutonium purification process that was part of the original TA-21 operations was discharged to a 3-in. cast iron drainline that exited the southeast side of building 21-2 and extended 160 ft to the south to the seepage pit (Christensen and Maraman 1969, 004779; LANL 2008, 102760). A 2-in. cast-iron outlet line exited the sump and extended approximately 100 ft to the south to an outfall approximately 8 ft above the surface of a bench below the mesa top (LANL 2008, 102760). The purification process included dissolution in nitric acid, oxalate and acetate precipitations, and ether extractions, and the ether extraction waste was discharged to the sump (Christensen and Maraman 1969, 004779). The ether extraction process was discontinued in September 1945 (Christensen and Maraman 1969, 004779). It is not known when the seepage pit ceased to be used (LANL 2008, 102760). The seepage pit consisted of a brick manhole placed within a trench (LANL 1991, 007680). The seepage pit and piping were removed during the 2006-2007 DP Site Aggregate Area investigation. The section of the drainline that lies beneath the road was left in place because the road is active and continues to service DP East (LANL 2008, 102760).

All detected inorganic and organic chemical concentrations and radionuclide activities from Consent Order samples were below residential SSLs and SALs. Extent of contamination was not defined for SWMU 21-006(b), and additional sampling was conducted as part of the Phase III investigation for DP Site Aggregate Area. SWMU 21-006(b) was recommended for corrective action complete without controls in the Phase III investigation report (LANL 2014, 600091). The report was approved by NMED in September 2016. NMED issued a COC without controls for SWMU 21-006(b) in September 2018.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Plutonium purification wastes	Plutonium, nitric acid, acetate, oxalate, ethyl ether

Site ID: **21-009**
Site Name: **Waste Treatment Laboratory**
SMA: **LA-SMA-5.91**

SMA Overview:
LA-SMA-5.91 monitors storm water discharges from SWMUs 21-021, 21-023(c), and 21-027(d) and AOC 21-009. The SMA currently receives runoff from areas where industrial activities associated with AOC 21-009 were reported to have occurred. This SMA is a 4.3-acre watershed consisting of 80% pervious surfaces and 20% impervious surfaces.

Site History Overview:
AOC 21-009 is a former waste treatment laboratory (building 21-33) that was built in August 1948 and operated until 1965. It was a wooden-frame single floor structure, built on concrete pillars and measuring 16 ft × 48 ft with a 12-ft ceiling (LANL 1991, 007680; LANL undated, 070428). The building was used to conduct research into recovering plutonium from waste streams (LANL 1991, 007528). Building components and laboratory furniture were contaminated with plutonium dust. Perchloric acid was used and may have contaminated the exhaust hoods (Romero 1965, 000370). Wastewater from the laboratory was discharged to septic tank 21-062 [SWMU 21-023(c)], which discharged to an outfall at the rim of Los Alamos Canyon (LANL 1991, 007680). The building was decontaminated and decommissioned in 1965 (LANL 1991, 007680; LANL undated, 070428). The building was cut into two sections and removed to MDA G where it was burned and disposed of in Pit 4 (Romero 1965, 000370). The concrete foundation was bulldozed from its original site into Los Alamos Canyon (LANL 1991, 007680). The tank was removed during demolition of building 21-33 in 1965 (LANL 1991, 007680). Consent Order investigations are complete for AOC 21-009; the Site meets residential risk levels. A request for COC was submitted to NMED in June 2015. NMED granted the Site a COC without controls on January 19, 2016.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Plutonium processing wastes	Plutonium, perchlorate

Site ID: **21-023(c)**
Site Name: **Septic System**
SMA: **LA-SMA-5.91**

SMA Overview:
LA-SMA-5.91 monitors storm water discharges from SWMUs 21-021, 21-023(c), and 21-027(d) and AOC 21-009. The SMA currently receives runoff from areas where industrial activities associated with SWMU 21-023(c) were reported to have occurred. This SMA is a 4.3-acre watershed consisting of 80% pervious surfaces and 20% impervious surfaces.

Site History Overview:
SWMU 21-023(c) is a former septic system and associated outfall located immediately west of former MDA V (Engineering Drawing A5-C142, LANL 2004, 085559). The septic system consisted of a reinforced concrete tank (structure 21-62) that measured 3.5 ft wide × 7 ft long × 5.8 ft deep and a 4-in. VCP drainline (Engineering Drawing A5-C141, LANL 1991, 007529; LANL 2004, 085559). The septic system was intended only for sanitary waste and served a waste treatment laboratory (building 21-33) from 1948 to 1965 (LANL 1991, 007529). Sewage was pumped from the sump in building 21-33 through the septic tank and was discharged approximately 40 ft from the canyon edge above BV Canyon, a tributary to Los Alamos Canyon (Engineering Drawings ENG-R-1191 and ENG-R-1193, LANL 2004, 085559). Contaminants associated with building 21-33 include plutonium and perchlorate (Romero 1963,

000369; Romero 1965, 000370; LANL 1991, 007680). It is not known what volume of wastewater was handled by the septic system or if any releases occurred, other than intentional releases to the outfall. The septic tank was removed in 1965 and taken to MDA G (LANL undated, 070428). The 2005–2006 field activities confirmed that none of the septic system components remained in place (LANL 2007, 098942). During the 2005–2006 field activities, radioactively contaminated soil in the outfall channel was removed (LANL 2007, 098942).

Consent Order investigations are complete for SWMU 21-023(c); the Site meets residential risk levels. NMED issued a COC with controls (storm water) for SWMU 21-023(c) in June 2011.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Laboratory wastewater	Plutonium, perchlorate

Site ID: **21-024(l)**
Site Name: **Industrial or Sanitary Wastewater Treatment**
SMA: **DP-SMA-0.6**

SMA Overview:
DP-SMA-0.6 monitors storm water discharges from SWMUs 21-021 and 21-024(l). The SMA currently does not receive runoff from areas where industrial activities associated with SWMU 21-024(l) were reported to have occurred. This SMA is a 0.032-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
SWMU 21-024(l) is the location of a former outfall that received liquid waste from the floor drain of the building 21-21 mechanical room (LANL 1991, 007529). The 3-in. cast-iron drainline ran north from the building 21-21 mechanical room to the outfall near the south rim of DP Canyon (Engineering Drawing ENG-C 23358, LASL 1960, 001611; LANL 2008, 102760). From 1946 to 1974, building 21-21 housed a vault used to store uranium and plutonium. During the 2007 DP Site Aggregate Area investigation, the drainline was removed (LANL 2008, 102760).

Consent Order investigations have been completed at SWMU 21-024(l), and the Site was recommended for corrective action complete with controls in the Phase III investigation report for DP Site Aggregate Area (LANL 2014, 600091). The report was approved by NMED in September 2016. NMED granted the Site a COC with controls in September 2018.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Floor drainage from vault mechanical room	Plutonium, uranium

Site ID: **32-002(b1)**
Site Name: **Septic System**
SMA: **LA-SMA-5.361**

SMA Overview:
LA-SMA-5.361 monitors storm water discharges from SWMUs 32-002(b1) and 32-002(b2). The SMA currently does not receive runoff from areas where industrial activities associated with SWMU 32-002(b1) were reported to have occurred. This SMA is a 1.7-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
Former SWMU 32-002(b) is a former septic system that served former buildings 32-1 and 32-2 (LANL 2011, 111806.23). In 2012, former SWMU 32-002(b) was split into SWMU 32-002(b1), which is the portion located on Los Alamos Public Schools property, and SWMU 32-002(b2), which is the portion on DOE property, in order to expedite completion of corrective actions at SWMU 32-002(b1) (NMED 2012, 521773). The septic system was installed directly northwest and slightly upgradient of the SWMU 32-002(a) septic tank, near the edge of Los Alamos Canyon. This system was installed when the SWMU 32-002(a) septic system could no longer meet the usage requirement of the laboratory (building 32-1) and consisted of a reinforced concrete tank, 9 ft wide by 5 ft long by 6 ft deep, (former structure 32-8) (Engineering drawing A5-C116, LASL 1948, 700234) with an outlet drainline that discharged to an outfall at the edge of Los Alamos Canyon (Engineering Drawing A5-C117, LASL 1948, 091749; LANL 1992, 007668; LANL 2011, 111806.23). The influent line from the SWMU 32-002(a) septic system was diverted to the former SWMU 32-002(b) septic system, which also received effluent from former building 32-2, the medical research annex (LANL 2011, 111806.23). The septic tank was decommissioned in 1954 (LANL 1992, 007668). Before the septic tank was removed in 1988, samples of the sludge and liquid were removed and analyzed and found to contain low concentrations of volatile organics and phenols (LANL 1992, 007668). The influent drainline was removed in 1996 (LANL 1996, 059178). Research activities in former building 32-1 involved radionuclides and potentially involved inorganic and organic chemicals (LANL 2011, 111806.23). Because no industrial waste line served former TA-32, it is possible that chemical and radioactive wastes may have been disposed of in sinks and drains connected to the SWMU 32-002(b1) septic system. After LANL activities at the property, the Site was used by Los Alamos County to store equipment and materials used for road work and maintenance, including street sweepings (LANL 2011, 111806.23).

Consent Order investigations are complete for SWMU 32-002(b1); the Site meets industrial risk levels. NMED issued a COC with controls for new SWMU 32-002(b1) in December 2012 (NMED 2012, 521746).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Laboratory chemicals	Radionuclides, volatile organics, phenols
Sanitary wastewater	Low concentrations of inorganic and organic chemicals

Site ID: **35-008**
Site Name: **Surface Disposal Area**
SMA: **M-SMA-10**

SMA Overview:
M-SMA-10 monitors storm water discharges from SWMUs 35-008 and 35-014(e). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-008 were reported to have occurred. This SMA is a 1.5-acre watershed consisting of 78% pervious surfaces and 22% impervious surfaces.

Site History Overview:
SWMU 35-008 is the location of an inactive surface disposal area located north of building 35-85 on the edge of Mortandad Canyon. Debris at the Site consists of construction debris, including scrap metal and pipe, paint cans, a 55-gal. drum, and miscellaneous building materials refuse such as a large concrete slab, conduits, asphalt, pipe, and steel reinforcing rods (LANL 1990, 007513). During a site inspection in 1991, only a small amount of debris, including tubing, scrap metal, and soda cans, was observed at the

Site (Roberson 1991, 021576). The surface disposal area has likely been in existence since 1977 when the nearby Chemical Laser Facility (building 35-85) was constructed (LANL 1997, 055687). Debris associated with SWMU 35-008 extends from the canyon rim to the canyon floor. Some of the dielectric oil associated with SWMU 35-014(e) flowed northward to the mesa edge and partially down the mesa slope over portions of the SWMU 35-008 disposal area (LANL 1997, 055687).

SWMU 35-008 and SWMU 35-014(e) were investigated together during the 1994, 1995, and 1997 RFIs and 2004 Consent Order Phase I investigation. All detected inorganic and organic chemical concentrations and radionuclide activities from Consent Order samples were below residential SSLs and SALs. A request for a COC without controls for SWMU 35-008 was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Scrap metal and pipe, paint cans, concrete slabs, metal conduits, asphalt, pipe, steel reinforcing rods	Metals, organic chemicals, PAHs

Site ID: **35-010(e)**
Site Name: **Outfall Associated with Filter Beds**
SMA: **T-SMA-6.8**

SMA Overview:
T-SMA-6.8 monitors storm water discharges from AOC 35-010(e). The SMA currently receives runoff from areas where any industrial activities associated with AOC 35-010(e) were reported to have occurred. This SMA is a 131.3-acre watershed consisting of 87% pervious surfaces and 13% impervious surfaces.

Site History Overview:
AOC 35-010(e) is a former NPDES-permitted outfall and discharge headwall (structure 35-215) that discharged from the SWMU 35-010(d) filter beds into Ten Site Canyon. A depth recording gauge station is located at the outfall and measured the effluent level above a small V-shaped weir discharge point. A rock dissipater apron is present at the discharge point. Compiled flow records of the outfall show that the average flow rate was approximately 45,000 gal./day, exceeding the planned capacity of 12,000 gal./day (Emelity 1974, 055116; LANL 2002, 073092). AOC 35-010(e) is a component of the former TA-35 WWTP, which was used for the biological treatment of wastewater from TA-35, TA-48, TA-50, and TA-55 from 1975 to 1992, when all discharges from the filter beds ceased. The system received primarily sanitary waste from these technical areas, but some waste from photoprocessing and other industrial drains was received. Small quantities of radionuclides, solvents, and other chemicals, including acids and bases from laboratory hoods, were present in the waste streams (LANL 1992, 007666). Engineering drawings show the layout of the filter beds and the location of the outfall below the southeast corner of the filter beds (LASL 1975, 602063; LASL 1975, 602062).

Consent Order investigations for AOC 35-010(e) are complete. The Site meets recreational risk levels. A COC request for AOC 35-010(e) was submitted to NMED in February 2011. NMED granted the Site a COC with controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Sanitary wastewater	Low concentrations of inorganic and organic chemicals; low activities of radionuclides
Solvents	VOCs
Laboratory chemicals	Acids, bases, metals, radionuclides
Photoprocessing wastes	Silver, cyanide

Site ID: **35-014(e)**
Site Name: **Operational Release**
SMA: **M-SMA-10**

SMA Overview:
M-SMA-10 monitors storm water discharges from SWMUs 35-008 and 35-014(e). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-014(e) were reported to have occurred. This SMA is a 1.5-acre watershed consisting of 78% pervious surfaces and 22% impervious surfaces.

Site History Overview:
SWMU 35-014(e) is an area of oil-stained soil on the northern edge of Ten Site Mesa directly north of building 35-85. The 1990 SWMU report described SWMU 35-014(e) as three dielectric oil spill areas associated with building 35-85 (LANL 1990, 007513). The stained soil associated with SWMU 35-014(e) may have been a result of a non-PCB (<50 mg/kg) dielectric oil spill that occurred east of building 35-188 when a forklift punctured an aboveground oil storage tank (LANL 2002, 073092). The oil tank was removed before 1992 (LANL 1997, 055687). Non-PCB dielectric oil was used in laser experiments conducted in building 35-85 in 1989. Types of oil used in past operations are unknown. The volume of oil released is not known. However, it was reported that oil from the release flowed northward to the mesa edge and partially down the mesa slope over portions of the SWMU 35-008 disposal area (LANL 1990, 007513). A 1984 photograph shows that the spill did flow down the side of the mesa (LANL 1997, 055687). Reports also suggest that oil-stained soil may have been pushed over the mesa during the cleanup of the spill (the spill cleanup is not documented) (LANL 2002, 073092). Soil samples from stained areas near building 35-85 showed detectable concentrations of PCBs (LANL 1990, 007513). After the oil spill, an extension to building 35-85 was constructed between building 35-188 and the edge of the mesa to house laser experiments. The building extension covers a portion of the area of the reported oil spill. The construction of this extension may have included site leveling, soil stabilization, and extension and stabilization of the mesa edge by backfilling with soil and riprap materials. During a site visit in 1997, stained soil was visible on the slope near the edge of the mesa as a dark stain that covered an area measuring approximately 15 ft × 10 ft. No stained soils or odors were apparent on the mesa top north of building 35-85 (LANL 1997, 055687).

SWMU 35-008 and SWMU 35-014(e) were investigated together during the 1994, 1995, and 1997 RFIs and 2004 Consent Order investigation. All detected inorganic and organic chemical concentrations and radionuclide activities from Consent Order samples were below residential SSLs and SALs. A COC request for SWMU 35-014(e) was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Dielectric oil	Mineral oil (alkanes, cycloalkanes)
Oil	PCBs

Site ID: **35-016(e)**
Site Name: **Inactive Outfall**
SMA: **M-SMA-10.01**

SMA Overview:
M-SMA-10.01 monitors storm water discharges from AOC 35-016(e). The SMA currently receives runoff from areas where industrial activities associated with AOC 35-016(e) were reported to have occurred. This SMA is a 0.35-acre watershed consisting of 99.8% pervious surfaces and 0.2% impervious surfaces.

Site History Overview:
AOC 35-016(e) is a former NPDES-permitted outfall (04A090) established in 1977 to discharge only noncontact cooling water from the chemical laser facility (building 35-85) (LANL 1990, 007513; LANL 1992, 007666). The outfall consists of two adjacent 6-in.-diameter steel pipes, insulated with fiberglass and wrapped with protective aluminum coating, that originate from cooling towers on the roof of building 35-85. The outfall is located north of building 35-85 on the rim of Mortandad Canyon (Engineering Drawing C44221, LANL 1983, 602090). The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). The volume of water released is not documented, but significant erosion was evident below the outfall during the 1995 RFI (LANL 1996, 054402). The outfall operated until the early 1990s (LANL 1996, 054402).

The AOC 35-016(e) outfall is collocated with SWMU 35-008, a former canyon-side disposal area north of building 35-6, and SWMU 35-014(e1), a former dielectric oil spill north of building 35-85. Consent Order samples collected in 2004 to characterize SWMUs 35-008 and 35-014(e1) were also used to characterize AOC 35-016(e). All detected inorganic and organic chemical concentrations and radionuclide activities from the 2004 samples for SWMUs 35-008 and 35-014(e) were below residential SSLs and SALs. A COC request for AOC 35-016(e) was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Site ID: **39-002(c)**
Site Name: **Satellite Accumulation Area**
SMA: **A-SMA-2.7**

SMA Overview:
A-SMA-2.7 monitors storm water discharges from SWMU 39-008 and AOC 39-002(c). The SMA currently does not receive runoff from areas where industrial activities associated with AOC 39-002(c) were reported to have occurred. This SMA is a 9.5-acre watershed consisting of 99.97% pervious surfaces and 0.03% impervious surfaces.

Site History Overview:
AOC 39-002(c) is a former outdoor SAA that was located on an asphalt-paved area next to the southeast corner of building 39-56 (LANL 1993, 015316). This SAA stored waste paper, solvent-contaminated rags (ethanol, acetone, and TCA), and vacuum grease (LANL 1993, 015316). A VCA was conducted in 1995 and approximately 1 yd^3 of soil contaminated with depleted uranium, lead, PCBs, and oil was removed (LANL 1996, 054401).

The Consent Order investigation of AOC 39-002(c) is complete. The approved "Investigation Report for North Ancho Canyon Aggregate Area, Revision 1" (LANL 2010, 108500.11) concluded that the nature and extent for all detected inorganic and organic contaminants are defined at AOC 39-002(c); no radiological COPCs were detected at the Site. The Site meets residential risk levels; therefore, no further investigation or corrective action is required. NMED issued a COC without controls for AOC 39-002(c) in April 2010 (NMED 2010, 110430).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Waste paper and solvent-contaminated rags	Ethanol, acetone, lead, depleted uranium, PCBs
Vacuum grease	Hydrocarbons

Site ID: **53-014**
Site Name: **Soil contamination (Lead Storage Site II)**
SMA: **S-SMA-4.1**

SMA Overview:
S-SMA-4.1 monitors storm water discharges from AOC 53-014. The SMA currently encompasses approximately 5% of AOC 53-014 where industrial activities were reported to have occurred. This SMA is a 0.0084-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
AOC 53-014, a lead spill site, is located at a paved storage area in TA-53 west of building 53-18. Lead shot was spilled on the paved surface, and storm water washed the lead into an asphalt-lined channel that joins a drainage below an NPDES-permitted outfall (03A113) (ICF Kaiser Engineers 1995, 058172). The lead shot was observed at a number of locations in the drainage channel but not below a large catchment approximately 50 ft below the canyon rim (IFC Kaiser Engineers 1995, 058172). This Site was not originally identified in the 1990 SWMU report but was discovered after the 1994 RFI work plan for OU 1100 had been prepared (LANL 2009, 105078). During the 1997 VCA conducted at AOC 53-014, all lead shot was removed from the paved area, asphalt channel, and drainage below NPDES Outfall 03A113 (LANL 1997, 062913). To minimize impacts to the drainage, visible lead was picked up by hand, and sediment was sieved to remove lead (LANL 1997, 062913).

NMED issued a COC without controls for AOC 53-014 in July 2013 (NMED 2013, 523159). This Site is now certified as corrective action complete, and monitoring of storm water discharges has ceased at S-SMA-4.1. No further sampling is required for S-SMA-4.1 for the remainder of the IP.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Lead shot	Lead

Site ID: **73-002**
Site Name: **Incinerator Surface Disposal**
SMA: **P-SMA-2**

SMA Overview:
P-SMA-2 monitors storm water discharges from SWMUs 73-002 and 73-006. The SMA currently receives runoff from areas where industrial activities associated with SWMU 73-002 were reported to have occurred. This SMA is a 2.4-acre watershed consisting of 98% pervious surfaces and 2% impervious surfaces.

Site History Overview:
SWMU 73-002 is a former incinerator and former associated ash pile located at TA-73, west of the Los Alamos County Airport terminal and on the south rim of Pueblo Canyon. According to the work plan, the incinerator was housed in the two-story concrete building, 73-2, and a 6-ft-diameter stack was located on the north side of the building (LANL 1992, 007667). According to the investigation report, the incinerator was originally used to destroy classified LANL documents from 1947 to 1948, after which time the incinerator was used to burn municipal trash (LANL 2007, 098194). Ash and debris were deposited over the edge of the mesa, which resulted in an ash pile that was approximately 150 ft wide × 160 ft long and up to 8 ft deep (ITSI 2005, 092983). Incinerator operations ceased in 1973, and the incinerator equipment and stack were removed (LANL 1992, 007667). Constituents detected in the ash and debris included metals, PAHs, PCBs, pesticides, dioxins/furans, and radionuclides (LANL 2007, 098194). The ash pile and the associated incinerator debris were removed between 2005 and 2007 (LANL 2007, 098194). Building 73-2 remains in place.

RFI and Consent Order investigation and remediation activities are complete for SWMU 73-002. Decision-level data indicate the nature and extent of contamination are defined, and risk-screening assessment results confirm SWMU 73-002 meets residential levels. NMED issued a COC with controls in August 2007.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Ash from combustion of nonradioactive municipal waste and classified Laboratory documents	Metals, PAHs, pesticides, PCBs, dioxins/furans, and radionuclides

Site ID: **73-006**
Site Name: **Airport Building Outfalls**
SMA: **P-SMA-2**

SMA Overview:
P-SMA-2 monitors storm water discharges from SWMUs 73-002 and 73-006. The SMA currently receives runoff from areas where industrial activities associated with SWMU 73-006 were reported to have occurred. This SMA is a 2.4-acre watershed consisting of 98% pervious surfaces and 2% impervious surfaces.

Site History Overview:
SWMU 73-006 consists of two former cast-iron drainlines that discharged to Pueblo Canyon from the former incinerator building (structure 73-2) (SWMU 73-002) that was located west of the Los Alamos County Airport terminal building at TA-73 (Kruger 1947, 000657). The west drainline, constructed of 5-in.-diameter cast-iron pipe, originated from two floor drains, now plugged with concrete, one on the west side of the charging floor and the other on the west side of the stoking floor (LANL 1998, 062522). The

east drainline, also constructed of 5-in.-diameter cast-iron pipe, originated at similar concrete-plugged drains located on the east side of the charging and stoking floors (LANL 1998, 062522). The drains reportedly handled wash water and are reported to have operated concurrently with the incinerator (LANL 1992, 007667). The drainlines discharged directly onto the former ash pile (SWMU 73-002) (LANL 1998, 062522). The floor drains were assumed to have been used from 1947 to 1973 when the incinerator was in operation (LANL 1992, 007667) and were described as having been plugged in a 1998 sampling plan (LANL 1998, 062522). The contents of the wash water are unknown but may have contained ash from the incinerator. The western drainline was removed during the 1997 RFI (LANL 1998, 062522); the eastern drainline could not be located during the RFI (ITSI 2005, 092983). During the corrective action conducted at SWMU 73-006 in January 2007, 25 yd^3 of lead and dioxin-contaminated soil was removed from around the foundation associated with the former incinerator smokestack (LANL 2007, 098194).

RFI and Consent Order investigation and remediation activities are complete for SWMU 73-006. Decision-level data indicate the nature and extent of contamination are defined, and risk-screening assessment results confirm SWMU 73-006 meets residential levels. NMED issued a COC with controls in August 2007.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Wash water	Ash containing inorganic and organic chemicals, dioxins/furans

Site ID: **C-00-020**
Site Name: **Mortar Impact Area**
SMA: **R-SMA-0.5**

SMA Overview:
R-SMA-0.5 monitors storm water discharges from AOC C-00-020. The SMA currently receives runoff from areas where industrial activities associated with AOC C-00-020 were suspected to have occurred. This SMA is a 0.27-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
AOC C-00-020 is a suspected mortar impact area located along the north valley wall of Rendija Canyon on GSA and USFS land. The 30-acre site also includes a tributary of Rendija Canyon. Most of the Site lies within the Santa Fe National Forest, except for a small area on the southeastern edge that is private property (LANL 2007, 099954). AOC C-00-020 was suspected to be a former mortar-impact area because of a “U.S. Property-No Trespassing” sign and a nearly illegible bilingual sign posted in the area (LANL 1992, 007667). The signs no longer remain. Extensive archival searches have revealed no documentation regarding the use of this site as a munitions-impact area (LANL 2011, 208817). In addition, no field evidence of operations (e.g., MD, MEC, UXO, or impact scars) has ever been found at AOC C-00-020 (LANL 2011, 208817). RFI activities conducted in 1993 included an ordnance sweep followed by a geophysical sweep (LANL 1994, 059427). No ordnance, MD, MEC, or UXO was located at the site (LANL 1994, 059427). In addition, no ordnance was found during the 2007 investigation or during the 2009 and 2011 ordnance surveys conducted at the site (LANL 2007, 099954; LANL 2009, 108171; LANL 2011, 208817). The Site is located within an area burned by the 2000 Cerro Grande fire (LANL 2007, 099954). The stream channel that runs through the center of the Site has been widened by flooding. Currently, there are burned and live trees on the steep slopes next to the stream (LANL 2007, 099954).

Consent Order investigations are complete for AOC C-00-020; the Site meets residential risk levels. NMED issued a COC without controls for AOC C-00-020 in May 2013.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
None	None

Attachment 7

New Mexico Environment Department Compliance Order on Consent Deferred Site List

The Permittees acknowledge the difficulties associated with managing storm water discharges from legacy solid waste management units/areas of concern (SWMUs/AOCs) co-located with currently operational facilities such as firing sites. However, numerous issues require resolution before proposing that Sites be deleted from the Individual Permit (IP or the Permit) and covered by another permit. These include further analysis of which operational facilities are co-located with SWMUs/AOCs, whether adjustment of SWMUs/AOCs boundaries that are located both inside and outside of operational facilities is appropriate, and determining the regulatory impacts of covering legacy SWMUs/AOCs under different permitting mechanisms. Activities at Los Alamos National Laboratory (LANL) are currently managed by two distinct contractors operating under different environmental permits and regulatory programs. If Site management is transferred between these contractors, additional direction from the U.S. Environmental Protection Agency (EPA) on future regulatory requirements is requested. In addition, internal discussions would be required to determine how to implement contract changes before transferring Sites between permits. The Permittees have requested the addition of language to the Permit to place deferred Sites into Long-Term Stewardship (see comment number 43) and are providing EPA with a list of the Sites deferred under the New Mexico Environment Department (NMED) Consent Order in Table 7-1. If the Sites become inactive, and investigations are allowed to take place, the Permittees request the ability to change the Site status in the Permit in order to perform storm water monitoring as required.

Table 7-1
NMED Consent Order Deferred Site List

SMA	Site	Site Status
R-SMA-1.95	00-015	Firing Range-Rendija Canyon, Deferred Site under the Consent Order[a]
S-SMA-0.25	03-013(a)	Storm drain, Deferred Site under the Consent Order[a]
W-SMA-10	11-002	Burn Site, Deferred Site under the Consent Order[a]
W-SMA-10	11-003(b)	Air Gun, Deferred Site under the Consent Order[a]
W-SMA-9.5	11-012(c)	Soil contamination associated with former Structure 11-9, Deferred Site under the Consent Order[a]
CDV-SMA-6.01	14-001(g)	Firing site, Deferred Site under the Consent Order[a]
CDV-SMA-6.02	14-002(d)[b]	Firing site, Deferred Site under the Consent Order[a]
CDV-SMA-6.02	14-002(e)[b]	Firing site, Deferred Site under the Consent Order[a]
PT-SMA-1.7	15-006(a)[b]	Phermex Firing Site (TA-15-184) , Deferred Site under the Consent Order[a]
3M-SMA-0.4	15-006(b)	Firing Site Ector, Deferred Site under the Consent Order[a]
3M-SMA-0.5	15-006(c)	Firing site (R-44), Deferred Site under the Consent Order[a]
PT-SMA-2	15-008(f)	I-J Firing site mounds at TA-36, Deferred Site under the Consent Order[a]
PT-SMA-3	36-004(a)	Firing site, Deferred Site under the Consent Order[a]
F-SMA-2	36-004(c)	Firing site, Deferred Site under the Consent Order[a]
PT-SMA-4.2	36-004(d)	Firing site, Deferred Site under the Consent Order[a]
PT-SMA-2	36-004(e)	Firing site, Deferred Site under the Consent Order[a]
PT-SMA-2.01	C-36-001	Containment vessel, Deferred Site under the Consent Order[a]
PT-SMA-2.01	C-36-006(e)	I-J Firing Site, projectile test area, Deferred Site under the Consent Order[a]
A-SMA-1.1	39-004(a)	Firing site, Deferred Site under the Consent Order[a]
A-SMA-2	39-004(b)	Firing site, Deferred Site under the Consent Order[a]
A-SMA-3	39-004(c)	Firing site TA-39-6, Deferred Site under the Consent Order[a]
A-SMA-1.1	39-004(d)	Firing site TA-39-57, Deferred Site under the Consent Order[a]
A-SMA-2	39-004(e)	Firing site, Deferred Site under the Consent Order[a]
A-SMA-3.5	39-006(a)	Septic system, Deferred Site under the Consent Order[a]
A-SMA-2.7	39-008	Disposal Trenches, Deferred Site under the Consent Order[a]
PJ-SMA-10	40-006(a)	Firing site, Deferred Site under the Consent Order[a]
PJ-SMA-8	40-006(b)	Firing site, Deferred Site under the Consent Order[a]
PJ-SMA-7	40-006(c)	Firing site, Deferred Site under the Consent Order[a]
LA-SMA-5.31	41-002(c)	Sludge Drying Bed, Deferred Site under the Consent Order[a]
LA-SMA-5.35	C-41-004	Storm drains, Deferred Site under the Consent Order[a]
M-SMA-3/M-SMA-4	48-005	Waste lines, Deferred Site under the Consent Order[a]
S-SMA-6	72-001	Firing range, Deferred Site under the Consent Order[a]

[a] 2016 Compliance Order on Consent, Appendix A.

[b] Site has been removed from the draft Permit because of an administrative error, Site should not have been included on the 2010 Permit.

Attachment 8

Sites Where Analytical Results
from at Least Two Sampling Events Yielded No
Target Action Level Exceedance and Site Descriptions

In Part I.C.4.c of the draft Individual Permit (Permit or IP), Sites are eligible for deletion when two confirmation monitoring samples have been collected with no target action level (TAL) exceedances. The Sites included in Table 8-1 meet this criteria for deletion, and the Permittees are requesting that the Sites be deleted from the Permit. Soil data were evaluated for these Sites using the process outlined in Part I.C.2.b.ii of the draft Permit, and the Permittees ensured that all pollutants of concern found to exceed the soil background threshold value (BTV) or 10% of the soil screening level (SSL) were monitored in storm water. The Permittees are requesting Sites listed in Table 8-1 be removed from the Permit. Site descriptions and additional information about these Sites are included after Table 8-1; these Sites have been removed from the redline/strikeout version of Appendix A included as Attachment 2.

Table 8-1
Sites Where Analytical Results from at Least Two Sampling Events Yielded No TAL Exceedances

SMA	Site	Monitoring Stage	Sample Dates
2M-SMA-3	07-001(a)	Corrective Action Monitoring	07/26/2017 10/04/2017
2M-SMA-3	07-001(b)	Corrective Action Monitoring	07/26/2017 10/04/2017
2M-SMA-3	07-001(d)	Corrective Action Monitoring	07/26/2017 10/04/2017
CDV-SMA-2.5	16-010(c)*	Baseline Monitoring	09/01/2011 10/12/2012 07/26/2013
CDV-SMA-2.5	16-010(d)*	Baseline Monitoring	09/01/2011 10/12/2012 07/26/2013
CDV-SMA-2.5	16-028(a)	Baseline Monitoring	09/01/2011 10/12/2012 07/26/2013
PJ-SMA-14.8	18-012(a)	Baseline Monitoring	07/28/2011 08/18/2011
PJ-SMA-16	27-002	Baseline Monitoring	07/30/2011 08/08/2013
LA-SMA-10.12	53-008	Corrective Action Monitoring	09/12/2013 07/20/2015

* These Sites have been removed from the draft Permit because they are no longer Resource Conservation and Recovery Act (RCRA) corrective action units, but are hazardous waste management units, and cannot be regulated under the Permit. Site descriptions of these Sites are included below for informational purposes.

Site ID: **07-001(a)**
Site Name: **Firing Site**
SMA: **2M-SMA-3**

SMA Overview:
2M-SMA-3 monitors storm water discharges from SWMUs 07-001(a), 07-001(b), 07-001(c), and 07-001(d). The SMA receives runoff from SWMU 07-001(a) where industrial activities were reported to have occurred. This SMA is a 23.9-acre watershed consisting of 99.99% pervious surfaces and 0.01% impervious surfaces.

Site History Overview:
SWMU 07-001(a) is an inactive firing pit located near the east end of TA-06. The Site consists of a circular depression surrounded by an annular berm about 5 ft high and approximately 30 ft in diameter. The firing pit was used in the 1950s to destroy scrap detonators and explosives (LANL 1990, 007511). Materials to be destroyed were mixed with Composition B scraps or flaked TNT and the mixture was detonated. A 1959 memorandum states this method was very effective in destroying detonators, with no intact detonators thrown out of a pit and no undestroyed detonators found during a site survey, although pellets of unexploded PBX were found in post-firing debris (Spaulding 1959, 004574). The base explosives of the PBX historically used at the Laboratory include HMX, RDX, and TATB (LANL 1993, 020948). Post-firing debris potentially included DU and pieces of detonators (LANL 1990, 007511). This method of destroying detonators was discontinued at SWMU 07-001(a) in 1959 (LANL 2010, 109520).

Consent Order investigations have not been performed at SWMU 07-001(a), and no decision-level data are available for this Site. An RFI was conducted at the Site in 1994. The RFI data are screening level only. SWMU 07-001(a) will be investigated under the Consent Order as part of the Twomile Canyon Aggregate Area investigation.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE residues from detonator destruction activities	HMX, RDX, TATB, DU, metal scrap from detonators

Site ID: **07-001(b)**
Site Name: **Firing Site**
SMA: **2M-SMA-3**

SMA Overview:
2M-SMA-3 monitors storm water discharges from SWMUs 07-001(a), 07-001(b), 07-001(c), and 07-001(d). The SMA receives runoff from SWMU 07-001(b) where industrial activities were reported to have occurred. This SMA is a 23.9-acre watershed consisting of 100% pervious surfaces and 0.01% impervious surfaces.

Site History Overview:
SWMU 07-001(b) is an inactive firing pit located near the east end of TA-06. The Site consists of a circular depression surrounded by an annular berm about 5 ft high and approximately 30 ft in diameter. The firing pit was used in the 1950s to destroy scrap detonators and explosives (LANL 1990, 007511). Materials to be destroyed were mixed with Composition B scraps or flaked TNT and the mixture was detonated. A 1959 memorandum states this method was very effective in destroying detonators, with no intact detonators thrown out of a pit and no undestroyed detonators found during a site survey, although pellets of unexploded PBX were found in post-firing debris (Spaulding 1959, 004574). The base explosives of the PBX historically used at the Laboratory include HMX, RDX, and TATB (LANL 1993,

020948). Post-firing debris potentially included DU and pieces of detonators (LANL 1990, 007511). This method of destroying detonators was discontinued at SWMU 07-001(b) in 1959 (LANL 2010, 109520). Consent Order investigations have not been performed at SWMU 07-001(b), and no decision-level data are available for this Site. An RFI was conducted at the Site in 1994. The RFI data are screening level only. SWMU 07-001(b) will be investigated under the Consent Order as part of the Twomile Canyon Aggregate Area investigation.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Residues from detonator destruction activities	HMX, RDX, TATB, DU, metal scrap from detonators

Site ID: **07-001(d)**
Site Name: **Firing Site**
SMA: **2M-SMA-3**

SMA Overview:
2M-SMA-3 monitors storm water discharges from SWMUs 07-001(a), 07-001(b), 07-001(c), and 07-001(d). The SMA receives runoff from SWMU 07-001(d) where industrial activities were reported to have occurred. This SMA is a 23.9-acre watershed consisting of 99.99% pervious surfaces and 0.01% impervious surfaces.

Site History Overview:
SWMU 07-001(d) is an inactive firing site located near the eastern boundary of TA-06. The Site is an approximately 20-ft-diameter × 3-ft-deep crater (LANL 2010, 109520). Detonator parts have been found near the crater (LANL 1993, 026068). Little is known about the Site operating history, but it is believed to be the location of a one-time "celebratory shot" fired in 1945 after the Japanese surrender at the end of World War II (LANL 1997, 056664). Potential contaminants include metals, HE, and radionuclides (LANL 1997, 056664).

Consent Order investigations have not been performed at SWMU 07-001(d), and no decision-level data are available for this Site. An RFI was conducted at the Site in 1994. The RFI data are screening level only. SWMU 07-001(d) will be investigated under the Consent Order as part of the Twomile Canyon Aggregate Area investigation.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Residues from detonator destruction activities and explosive shot	Metals, HE, radionuclides

Site ID: **16-010(c)**
Site Name: **Flash Pad/Burn Tray**
SMA: **CDV-SMA-2.5**

SMA Overview:
CDV-SMA-2.5 monitors storm water discharges from SWMUs 16-010(c), 16-010(d), and 16-028(a). The SMA receives runoff from SWMU 16-010(c) where industrial activities were reported to have occurred. This SMA is a 23.5-acre watershed consisting of 90% pervious surfaces and 10% impervious surfaces.

Site History Overview:
SWMU 16-010(c) is a former burn table constructed in 1951 that was converted to a flash pad/burn tray (structure 16-388) located at the TA-16 burning ground. The burn table was used to treat HE scrap (LANL 1990, 007512). The 100-ft × 100-ft enclosed area consisted of a 12-ft × 20-ft concrete pad that was used to unload explosives and a 16-ft × 4-ft metal tray that was approximately 2 ft above the ground surface. Scrap HE was placed on the tray and burned (LANL 1990, 007512; LANL 1993, 020948). The current flash pad consists of a 22-ft × 22-ft concrete pad set on a secondary containment area and surrounded on three sides by a concrete wall. Before treatment, the HE-contaminated wastes are placed on steel pallets or steel trays. Propane burners are used as heat sources to treat the wastes at the flash pad, which can be covered with a movable steel roof when the pad is not in use. The current burn tray consists of a stainless-steel kettle that is 30 in. in diameter and 24 in. high. Propane burners are used to treat HE-contaminated liquid wastes at the burn tray. The entire assembly, which can be covered with a retractable cover, is provided with secondary containment (LANL 2003, 700300).

SWMU 16-010(c) is an active RCRA hazardous waste treatment unit and not subject to the Consent Order (Nonno 2012, 210148). No investigations have been conducted at this Site. SWMU 16-010(c) is a formerly dual-regulated corrective action unit that was removed from the list of corrective action units in LANL's Hazardous Waste Facility Permit in November 2010; therefore, this unit is no longer subject to the Consent Order.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE scrap	HE, metals, dioxins/furans

Site ID: **16-010(d)**
Site Name: **Flash Pad/Burn Tray**
SMA: **CDV-SMA-2.5**

SMA Overview:
CDV-SMA-2.5 monitors storm water discharges from SWMUs 16-010(c), 16-010(d), and 16-028(a). The SMA receives runoff from SWMU 16-010(c) where industrial activities were reported to have occurred. This SMA is a 23.5-acre watershed consisting of 90% pervious surfaces and 10% impervious surfaces.

Site History Overview:
SWMU 16-010(d) is a former burn table constructed in 1951 that was converted to a flash pad/burn tray (structure 16-388) located at the TA-16 burning ground. The burn table was used to treat HE scrap (LANL 1990, 007512). The 100-ft^2 enclosed area consists of a 20-ft × 20-ft concrete pad, a burn table that is approximately 2 ft above the ground surface, and a 16-ft × 4-ft metal tray situated on the table. Scrap HE is placed on the tray and burned. A metal-covered rain guard can be rolled back to expose the tray (LANL 1993, 020948). This is an active RCRA hazardous waste treatment unit and is not subject to the Consent Order (Nonno 2012, 210148).

No investigations have been conducted at this Site. SWMU 16-010(d) is a formerly dual-regulated corrective action unit that was removed from the list of corrective action units in LANL's Hazardous Waste Facility Permit in November 2010; therefore, this unit is no longer subject to the Consent Order.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE scrap	HE, metals

Site ID: **16-028(a)**
Site Name: **Drainage Channel**
SMA: **CDV-SMA-2.5**

SMA Overview:
CDV-SMA-2.5 monitors storm water discharges from SWMUs 16-010(c), 16-010(d), and 16-028(a). The SMA receives runoff from SWMU 16-028(a) where industrial activities were reported to have occurred. This SMA is a 23.5-acre watershed consisting of 90% pervious surfaces and 10% impervious surfaces.

Site History Overview:
SWMU 16-028(a) is the south drainage channel located at the TA-16 burning ground (LANL 1994, 039440). The Site provides the only drainage for half the burning ground and marks the southern edge of burning ground activities (LANL 2006, 091697). Potential contaminants at this Site include HE, metals (particularly barium), and laboratory chemicals such as solvents that were burned at various burning ground sites (LANL 2006, 091697).

Consent Order investigations have not yet begun for this Site; however, decision-level data from 1995 and 1997 RFIs are available for SWMU 16-028(a). Several inorganic chemicals were detected above BVs in shallow RFI samples, and PAHs and HE were detected at concentrations below residential SSLs. SWMU 16-028(a) will be sampled during the future Cañon de Valle Aggregate Area TA-16 investigation.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Burned HE debris	HE, metals (barium)

Site ID: **18-012(a)**
Site Name: **Outfall**
SMA: **PJ-SMA-14.8**

SMA Overview:
PJ-SMA-14.8 monitors storm water discharges from SWMU 18-012(a). The SMA currently receives runoff from areas where industrial activities associated with SWMU 18-012(a) were reported to have occurred. This SMA is a 0.0077-acre watershed that consists of 100% pervious surfaces.

Site History Overview:
SWMU 18-012(a) consists of a former outfall at TA-18 for a combined industrial drain and storm sewer drain for former building 18-116 (Engineering drawing ENG-R1063, LASL 1958, 602446; LANL 1995, 052183). Drainlines that discharged to this outfall were connected to building 18-116 roof drains and floor drains. The floor drains received floor washings (Santa Fe Engineering, Ltd. 1992, 602422). Potential contaminants include beryllium, uranium, and silver (LANL 1993, 015310). In 1965, the drain may have overflowed, possibly releasing uranium-235 and plutonium-238 (LANL 1990, 007512). The outfall, found during 1992 field inspections using a dye-trace test, is located approximately 120 ft northeast of building 18-116 and approximately 150 ft from the stream channel in Pajarito Canyon (LANL 2010, 109636). Building 18-116 was built in 1960 and used for uranium mockup tests for the Rover Program—a nuclear rocket propulsion program conducted from 1955 to 1972 (LANL 1993, 015310). The date this outfall became operational is not known, but it is likely that the outfall has been operational from the time building 18-116 was completed in 1960 until it underwent D&D in 2016 (LANL 2010, 109636).

SWMU 18-012(a) is included in the Consent Order as part of the Lower Pajarito Canyon Aggregate Area. Consent Order investigations for this aggregate area have not yet begun. The ”Investigation Work Plan for Lower Pajarito Canyon Aggregate Area, Revision 1” (LANL 2010, 111328) was approved in December 2010. Decision-level data are not available for SWMU 18-012(a).

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Floor washings	Beryllium, silver, uranium, uranium-235, plutonium-238
Storm Water	None

Site ID: 27-002
Site Name: Firing Site
SMA: PJ-SMA-16

SMA Overview:
PJ-SMA-16 monitors storm water discharges from SWMU 27-002. The SMA currently receives runoff from areas where industrial activities associated with SWMU 27-002 were reported to have occurred. This SMA is a 3.04-acre watershed consisting of 73% pervious surfaces and 27% impervious surfaces.

Site History Overview:
SWMU 27-002 is an inactive firing site in Pajarito Canyon used between 1944 and 1947 (LANL 1993, 015310). The Site consists of five former firing pits situated on both sides of Pajarito Road, approximately 0.9 mi southeast of TA 18. The experimental shots at these pits used up to 2 tons of HE. Potential contaminants include HE, beryllium, lead, thorium, and uranium (LANL 1990, 007513; LANL 1993, 015310). Firing Pit 1 is located in the grassy area approximately 100 ft south of the TA-36 fence. Firing Pits 2 and 3 are approximately 200 ft east of Firing Pit 1, between the fence and Pajarito Road. Firing Pit 4 has been impacted by the construction of Pajarito Road but is located on the north side of Pajarito Road. Firing Pit 5 is located on a small curve on the north side of Pajarito Road (LANL 1995, 052183). The pits were used for explosives testing with materials such as beryllium, thorium, and uranium. A 1946 bullet sensitivity test at Firing Pit 1 caused a block of Composition B explosive to undergo a low-order explosion, scattering unexploded HE over a 250-yd radius (LANL 1995, 052183).

SWMU 27-002 is included in the Consent Order as part of the Lower Pajarito Canyon Aggregate Area. Consent Order investigations for this aggregate area have not yet begun. The “Investigation Work Plan for Lower Pajarito Canyon Aggregate Area” was approved in December 2010 (LANL 2010, 111328). Decision-level data are not available for SWMU 27-002.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Experimental shot debris	HE, beryllium, lead, thorium, and uranium

Site ID: **53-008**
Site Name: **Storage Area**
SMA: **LA-SMA-10.12**

SMA Overview:
LA-SMA-10.12 monitors storm water discharges from AOC 53-008. The SMA currently receives runoff from areas where industrial activities associated with AOC 53-008 were reported to have occurred. This SMA is a 0.68-acre watershed consisting of 98% pervious surfaces and 2% impervious surfaces.

Site History Overview:
AOC 53-008 is an unpaved open area (referred to as a “boneyard”) previously used to store used materials and equipment associated with historical experiments conducted at TA-53. This storage area, approximately 3 to 4 acres in size, is irregularly shaped, and located east and south of former TA-53 surface impoundments (LANL 1990, 007514; LANL 1994, 034756). Most of the storage area is vegetated with grasses, shrubs, and juniper trees, and several dirt trails also run through the site (LANL 2009, 105078). Materials shown to be present at the site in 1989 photographs included vacuum pumps, metal ducting, concrete shielding blocks, empty overpack drums, and drums containing steel bearings (LANL 1989, 020614; LANL 1989, 020615; LANL 1989, 020616). This site was inspected in September 1993 and was found to contain shielding blocks (magnetite concrete and steel), concrete, steel, other metallic debris, and other miscellaneous items (LANL 1994, 034756). No hazardous materials or chemicals were observed, with the exception of lead stored in a shed (structure 53-621) at the south end of the site (LANL 1994, 034756). Steel within shielding blocks may have been activated by the accelerator beam (LANL 1994, 034756). This area was used for storage from approximately 1972 to 2009. By 2009, much of the material previously stored at the site had been removed (LANL 2009, 105078).

Phase I Consent Order sampling is complete for AOC 53-008. All detected inorganic and organic chemical concentrations and radionuclide activities were below residential SSLs, except for one detection of arsenic. Additional sampling was recommended for AOC 53-008 in the ”Supplemental Investigation Report for Lower Sandia Canyon Aggregate Area,” which was submitted to NMED in July 2017 (LANL 2017, 602524).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Equipment, shielding blocks, concrete and metal debris, lead, steel bearings	Metals, activation products

Attachment 9

Development of Background Threshold Values for Storm Water Runoff on the Pajarito Plateau, New Mexico, 2019 Revision

The completed "Development of Background Threshold Values for Storm Water Runoff on the Pajarito Plateau, New Mexico 2019 Revision" report is available at https://ext.em-la.doe.gov/ips/Content/posters_presentations/Revised%202020%20Background%20Report.zip. This revised storm water background characterization report incorporates background sampling data collected through 2018. Target action levels and background threshold values in Attachment 2, Appendixes B and C, respectively, have been updated to reflect the inclusion of 2018 data.

Attachment 10

Additional Site Information in Response to the Citizens for Clean Water Comment Regarding Proposed Site Deletion

On page 24 of the Fact Sheet, Citizens for Clean Water (CCW) present 14 Sites that they do not believe should be removed from the Individual Permit (Permit or IP). In several instances, the Permittees agree with CCW and are requesting the Site be added back to the Permit or have not requested that the Site be removed from the Permit. These Sites are included in Table 10-1, along with the Permittees' rationale for Site deletion from the Permit. Following Table 10-1, the Permittees have provided additional information regarding the Site history.

Table 10-1
Sites Where Additional Information was Requested by CCW

SMA	Site	Reason(s) for Deletion from the Permit
R-SMA-2.05	00-011(c)	• Significant industrial materials were not used at the Site or significant industrial materials were remediated such that storm water is not impacted • The SMA sampler was operational during a 25-year 24-hour storm event and did not collect a sample
R-SMA-2.3	00-011(e)	• The Permittees are requesting this site be added back to the Permit because the COC with Controls from NMED requires monitoring under the IP.
ACID-SMA-2	45-001	• The Permittees are requesting that this Site be added back to the IP because non-Site related TAL exceedances exceeded applicable BTV's and the Site does not qualify for Long Term Stewardship.
ACID-SMA-2	45-002	• The Permittees are requesting that this Site be added back to the IP because non-Site related TAL exceedances exceeded applicable BTV's and the Site does not qualify for Long Term Stewardship.
LA-SMA-4.2	01-001(c)	• The Permittees have not requested to delete this site from the Permit.
LA-SMA-4.2	01-006(d)	• The Permittees are requesting this Site be added back onto the Permit because no storm water sample has been collected at the associated SMA.
CDB-SMA-1	C-46-001	• Significant industrial materials were not used at the Site or significant industrial materials were remediated such that storm water is not impacted
CDB-SMA-4	54-017	• The Permittees have not requested to delete this site from the Permit.
CDB-SMA-4	54-018	• The Permittees have not requested to delete this site from the Permit.
M-SMA-4	48-007(a)	• The Permittees have not requested to delete this site from the Permit.
M-SMA-4	48-007(d)	• The Permittees have not requested to delete this site from the Permit.
M-SMA-12.5	05-005(b)	• The Permittees have not requested to delete this site from the Permit.

Table 10-1 (continued)

SMA	Site	Reason(s) for Deletion from the Permit
PRATT-SMA-1.05	35-016(m)	• Significant industrial materials were not used at the Site or significant industrial materials were remediated such that storm water is not impacted
T-SMA-5	35-016(a)	• Significant industrial materials were not used at the Site or significant industrial materials were remediated such that storm water is not impacted

Site ID: **00-011(c)**
Site Name: **Mortar Impact Area**
SMA: **R-SMA-2.05**

SMA Overview:
R-SMA-2.05 monitors storm water discharges from SWMU 00-011(c). The SMA currently receives runoff from areas where industrial activities associated with SWMU 00-011(c) were believed to have occurred. This SMA is a 0.56-acre watershed consisting of 100% pervious surfaces.

Site History Overview:
SWMU 00-011(c) is the location of a possible munitions impact area. The Site is located on GSA and USFS land within a tributary of Rendija Canyon north of the Sportsmen's Club small-arms firing range (AOC 00-015). The area is approximately 9 acres. The Site was identified as a possible munitions impact area because of nearly illegible historical signage posted at the Site in the 1940s (LANL 1990, 007511). However, extensive archival searches revealed no documentation regarding the use of this Site as a munitions impact area, and no field evidence of munitions operations (e.g., MD, MEC, UXO, or impact scars) has ever been found at SWMU 00-011(c) (LANL 1994, 059427). In addition, no ordnances were found during the 2007 investigation or during the 2009 and 2011 ordnance surveys conducted at the Site (LANL 2007, 099954; LANL 2009, 108171; LANL 2011, 208817). The complete absence of MD, MEC, UXO, or impact scars confirmed SWMU 00-011(c) was never used as a munitions impact area; a COC without controls was issued for SWMU 00-011(c) in May 2012 (NMED 2012, 520388). The complete absence of UXO and OEW confirmed that the SWMU 0-011(c) was never used as an ordnance-impact area. In accordance with the approved Guaje/Barrancas/Rendija Canyons Aggregate Area investigation work plan (LANL 2005, 089657), no further investigation was conducted at SWMU 00-011(c). NMED concurred with the conclusion that no additional ordnance surveys need to be conducted at this Site and issued a COC without controls in May 2012.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
None	None

Site ID: **00-011(e)**
Site Name: **Mortar Impact Area**
SMA: **R-SMA-2.3**

Site History Overview:
SWMU 00-011(e) is a former ammunition impact area located in a tributary of Rendija Canyon known as Thirty-Seven Millimeter Canyon on USFS land with a small portion on DOE land (LANL 2011, 208817). The Site was used from 1944 to 1948 for training U.S. Army personnel operating tanks firing 20-, 37-, and 76-mm rounds and 50-mm caliber munitions (LANL 1990, 007511; LANL 2011, 208817). The impact area extends north along the tributary to the top of a cliff face and is approximately 15 acres in size. SWMU 00-011(e) is located within a steep natural amphitheater with numerous loose rocks and boulders. The Site is fenced with barbed wire and posted with "Explosives No Trespassing" signs (LANL 2009, 108171; LANL 2011, 208817; LANL 2013, 251748). During the 1993 Phase I RFI conducted at SWMU 00-011(e), the Site was surveyed for UXO and OEW. During the ordnance sweep, materials recovered included 37-mm rounds and fragments. Because it was not known if these rounds were HE or armor-piercing, they were all placed in shallow pits and detonated with explosives (LANL 1994, 059427). Numerous munitions debris was also found during the 2009, 2011, and 2013 ordinance surveys (LANL 2009, 108171; LANL 2011, 208817; LANL 2013, 251748).

Consent Order investigations are complete for SWMU 00-011(e); the Site meets residential risk levels. NMED issued a COC with controls for SWMU 00-011(e) in May 2013. The controls require performance of triennial ordnance surveys, which were performed in 2013 and 2016.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
HE	Explosive compounds
Munition shell residuals	Metals (copper, iron, lead)

Site ID: **45-001**
Site Name: **Soil Contamination from Former RLW Treatment Plant**
SMA: **ACID-SMA-2**

SMA Overview:
ACID-SMA-2 monitors storm water discharges from SWMUs 01-002(b)-00, 45-001, 45-002, and 45-004. The SMA receives runoff from SWMU 45-001 where industrial activities were reported to have occurred. This SMA is a 52.4-acre watershed consisting of 73% pervious surfaces and 27% impervious surfaces.

Site History Overview:
SWMU 45-001 consists of the former TA-45 liquid waste treatment plant and its two associated outfalls. The TA-45 RLW treatment plant (building 45-2) was the first such facility at LANL and was located near the current intersection of Canyon Road and Central Avenue in the Los Alamos townsite (LANL 1992, 007668). The treatment plant began operation in 1951 and operated until 1964 (LANL 1990, 007513). The capacity of the plant was originally 90 gal./min but was expanded to 145 gal./min in 1957 (LANL 1992, 007668). The treatment plant included neutralization and storage tanks, flocculation tanks, sedimentation basins, vacuum filters, and granular media filters (Stoker et al. 1981, 006059). Contaminants potentially present in the untreated wastewater include any chemicals or radionuclides used in buildings connected to the waste lines. These contaminants include plutonium, uranium, americium, tritium, cesium-137, strontium-90, solvents, and other chemicals (LANL 1981, 006059; LANL 1990, 007513). Effluent from the plant discharged to Acid Canyon through two outfalls located near the canyon rim and flowed to the south fork of Acid Canyon [SWMU 01-002(b)-00] (LANL 1990, 007513;

LANL 1992, 007668). D&D of SWMU 45-001 began in October 1966 and included demolition and removal of the treatment plant equipment, facilities, and waste lines and excavation of contaminated soil (LANL 1981, 006059; LANL 1992, 007668). In July 1967, the TA-45 property was transferred to Los Alamos County (LANL 1992, 007668).

The 2007 and 2010 Consent Order investigations of inorganic and organic chemical contamination at SWMU 45-001 was conducted jointly with SWMUs 45-002, 45-003, 45-004 and AOC C-45-001. NMED issued a COC without controls for SWMU 45-001 in February 2013 (NMED 2013, 522072).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Treated radioactive liquid waste	Plutonium, uranium, americium, tritium, cesium-137, strontium-90, solvents, and other chemicals

Site ID: 45-002
Site Name: Soil Contamination from Former Decontamination Facility
SMA: ACID-SMA-2

SMA Overview
ACID-SMA-2 monitors storm water discharges from SWMUs 01-002(b)-00, 45-001, 45-002, and 45-004. The SMA receives runoff from SWMU 45-002 where industrial activities were reported to have occurred. This SMA is a 52.4-acre watershed consisting of 73% pervious surfaces and 27% impervious surfaces.

Site History Overview:
SWMU 45-002 consists of a former vehicle decontamination facility used to remove radioactive contamination from vehicles and large equipment, including filters from the Sigma Building, trash dumpsters, wing tanks from airplanes, and lead bricks (LANL 1995, 048856). This former decontamination facility was composed of former building 45-1, a sump, and a drain system used to collect water for the RLW treatment facility (LANL 1990, 007513). SWMU 45-002 was located approximately 40 ft south of the TA-45 RLW treatment plant (SWMU 45-001). Vehicles and other equipment were decontaminated by steam cleaning (LANL 1995, 048856). Decontamination wastes consisted of oil and grease contaminated with radionuclides (LANL 1990, 007513). The decontamination facility was constructed in 1951, began operation in 1952, was operated approximately once per week until 1964, and was decommissioned in 1966 (IT Corporation 1991, 002085; LANL 1992, 007668; LANL 1995, 048856). Decontamination wastewater was initially discharged to Acid Canyon until 1955 when it was routed to the RLW treatment plant (LANL 1992, 007668). In July 1967, the TA-45 property was transferred to Los Alamos County (LANL 1992, 007668).

NMED issued a COC without controls for SWMU 45-002 in February 2013 (NMED 2013, 522072).

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Decontamination wastes	Oil, petroleum hydrocarbons, radionuclides

Site ID: **01-006(d)**
Site Name: **Drainlines and Outfall**
SMA: **LA-SMA-4.2**

SMA Overview:
LA-SMA-4.2 monitors storm water discharges from SWMUs 01-001(c), 01-006(c), and 01-006(d). The SMA receives runoff from 01-006(d) where industrial activities were reported to have occurred. This SMA is a 0.27-acre watershed consisting of 100% impervious surfaces.

Site History Overview:
SWMU 01-006(d) is the former drainline and outfall that served Building D-3 (former structure 01-9) and discharged to Los Alamos Canyon at the former TA-01. The outfall is located on Hillside 137 in the same area as the former SWMU 01-006(c) drainline (LANL 1992, 043454). Activities conducted at Building D-3 included counting radioactive filter papers from Building H-1 (Ahlquist et al. 1977, 005710). During the D&D of Buildings D and D-2, all drainlines were removed along with areas of elevated radioactivity (Ahlquist et al. 1977, 005710). Because the main portion of the drainline from Building D-3 was located in close proximity to Building D-2, this drainline was likely removed during the excavation of contaminated soils beneath and around Buildings D and D-2 (LANL 2006, 091915). Clean soil was used to backfill the excavations. Currently, the area is undeveloped and privately owned (LANL 2006, 091915).

All detected inorganic and organic chemical concentrations and radionuclide activities from Consent Order samples were below residential SSLs and SALs. NMED issued a COC with controls in September 2010.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Discharge from Building D-3	Radionuclides

Site ID: **C-46-001**
Site Name: **Spill/Non-Intentional Release Area**
SMA: **CDB-SMA-1**

SMA Overview:
CDB-SMA-1 monitors storm water discharges from SWMUs 46-003(c), 46-004(d2), 46-004(f), 46-004(t), 46-004(w), 46-008(g), and 46-009(a) and AOC C-46-001. The SMA currently receives runoff from areas where industrial activities associated with AOC C-46-001 were reported to have occurred. This SMA is a 10.5-acre watershed consisting of 64% pervious surfaces and 36% impervious surfaces.

Site History Overview:
AOC C-46-001 is the location of a one-time mercury spill in the vicinity of building 46-75 at TA-46. On July 22, 1975, 250–500 g (0.55–1.1 lb) of mercury reportedly spilled on the ground near building 46-75 (Ahlquist 1975, 008501). The spill was cleaned up shortly after it occurred (Ahlquist 1975, 008501). The memorandum documenting the spill does not provide the precise location of where the spill occurred at building 46-75; however, aerial photos show the entire area surrounding building 46-75 was paved at the time of the spill (LANL 1993, 020952).

NMED issued a COC without controls under the Consent Order for this Site in July 2013.

Potential Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Mercury	Mercury

Site ID: **35-016(m)**
Site Name: **Outfall**
SMA: **Pratt-SMA-1.05**

SMA Overview:
Pratt-SMA-1.05 monitors storm water discharges from SWMUs 35-003(h), 35-003(p), 35-004(h), 35-009(d), 35-016(k), and 35-016(m) and AOCs 35-003(r) and 35-016(l). The SMA currently receives runoff from areas where industrial activities associated with SWMU 35-016(m) were reported to have occurred. This SMA is a 10.3-acre watershed consisting of 86% pervious surfaces and 14% impervious surfaces.

Site History Overview:
SWMU 35-016(m) consists of a 1.5-in.-diameter metal blowdown line and a 4-in.-diameter metal drainline intended to receive blowdown from a cooling tower at building 35-27 (LANL 1996, 055075). This outfall is located on the east end of the TA-35 mesa top south of a cooling tower (structure 35-33) and east of the Nuclear Safeguards Research Building (35-27). The formerly permitted outfall associated with the cooling tower was intended for discharging treated cooling tower blowdown from two planned reactors in building 35-27. However, the reactors were never installed, the cooling tower was never operated, and the outfall never received blowdown (Sontag et al. 1996, 054766). The SWMU 35-016(m) outfall has discharged only storm water runoff from paved parking areas at the east end of the TA-35 mesa top since its installation (LANL 2002, 073092). In August 2011, a COC request under the Consent Order was submitted to NMED for this Site. NMED granted SWMU 35-016(m) a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
None	None

Site ID: **35-016(a)**
Site Name: **Drain and Outfall from Building 35-34**
SMA: **T-SMA-5**

SMA Overview:
T-SMA-5 monitors storm water discharges from SWMUs 35-004(a), 35-009(a), 35-016(a), and 35-016(q). The SMA currently does not receive runoff from areas where industrial activities associated with SWMU 35-016(a) were reported to have occurred. This SMA is a 1.4-acre watershed consisting of 70% pervious surfaces and 30% impervious surfaces.

Site History Overview:
SWMU 35-016(a) is a former NPDES-permitted outfall (04A089) that originally consisted of an 8-in.-diameter metal pipe with a valve and a 6-in. VCP placed in a trench cut into the tuff that discharged into Ten Site Canyon (LASL 1955, 602059; LANL 1996, 055075). The outfall was established in 1958 to handle noncontact cooling water from the sodium testing building (35-34) and was eliminated from the NPDES permit in 1985 when discharges to the outfall ceased (LANL 1992, 007666). The NPDES permit outfall category 04A was for noncontact cooling water, non-destructive testing discharge, asphalt batch

plants, and water production facilities. The 1990 NPDES permit did have any effluent discharge limitations for category 04A other than flow (EPA 1990, 012454). The trench now serves as a storm water collection channel for a small area on the south side of Ten Site Mesa at TA-35. SWMU 35-016(a) discharges to the same location as the SWMU 35-016(q) storm water outfall in Ten Site Canyon. Aerial photographs from 1965 show a diagonal trench extending from the north end of SWMU 35-016(a) in a southeasterly direction that appears to connect with the north end of SWMU 35-016(q). Aerial photographs from 1974 show that the diagonal trench and approximately two-thirds of the northern portion of the SWMU were no longer present and may have been backfilled. The mid-90s aerial photographs show this Site to be much the same as it appeared in 1974 (LANL 1996, 055075). The outfall was inspected during the RFI and the metal pipe and valve were seen to be extending from a trench at the edge of the mesa (Koch 1994, 045284).

Consent Order investigations are complete for SWMU 35-016(a). The Site meets residential risk levels. A request for a COC was submitted to NMED in August 2011. NMED granted the Site a COC without controls on October 14, 2015.

Potential Site Use of Industrial Materials:

Known or Potential Industrial Material Used at the Site	Associated Constituents
Noncontact cooling water	None

Attachment 11

Sites to Be Rescreened Using the Site-Specific Determination

On page 29 of the Fact Sheet, the U.S. Environmental Protection Agency (EPA) provides the Permittees with a mechanism for screening Sites in a compliance stage that has either changed or no longer exists. In response to this opportunity provided by EPA, the Permittees are providing an initial list of Sites in Table 11-1 that will be screened to determine a new compliance stage (Part I.C of the draft Individual Permit) once the final Permit is issued.

Table 11-1
Sites Pending EPA Response
(Alternative Compliance, Force Majeure, and Compliance Order on Consent Certificates of Completion [COCs]) for Which a Site-Specific Demonstration Will Be Completed

SMA	SMA Site	Corrective Action Short Description
R-SMA-2.5	00-011(a)*	CA Complete COC
B-SMA-1	00-011(d)	CA Complete COC
P-SMA-3.05	00-018(a)	CA Complete COC
P-SMA-0.3	00-018(b)	CA Complete COC
LA-SMA-2.3	01-001(b)	CA Complete COC
LA-SMA-3.1	01-001(e)	Alt Comp Requested and CA Complete COC
ACID-SMA-2	01-002(b)-00	Alt Comp Requested
ACID-SMA-2.1	01-002(b)-00	Alt Comp Requested
LA-SMA-3.1	01-003(a)	Alt Comp Requested
LA-SMA-4.1	01-003(b)	Alt Comp Requested
LA-SMA-4.1	01-003(b1)	Alt Comp Requested
LA-SMA-4.1	01-003(b2)	Alt Comp Requested
LA-SMA-5.02	01-003(e)	CA Complete COC
LA-SMA-4.1	01-006(b)	Alt Comp Requested
2M-SMA-1.8	03-001(k)	Alt Comp Requested
2M-SMA-1.9	03-003(a)	Alt Comp Requested
2M-SMA-1	03-010(a)	Alt Comp Requested
S-SMA-2	03-012(b)	FM COC Requested
S-SMA-0.25	03-013(a)	Alt Comp Requested
S-SMA-3.53	03-014(b2)	FM COC Requested
S-SMA-1.1	03-029	FM COC Requested
S-SMA-2	03-045(b)	Alt Comp Requested
M-SMA-1.22	03-045(h)	Alt Comp Requested
M-SMA-1.2	03-049(a)	Alt Comp Requested
M-SMA-1	03-050(a)	Alt Comp Requested
2M-SMA-2	03-050(d)	Alt Comp Requested
S-SMA-2.01	03-052(b)	FM COC Requested
S-SMA-0.25	03-052(f)	Alt Comp Requested and FM COC Requested
2M-SMA-2	03-054(b)	Alt Comp Requested
M-SMA-1	03-054(e)	Alt Comp Requested
2M-SMA-1.7	03-055(a)	Alt Comp Requested

Table 11-1 (continued)

SMA	SMA Site	Corrective Action Short Description
LA-SMA-0.85	03-055(c)	Alt Comp Requested and CA Complete COC
S-SMA-2	03-056(c)	Alt Comp Requested and CA Complete COC
T-SMA-7.1	04-001	CA Complete COC
T-SMA-7.1	04-002	CA Complete COC
CDB-SMA-0.15	04-003(a)	Alt Comp Requested
T-SMA-7	04-003(b)*	Alt Comp Requested and CA Complete COC
CDB-SMA-0.15	04-004	Alt Comp Requested
M-SMA-12.8	05-001(a)*	CA Complete COC
M-SMA-12.9	05-001(b)	CA Complete COC
M-SMA-12.9	05-002	CA Complete COC
M-SMA-12.8	05-002	CA Complete COC
M-SMA-12.6	05-004*	CA Complete COC
M-SMA-12.5	05-005(b)	CA Complete COC
M-SMA-12.5	05-006(c)	CA Complete COC
2M-SMA-1.42	06-001(a)	Alt Comp Requested
STRM-SMA-1.05	08-009(f)	Alt Comp Requested
PJ-SMA-4.05	09-004(g)	Alt Comp Requested
PJ-SMA-4.05	09-005(g)	Alt Comp Requested
STRM-SMA-5.05	09-013	Alt Comp Requested
B-SMA-0.5	10-001(a)*	CA Complete COC
B-SMA-0.5	10-001(b)*	CA Complete COC
B-SMA-0.5	10-001(c)*	CA Complete COC
B-SMA-0.5	10-001(d)*	CA Complete COC
B-SMA-0.5	10-004(a)*	CA Complete COC
B-SMA-0.5	10-004(b)*	CA Complete COC
B-SMA-0.5	10-008*	CA Complete COC
B-SMA-0.5	10-009*	CA Complete COC
W-SMA-10	11-002	Alt Comp Requested
W-SMA-10	11-003(b)	Alt Comp Requested
W-SMA-10	11-005(a)	Alt Comp Requested
W-SMA-10	11-005(b)	Alt Comp Requested
W-SMA-10	11-006(c)	Alt Comp Requested
W-SMA-10	11-006(d)	Alt Comp Requested
W-SMA-9.7	11-011(a)	Alt Comp Requested
W-SMA-9.7	11-011(b)	Alt Comp Requested
W-SMA-10	11-011(d)	Alt Comp Requested
CDV-SMA-2.3	13-001	Alt Comp Requested
W-SMA-8.7	13-001	Alt Comp Requested
CDV-SMA-2.3	13-002	Alt Comp Requested

Table 11-1 (continued)

SMA	SMA Site	Corrective Action Short Description
W-SMA-8.7	13-002	Alt Comp Requested
PT-SMA-1	15-004(f)	Alt Comp Requested
W-SMA-14.1	15-004(h)	Alt Comp Requested
3M-SMA-0.4	15-006(b)	Alt Comp Requested
PT-SMA-1	15-008(a)	Alt Comp Requested
3M-SMA-0.5	15-009(c)	Alt Comp Requested
CDV-SMA-8	15-011(c)	Alt Comp Requested
W-SMA-14.1	15-014(l)	Alt Comp Requested
W-SMA-5	16-001(e)	Alt Comp Requested
W-SMA-5	16-003(f)	Alt Comp Requested
CDV-SMA-2.3	16-003(n)	Alt Comp Requested
CDV-SMA-2.3	16-003(o)	Alt Comp Requested
W-SMA-8.7	16-004(a)	Alt Comp Requested
CDV-SMA-2.51	16-010(i)	Alt Comp Requested
CDV-SMA-1.3	16-017(a)-99*	FM COC Requested
CDV-SMA-1.3	16-017(a)-99*	CA Complete COC
CDV-SMA-2	16-021(c)	Alt Comp Requested
W-SMA-5	16-026(b)	Alt Comp Requested
W-SMA-5	16-026(c)	Alt Comp Requested
W-SMA-1	16-026(c2)	Alt Comp Requested
W-SMA-5	16-026(d)	Alt Comp Requested
W-SMA-5	16-026(e)	Alt Comp Requested
W-SMA-8.7	16-026(j2)	Alt Comp Requested
CDV-SMA-1.3	16-026(m)*	CA Complete COC
W-SMA-1	16-026(v)	Alt Comp Requested
CDV-SMA-2.3	16-029(h)	Alt Comp Requested
W-SMA-8.7	16-029(h)	Alt Comp Requested
CDV-SMA-1.4	16-030(c)	CA Complete COC
CDV-SMA-2.3	16-031(h)	Alt Comp Requested
W-SMA-8.7	16-035	Alt Comp Requested
3M-SMA-4	18-002(b)	Alt Comp Requested
3M-SMA-4	18-003(c)	Alt Comp Requested
3M-SMA-4	18-010(f)	Alt Comp Requested
S-SMA-3.95	20-002(a)	Alt Comp Requested
S-SMA-5.5	20-005	Alt Comp Requested
LA-SMA-6.3	21-006(b)*	CA Complete COC
LA-SMA-5.91	21-009*	CA Complete COC
LA-SMA-5.92	21-013(b)	CA Complete COC
DP-SMA-3	21-013(c)	CA Complete COC

Table 11-1 (continued)

SMA	SMA Site	Corrective Action Short Description
LA-SMA-5.92	21-013(g)	CA Complete COC
LA-SMA-5.92	21-018(a)	CA Complete COC
DP-SMA-0.4	21-021	Alt Comp Requested
DP-SMA-2.35	21-021	Alt Comp Requested
LA-SMA-5.91	21-021	Alt Comp Requested
LA-SMA-6.395	21-021	Alt Comp Requested
LA-SMA-5.91	21-023(c)*	CA Complete COC
LA-SMA-6.395	21-024(j)	CA Complete COC
DP-SMA-0.6	21-024(l)*	CA Complete COC
DP-SMA-2.35	21-024(n)	Alt Comp Requested
LA-SMA-5.91	21-027(d)	FM COC Requested
DP-SMA-0.3	21-029	CA Complete COC
2M-SMA-1.43	22-014(a)	Alt Comp Requested
2M-SMA-1.43	22-015(a)	Alt Comp Requested
LA-SMA-9	26-001	Alt Comp Requested
LA-SMA-9	26-002(a)	Alt Comp Requested
LA-SMA-9	26-002(b)	Alt Comp Requested
LA-SMA-9	26-003	Alt Comp Requested
LA-SMA-5.361	32-002(b1)*	CA Complete COC
LA-SMA-5.33	32-004	CA Complete COC
CHQ-SMA-2	33-004(d)	Alt Comp Requested
A-SMA-6	33-004(k)	Alt Comp Requested
A-SMA-6	33-007(a)	Alt Comp Requested
A-SMA-6	33-010(a)	Alt Comp Requested
CHQ-SMA-4.5	33-011(b)	Alt Comp Requested
CHQ-SMA-4.1	33-016	Alt Comp Requested
Pratt-SMA-1.05	35-003(h)	CA Complete COC
Pratt-SMA-1.05	35-003(p)	CA Complete COC
Pratt-SMA-1.05	35-003(r)	CA Complete COC
T-SMA-4	35-004(a)	CA Complete COC
Pratt-SMA-1.05	35-004(h)	CA Complete COC
M-SMA-10	35-008*	CA Complete COC
T-SMA-4	35-009(a)	CA Complete COC
Pratt-SMA-1.05	35-009(d)	CA Complete COC
T-SMA-6.8	35-010(e)*	CA Complete COC
M-SMA-10	35-014(e)*	CA Complete COC
M-SMA-10.3	35-014(e2)	CA Complete COC
T-SMA-2.85	35-014(g)	CA Complete COC
T-SMA-2.5	35-014(g3)	CA Complete COC

Table 11-1 (continued)

SMA	SMA Site	Corrective Action Short Description
T-SMA-3	35-016(b)	CA Complete COC
T-SMA-4	35-016(c)	CA Complete COC
T-SMA-4	35-016(d)	CA Complete COC
M-SMA-10.01	35-016(e)*	CA Complete COC
M-SMA-7	35-016(g)	Alt Comp Requested
M-SMA-6	35-016(h)	Alt Comp Requested
M-SMA-10.3	35-016(i)	CA Complete COC
Pratt-SMA-1.05	35-016(k)	CA Complete COC
Pratt-SMA-1.05	35-016(l)	CA Complete COC
Pratt-SMA-1.05	35-016(m)	CA Complete COC
T-SMA-2.85	35-016(n)	CA Complete COC
M-SMA-12	35-016(p)	CA Complete COC
A-SMA-2.7	39-002(c)*	CA Complete COC
PJ-SMA-6	40-010	Alt Comp Requested
LA-SMA-1.1	43-001(b2)	CA Complete COC
ACID-SMA-2	45-001	Alt Comp Requested and CA Complete COC
ACID-SMA-2	45-002	Alt Comp Requested and CA Complete COC
ACID-SMA-2	45-004	Alt Comp Requested and CA Complete COC
CDB-SMA-0.25	46-004(c2)	Alt Comp Requested
CDB-SMA-0.25	46-004(e2)	Alt Comp Requested
CDB-SMA-0.55	46-004(g)	Alt Comp Requested
CDB-SMA-0.55	46-004(m)	CA Complete COC
CDB-SMA-0.55	46-004(s)	Alt Comp Requested
CDB-SMA-0.55	46-006(f)	Alt Comp Requested
M-SMA-3	48-001	Alt Comp Requested
M-SMA-4	48-001	Alt Comp Requested
M-SMA-4	48-007(a)	CA Complete COC
M-SMA-3	48-007(c)	Alt Comp Requested
M-SMA-4	48-007(d)	CA Complete COC
M-SMA-4	48-010	CA Complete COC
T-SMA-1	50-006(a)	FM COC Requested
M-SMA-7.9	50-006(d)	Alt Comp Requested
S-SMA-3.72	53-001(b)	CA Complete COC
S-SMA-4.1	53-014*	CA Complete COC
PJ-SMA-19	54-017	FM COC Requested
PJ-SMA-18	54-017	FM COC Requested
S-SMA-3.6	60-007(b)	FM COC Requested
P-SMA-2	73-002*	CA Complete COC
P-SMA-2	73-006*	CA Complete COC

Table 11-1 (continued)

SMA	SMA Site	Corrective Action Short Description
R-SMA-0.5	C-00-020*	CA Complete COC
R-SMA-1	C-00-041	CA Complete COC
LA-SMA-1	C-00-044	Alt Comp Requested
CHQ-SMA-2	C-33-003	Alt Comp Requested
LA-SMA-5.35	C-41-004	Alt Comp Requested
LA-SMA-1.25	C-43-001	Alt Comp Requested
CDB-SMA-1	C-46-001	CA Complete COC

*Permittees are requesting Site deletion; pending EPA final decision, these Sites may not need to be rescreened.