

**NPDES PERMIT NO. NM0030759
RESPONSE TO COMMENTS**

RECEIVED ON THE SUBJECT DRAFT NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT IN ACCORDANCE WITH REGULATIONS
LISTED AT 40CFR124.17

APPLICANT: Los Alamos National Security, LLC
Management Contractor for Operations
Los Alamos, New Mexico 87544

and

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

ISSUING OFFICE: U.S. Environmental Protection Agency
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PERMIT ACTION: Final permit decision and response to comments received on the
draft reissued NPDES permit publicly noticed on January 25,
2008.

DATE PREPARED: February 9, 2009

Unless otherwise stated, citations to 40CFR refer to promulgated regulations listed at Title 40,
Code of Federal Regulations, revised as of December 8, 2008.

SUBSTANTIAL CHANGES FROM DRAFT PERMIT

There are substantial changes from the draft permit publicly noticed on January 25, 2008. Significant changes and the rationale for changes can be found in the following response to certification or response to comments. Some minor changes, such as rewording or typos, are not discussed in Response to Comments. A summary of significant changes is given below.

(A) Receiving Streams (permit cover page):

- (a) Add more receiving streams to the cover page of the permit.

(B) Best Management Practices (Part I.A. and I.A.1.):

- (a) Add the terms “Stage 0”, “Stage I”, “Stage II”, and “Stage III” BMPs
- (b) Allow up to three (3) years to complete the first BMP implementation for sites identified by the permittee no later than six (6) months after the effective date of this permit, if it is determined that the implementation of intensive BMPs that are more costly and require longer periods of time for planning, design and installation. Examples of such BMPs, include, but are not limited to, removal of contaminated soils through excavation (e.g. cleanup), capping using impervious cover, or structural changes to eliminate run-on or provide for total retention of contaminated waters. Sites which have detected PCBs at a level above 0.014 µg/l are required to implement effective BMPs under this timeline.
- (c) Modify the description of unauthorized discharges.
- (d) Add a subsection A.1.h. Construction Activity Permit to authorize discharges from disturbed sites because of BMP installation.

(C) Site Inspection (Part I.A.2.):

- (a) Delete the requirement for reevaluation of erosion potential score.
- (b) Change the magnitude of storm for post-storm inspection to 0.25-inch or more intensive storm event within thirty (30) minutes.

(D) Monitoring Requirements (Part I.A.3.):

- (a) Target action levels for hardness-dependent metals are recalculated based on information provided by NMED pursuant to the condition set forth in the State 401 certification letter dated May 8, 2008.

(b) Replace the term of “water quality standards” or “water quality criteria” with “target action levels” if appropriate. Replace “target levels” with “target action levels.”

(c) Sample types are limited to grab samples. And, no snow-melt sample shall be used for confirming BMP effectiveness purpose.

(d) Add subsection d. Alternative Compliance to address extraordinary non-compliance issues.

(E) Site Discharge Pollution Prevention Plan (SDPPP) (Part I.B.)

(a) Require locations of SMAs to be identified and/or updated in the permittees’ annual SDPPP instead of being identified in the permit.

(F) Reporting (Part I.C.)

(a) Modify reporting requirements and add samples of Reporting Forms to Appendix D.

(G) Permit Reopener Provision (Part II):

(a) Add a permit reopener clause in Part II of the permit.

(H) Site Information (Appendix A)

(a) Add 128 and delete 6 sites from the 283 sites in the draft permit making a total of 405 sites in the final permit.

PUBLIC HEARING

A public hearing was conducted on March 4, 2008, at Best Western Hilltop House located at 400 Trinity Drive, Los Alamos, NM. Participants provided several comments. Responses to these comments are also included here.

STATE CERTIFICATION

Section 401(a) of the Clean Water Act (CWA or “the Act”) provides that applicants for a Federal license or permit to conduct any activity that may result in a discharge to navigable waters must obtain a certification from the State in which the discharge originates that the discharge complies with the applicable provisions of the Act. Pursuant to Section 401(a)(1) of the Act and 40 CFR §124.53(a), EPA may not issue a permit unless such a certification has been granted or waived by the State. Section 401(d) further provides that any State certification provided under Section 401 of the Act “shall become a condition on any Federal license or permit subject to the provision of this section,” and 40 CFR §124.55(a)(2) mandates that “no final permit shall be

issued” unless it incorporates the State certification requirements. EPA is without authority under the Act to review the appropriateness of such requirements. Roosevelt Campobello International Park Commission, et al. v. EPA, 684 F.2d 1041 (1st Circuit, 1982).

Pursuant to the New Mexico Water Quality Act, the New Mexico Environment Department (NMED) is the agency tasked with providing State certifications of federal permits. 74-6-4.E NMSA 1978. NMED provided EPA, Region 6 with their CWA Section 401 certification of the draft permit by letters from Marcy Leavitt (NMED) to Miguel Flores (EPA), dated January 15, 2008 and May 8, 2008. As required by the CWA and 40 CFR Part 124, the requirements specified in the State’s certification have been included in the final permit as discussed below:

DISCUSSION OF STATE CERTIFICATION

Conditions of Certification

(1) In NMED’s pre-certification letter dated January 15, 2008, NMED required that Method 1668A be used for analysis of PCBs.

(2) In their letter dated May 8, 2008, based on site-specific data, NMED required as a condition of certification that EPA incorporate the maximum target action levels (MTALs) for hardness-dependent metals based on a hardness value of 30 mg/l as CaCO₃. NMED also required that EPA re-analyze the reasonable potential for those metals. If the permittees submit appropriate additional data which reflects a more accurate geometric mean filtered hardness value than the 30 mg/l as CaCO₃, NMED has no objection to EPA’s use of the more accurate hardness value in calculation of new MTALs.

Response

(1) The proposed and final permit requires Method 1668A to be used for PCB analysis. As required under their industrial permit (NM0028355) the permittees have submitted the site specific congener-by-congener minimum quantification level (MQL) data for Method 1668A to EPA. EPA incorporates the permittees proposed congener-by-congener MQL for PCB Method 1668A into the final permit. As requested by the permittees EPA allows the permittees to develop the site-specific MQLs for PCBs in the final permit.

(2) EPA has revised the maximum target action levels for those pollutants having a hardness based formula for calculating the criterion using a hardness of 30 mg/l. Monitoring requirements for certain hardness-dependent metals were not listed in the Monitoring Requirement Table in the draft permit because no “reasonable potential” (RP) was found based on the proposed 100 mg/l of hardness. Because of the relationship between low hardness and increased toxicity for these metals it is necessary to reevaluate all sites for reasonable potential using the lower hardness values. The permittees will need to re-evaluate the metals concentrations for each site with the new target action levels to assure that sites are within the revised target action levels.

RESPONSE TO COMMENTS RECEIVED ON DRAFT PERMIT

EPA received many comments during the public comment period from January 25, 2008 to April 28, 2008, including comments recorded at the public hearing held on March 4, 2008.

The members of the public who spoke at the public hearing include, in order, Ms. Rachel Conn, Ms. Joni Arends, Ms. Bonnie Bonneau, Sister Marlene Perrotte, Sister Joan Brown, Mr. James R. Maestas, Ms. Kathy Wanpovi Sanchez, Sister Penelope McMullen, and Mr. Steve Veenis.

EPA received letters or emails from the following individuals or entities:

Ms. Susan Selbin via email dated March 6, 2008;
Mr. Tom Gallegos via mail dated March 10, 2008;
Mr. Thomas Powell via mail dated March 11, 2008;
Mr. J. Campbell (Northern New Mexico Citizens' Advisory Board) via mail dated March 17, 2008;
Ms. Brenda Blume by mail dated March 24, 2008;
Al & Julie Sutherlove by mail dated March 25, 2008;
Ms. Bonnie Bonnead by mail dated April 23, 2008;
U.S. Fish & Wildlife Service by mail dated April 30, 2008;
Citizen Groups by mail dated April 25, 2008, and fifteen (15) individuals who sent similar template letters during the public comment period;
Ms. Kathryn Tretter via mail dated April 25, 2008;
Mr. or Ms. McCarthy via mail dated April 26, 2008;
Los Alamos National Laboratory (LANL) via mail dated April 24, 2008; and
New Mexico Environment Department (NMED) dated May 8, 2008.

EPA has consolidated similar comments and categorized comments into six topics: 401 Certification Authority, Scope of Permit Coverage, Best Management Practices, Monitoring Requirements, Compliance, and Other Comments. Comments on the Statement of Basis are noted for the administrative record.

Comments Regarding 401 Certification Authority

Comment 1: EPA should offer adjacent and nearby Pueblos opportunities for 401 certification for the permit.

Response: EPA addressed the 401 Certification issue in the Statement of Basis. A state or Tribe, which is treated in the same manner as a state for purposes of the water quality standards program under CWA 303(c), is the 401 certifying authority for discharges to waters of the U.S. originating within their jurisdiction. The discharges at issue in this permit are to the waters of the State of New Mexico; therefore, the State of New Mexico is the appropriate certifying

agency under CWA section 401. Any affected Pueblos are treated in this case as downstream jurisdictions.

Comments Regarding Scope of Permit Coverage

Comment 2: At the public hearing, LANL noted for the record that only 294 sites were identified in the application submitted in April 1, 2005.

Response: The permittees' 2005, permit application contained detailed information concerning 294 Sites that had erosion scores greater than 40 and general information concerning 1038 Sites that had erosion scores less than 40. In accordance with the Federal Facilities Compliance Agreement (FFCA) signed between EPA and the permittees in 2005, the 294 Sites have been monitored under the site-specific monitoring plan and the 1038 Sites have been monitored under the watershed monitoring plan. Because this individual Permit is to replace the coverage of specific Sites under the multi-sector general permit (MSGP) and to terminate the FFCA in accordance with the agreement, it was reasonable to believe that all Sites listed in the original application would be covered by the individual permit. The permittees revised their application based on their 2007 CWA evaluation process. As stated in the Statement of Basis to the proposed permit, EPA did not approve or disapprove the list of Sites that were not included in the revised application submitted in March 2008.

Comment 3: The list of receiving waters should include Mortandad Canyon, Canada del Buey, Los Alamos Canyon, DP Canyon, Sandia Canyon, Ten Site Canyon, Canyon de Valle, Water Canyon, Ancho Canyon, Bay Canyon, Chaquehui Canyon, Fence Canyon, Pajarito Canyon, Twomile Canyon, Threemile Canyon, Potrillo Canyon, Pueblo Canyon, Rendija Canyon and, portions of segment no. 20.6.4.97 because some SWMUs are located in lands owned by Los Alamos County.

Response: The permit has been revised to reflect these changes.

Comment 4: One commenter stated that they understood throughout the application process that all Sites would be reassessed to determine their current erosion potential prior to exclusion from coverage under the Permit. In reviewing the justification given by the permittees for the exclusion of certain Sites from its request for Permit coverage, it appears that the permittees excluded some Sites based on assessments completed from 1997 – 2001. The commenter suggested EPA should require LANL to provide documentation that sites excluded from the permit are based on current erosion assessments.

Response: As stated in the Statement of Basis, this individual storm water permit only authorizes storm water discharges associated with industrial activity from solid waste management units (SWMUs) and areas of concern (AOCs) listed in Appendix A of the Permit, which are collectively referred to throughout the Permit as "Sites." Although the list of Sites is lengthy, it does not include every SWMU and AOC on facility land. The list, which was

compiled by the permittees and submitted as part of the Permit application, includes only those Sites for which the Permittees requested storm water permit coverage. The Permittees determined, based on their independent CWA Evaluation Process that certain SWMUs and/or AOCs were not subject to the CWA, based on either new erosion potential assessments or assessments previously conducted, and therefore did not require NPDES permit coverage. It is the permittees' responsibility to determine those Sites for which they believe they need NPDES permit coverage. The final Permit does not authorize discharges from any SWMUs and/or AOCs for which the permittees did not specifically request coverage as reflected in Appendix A of the Permit. Any discharge of pollutants from SWMUs and/or AOCs not listed on Appendix A would constitute a violation of the CWA for discharge of a pollutant without a permit.

Comment 5: Can additional pollutants or locations be added to the permit?

Response: Yes, if cause exists under 40 CFR §122.62, such as the receipt of new information not available at the time of Permit issuance, EPA can modify the Permit during its term to include additional requirements. If appropriate, additional requirements can also be added at permit reissuance.

Comment 6: Water may not be protected by this permit because most of the chemicals being discharged from LANL are not listed under the NPDES program jurisdiction.

Response: This Permit is an NPDES permit issued by EPA pursuant to specific authority granted the agency to issue NPDES permits under the CWA. EPA does not have authority under the CWA to include requirements outside the scope of its CWA NPDES jurisdiction.

Comment No. 7: A number of commenters expressed concerns about health impacts, PCBs, and contamination of the source of drinking water and downstream water quality caused by discharges from LANL.

Response: As stated in Response to Comment No. 6, EPA's jurisdiction in issuing this Permit is limited by the statutory parameters of the CWA NPDES program. Under the NPDES program, EPA is authorized to issue permits for the discharge of pollutants from point sources to waters of the United States. The NPDES permit at issue in this proceeding addresses only the discharge of "pollutants" as defined by the CWA and federal regulations from the SWMU's and AOCs listed on Appendix A to the named receiving streams. The Permit imposes water quality-based control measures, in the form of site-specific BMPs, aimed at reducing concentrations of pollutants in permittees' storm water to levels sufficient to ensure compliance with applicable WQS as well as monitoring requirements aimed at determining the effectiveness of those control measures. The Permit's monitoring requirements are based on New Mexico State water quality criteria-equivalent target action levels, which in turn are based on the designated uses assigned to the receiving streams by the State of New Mexico. None of the receiving streams at issue in this permit have domestic water supply as a designated use. Thus, monitoring requirements specifically designed to protect that use are not included in the Permit. However, in order to

minimize the possibility of the migration of contaminants to a downstream surface water that may be designated for domestic water supply use, the Permit includes a watershed protection provision which encourages LANL to use watershed-based BMPs to minimize sediment or storm water runoff migration off LANL boundaries.

In addition, because of concerns expressed in comments concerning PCBs, the Permit as finalized requires that all Sites with PCB levels greater than the Wildlife Habitat criterion of 0.014 µg/l at the time of the permittees' signing of the Site Discharge Pollution Prevention Plan (SDPPP) must complete final BMPs within 3 years of signing the SDPPP. EPA believes that the water quality of affected streams will be improved and that the levels of contaminants, including PCBs, in those streams will be minimized as a result of this Permit.

Comment 8: Elevated concentrations of radiation in drainage and contaminants should be cleaned up. And, LANL plutonium pit manufacturing will contaminate land and water.

Response: EPA is aware of public concern over the possibility that storm water discharges from LANL's SMWUs and AOCs may be contaminated with radionuclides. However, under the Clean Water Act (CWA or "the Act"), EPA's regulatory authority is limited to the discharge of pollutants. The United States Supreme Court in Train vs. Colorado Public Interest Research Group, Inc., 426 U.S. 1, 96 S. Ct. 2938 (1976) found that the term "pollutant" under the CWA does not include source, by-product, and special nuclear materials covered by the Atomic Energy Act (AEA), and that, consequently EPA does not have the authority to regulate such materials under the Act.

It appears that the materials at issue in this comment are regulated by the Atomic Energy Commission under the AEA. As a result, EPA does not have the authority to impose regulatory controls on the discharge of these materials.

Comment 9: EPA should declare the entirety of the Pajarito Mesa drainage basin as a superfund site. Another comment suggests that LANL halt all weapons production until cleanup of the existing contamination occurs.

Response: This is beyond the scope of the CWA and this permit.

Comments Regarding Best Management Practices (BMPs)

Comment 10: There is no justification for the requirement in the proposed permit that, if after two installations of enhanced BMPs, the discharge from a specific Site still exceeds applicable water quality criteria, the permittees must "take decisive actions to totally eliminate either the source of pollutants (e.g., clean-up), the exposure of pollutants (e.g., caps), or the discharge of pollutants (e.g., collection or total retention)." This requirement is the equivalent of a "zero discharge" effluent limit and EPA's determination that zero discharge is the best available technology economically achievable (BAT) is unsupported by the Statement of Basis. EPA did

not consider the factors required by the regulations for BAT at 40 CFR §125.3(d) and the economic cost of total elimination.

In addition, in determining appropriate permit limits for a given facility, EPA is required to derive both technology-based limits and effluent limits that are protective of State water quality standards (i.e., water quality-based effluent limits). The permit writer must then compare the technology-based limits with the water quality-based limits and impose in the permit the more stringent of the two. As stated above, the “total elimination” requirement cannot be justified as a technology-based limit. It also cannot be justified as a water-quality based limit. To set water quality-based limits, EPA must first determine the need for water-quality based limits and to do so, EPA must conduct a reasonable potential analysis to determine “whether the discharge causes, has the reasonable potential to cause, or contributes to an excursion of numeric or narrative water quality criteria.” See 40 CFR §122.41(d)(1). Because EPA did not conduct a reasonable potential analysis, water quality-based limits cannot be justified and the “total elimination” provision should be removed from the permit.

Also, the Permit requirements for “total elimination” may conflict with LANL’s responsibilities under a 2005 Consent Order among DOE, DOE’s operations and management contractor and NMED.

Response: The Permit does not require “total elimination” of the source, discharge or exposure of pollutants, and does not include a technology-based BAT requirement of “zero discharge.” As noted by the commenter NPDES permits must contain conditions to meet, when applicable, technology-based effluent limitations based either on EPA promulgated effluent limitation guidelines or the best professional judgment of the permit writer (in the absence of such guidelines), and/or any conditions in addition to or more stringent than technology-based limitations necessary to achieve state water quality standards. See 40 CFR §122.44.

As explained in the Statement of Basis, EPA has not promulgated effluent limitation guidelines applicable to storm water discharges from the permittees’ SWMUs and AOCs. Thus, the imposition of technology-based effluent limits would have to be based on the best professional judgment of the permit writer (BPJ). But, under CWA § 301(b) and 40 CFR §125.3, technology-based requirements represent the minimum level of control that must be imposed in a NPDES permit. In this instance, information in the record, including storm water monitoring data collected under the FFCA and the 2005 RCRA Consent Order, as well as the permittees’ own water quality database, indicate numerous exceedances of New Mexico water quality standards for the listed pollutants at the points of discharge. EPA has determined that based on this information, as well as the unique characteristics of the permittees’ discharges, these discharges have “the reasonable potential to cause, or contribute[s] to an excursion of numeric or narrative water quality criteria.” See 40 CFR §122.41(d)(1). As a result, EPA has determined that CWA and EPA regulations require more stringent water quality based effluent limitations for this facility, designed to ensure that water quality standards are met.

As a result, the control measures included in this Permit are aimed at achieving compliance with New Mexico State water quality standards, i.e., they are water quality-based, not technology-based controls. In addition, because EPA has determined that numeric water quality-based effluent limitations are infeasible in this instance due to insufficient information concerning the sources and effects of storm water discharges from the covered Sites (due to, among other things, the intermittent and variable nature of these discharges), the agency has determined that site-specific Best Management Practices (BMPs) are best suited for ensuring compliance with State water quality standards. (EPA's justification for imposing BMPs instead of numeric water quality based limitations is discussed in greater detail in Response to Comment 23). This Permit incorporates water quality-based BMPs, coupled with a comprehensive, coordinated monitoring program based on New Mexico State water quality criteria-equivalent target action levels, to ensure the attainment of State water quality standards. Based on all available information for this facility, and in accordance with the authority and requirements of §402(p) of the CWA and 40 CFR §122.44(k), EPA finds this approach to be both appropriate and reasonable.

Further, the Permit does not require that discharges of pollutants be reduced to zero, nor does it prescribe the implementation of any particular BMPs (beyond "Stage 0," or basic BMPs). Instead, the Permit provides the permittees flexibility to select site-appropriate BMPs in order to minimize discharges of pollutants to levels at or below the water quality criteria-equivalent target action levels established in the permit. The language in the proposed Permit stating that if, after two installations of enhanced BMPs, the discharge from a specific Site still exceeds applicable water quality criteria-based target action levels the permittees must "take decisive actions to totally ELIMINATE either the source of pollutants (e.g., clean-up), the exposure of pollutants (e.g., caps), or the discharge of pollutants (e.g., collection or total retention)" was intended to provide permittees with examples of the types of BMPs which might be indicated in order to reduce the discharge of pollutants to levels at or below target action levels. In order to clarify this intent and avoid confusion, this language has been reworded in the Permit as finalized to clearly identify the removal of contaminated soils, capping of Sites, etc. merely as examples of BMPs that might be implemented.

Comment 11: Citizens support the proposed permit provision of elimination as the final BMP. One commenter requests immediate clean-up of LANL sites.

Response: As noted in the Response to Comment 10, the Permit does not require total elimination of the source, discharge or exposure of pollutants. The Permit requires that the permittees implement Site-specific BMPs to minimize discharges of pollutants to levels at or below the established water quality criteria-equivalent target action level. The intent of the Permit is to bring all discharges into compliance with applicable target action levels designed to achieve compliance with State water quality standards, not to achieve full elimination of all pollutants. The Permit allows an iterative BMP approach, under which the permittees may, at any stage, select any appropriate BMP which they determine is best suited to prevent the discharge of pollutants above target action levels. The permittees are then required to complete confirmation monitoring to demonstrate the effectiveness of the selected BMPs. If the

confirmation monitoring shows that the target action levels are not being achieved, installations of enhanced BMPs are required.

The Permit requires the permittees to install appropriate control measures to ensure that all discharges meet target action levels no later than October 1, 2015. Discharges from some sites may meet target action levels after the first BMP implementation while others may take several BMP iterations before confirmation monitoring ultimately confirms target action levels are reached. Some sites may require the implementation of intensive BMPs that are more costly and require longer periods of time to install. Removal of contaminated soils through excavation (e.g. cleanup), capping, or structural changes to eliminate run-on, or provide for total retention of contaminated waters are mentioned in the Permit only as examples of possible types of more intensive BMPs.

Comment 12: There are numerous instances where multiple SMAs are listed as monitoring locations for the same SWMU. Could LANL install only one BMP at a Site and not at the other Sites located at those SMAs and still be in compliance with the BMP enhancement permit requirement?

Response: It is possible that storm runoff from a large Site may flow toward different directions and even reach different watersheds. Therefore, runoff from a Site may need to be monitored by more than one SMA. If a SMA is used to monitor runoff from several substantially identical Sites, properly enhanced BMPs shall be established for all Sites within the same SMA if confirmation sampling shows continuing concerns. For instance, the permittees may either install a single BMP at each individual Site within the SMA or install one BMP (e.g., retention) to control discharges from all Sites in the same SMA. It would be rare for the permittees to install a BMP at one Site, but not at other Sites located in the same SMA drainage area unless the permittees could demonstrate that pollutants of concern are not contributed by other Sites. Ultimately, effectiveness of the BMP(s) used will be demonstrated through confirmation monitoring.

Comment 13: The permit text says that BMPs are to be installed “on” each Site. Rather, “for” each Site would be more accurate because BMPs may be installed for a group of sites to improve the management of run-on or run-off.

Response: EPA agrees to revise “on” or “at” each Site to “for” each Site, as appropriate.

Comment 14: The language “best available control measures economically achievable” in Part I.A. is confusing because it suggests that some different control measures other than BMPs are required.

Response: EPA agrees. There is no effluent limitation guideline for the best available control technologies economically achievable (BAT) promulgated by EPA for this type of storm

water discharge and EPA determined not to establish BPJ technology-based effluent limitations for this Permit. This term is not used in the final permit.

Comment 15: Pollutants, erosion, or sedimentation cannot be eliminated. The permittees should not be required to reduce pollutants that are naturally occurring or non-Laboratory derived. The permittees have suggested language to exclude naturally occurring or non-Laboratory generated pollutants.

Response: To avoid misunderstanding or misuse of the term “eliminate” as used in the proposed Permit, the final Permit substitutes language requiring the permittees to “minimize (or reduce)...to permit target action levels...” in place of the term “eliminate.” Because establishment of BMPs at all Sites is a Permit condition, EPA would only consider site-specific “naturally occurring” or “non-Laboratory” factors after the permittees have installed appropriate BMPs for that site but the discharge still shows that effluent data are above target action levels.

To address pollutants from adjacent property running onto the regulated facility, the final Permit includes the following statement in accordance with the discussion in the Fact Sheet of the MSGP 2000, at Part VI.C.2, “If the permittees find that significant amounts of non-laboratory pollutants are running onto a specific site, the permittees should identify and address the contaminated run-on in the annual SDPPP update. If the run-on cannot be addressed or diverted by the permittees, the permitting authority should be notified. The permittees, then, may request for a Force Majeure for missing the BMP compliance schedules for that particular site.”

The permit also allows the permittees to request no further action if values in excess of a permit target are determined to be attributable solely to natural background levels of that pollutant in stormwater runoff. In order to use this provision, the discharger must (1) document and obtain EPA approval of the supporting rationale for establishing background; demonstrate that that values above target level are attributable solely to natural background pollutant levels; (2) have results that show pollutant levels are less than or equal to the concentration of that pollutant in the natural background; and (3) notify EPA that values above target action levels are attributable solely to natural background pollutant levels.

Comment 16: Sections 1.2.2.2 and 4.4.2 of the MSGP provide a limited set of “allowable non-storm water discharges.” Those same allowable non-storm water discharges should be added to this permit.

Response: EPA recognizes that, in some cases, non-storm water (e.g., fire fighting water, irrigation drainage, etc.) discharges may not be avoidable. The provision prohibiting unauthorized discharges is intended to prevent discharge of unauthorized process wastewater or spills that may occur during the site remediation process. A revised provision of unauthorized discharges has been added to the final Permit.

Comment 17: The permit conditions should be modified to require that cost not be the only factor, but one of many criteria to be considered in selection of BMPs.

Response: LANL must select proper BMPs to ensure that discharges meet target action levels as demonstrated through confirmation sampling.

Comment 18: Check dams provide no long term solution and site clean-up, neutralizing or proper sequestration of the toxins is the solution.

Response: No specific BMPs are specifically authorized or prohibited by this Permit. The Permit provides the permittees flexibility to select the BMPs they determine are most appropriate to minimize discharges of pollutants to levels at or below the water quality criteria-equivalent target action levels established in the Permit. BMP effectiveness will be measured through confirmation monitoring.

Comments Regarding Site Inspection

Comment 19: Brief, high intensity rain storms are more likely than long lasting but gentle rain storms to cause BMP damage and merit post-storm inspections.

Response: The permittees provided a copy of a study entitled “Sample Rainfall/Runoff Events – 2007 LANL Station E121.0,” documenting rainfall impacts at inspected Sites in support of this assertion. After evaluating the additional information submitted by the permittees, EPA has changed the threshold for a post-storm inspection to 0.25-inch or more intensive rain event within 30 minutes.

Comment 20: Most rain events on the Pajarito Plateau occur during the “monsoon season,” in July and August, and heavy rain events often are grouped together in periods of a few days. Also, rain events typically affect many Sites. The 14 day time frame is so restrictive that staff could still be inspecting Sites from the first rain event when a second or third or fourth rain event strikes. The commenter requests that EPA increase the inspection period to 30 days.

Response: The final Permit allows a 15 day time frame for a post-storm inspection. If several storms exceeding the intensity threshold occur over a period not greater than 15 days from the date of the first storm event, a single inspection following these storms is sufficient for compliance with this requirement, provided that the inspection occurs no more than 15 days from the date of the first storm.

Comment 21: The Permit should include a waiver of inspections for adverse weather conditions similar to the Construction General Permit and the MSGP.

Response: The final Permit modifies the post-storm inspection requirement to “rain” event and adds, “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 maintained with the SDPPP. Adverse weather conditions include dangerous weather-related events (e.g., flooding, wildfires, or hail) that make site inspection dangerous for worker safety.”

Comment 22: The Erosion Potential Score no longer serves a purpose and references to it should be deleted.

Response: EPA agrees and has modified the language for Erosion Reevaluation.

Comments Regarding Monitoring Requirements

Comment 23: Numeric effluent limitations instead of target action levels should be established in the permit.

Response: Pursuant to Section 301 of the Clean Water Act, all NPDES permits must contain conditions to ensure that State water quality standards are met. This Permit requires permittees to comply with non-numeric water quality-based effluent limits (WQBELs) in the form of Site-specific BMPs pursuant to 40 CFR §122.44 (k). EPA believes that the permittees compliance with these BMPs coupled with target action levels will result in the reduction of pollutants in the permittees’ storm water discharge to levels sufficient to comply with NM State water quality standards.

EPA does not believe the CWA or NPDES regulations require WQBELs in the form of numeric limitations at this time to control the discharge of pollutants from Sites covered by this Permit. EPA believes the Permit’s phased approach, using BMPs, meets the requirements of the CWA and EPA’s implementing regulations. The permit conditions are consistent with EPA’s NPDES storm water regulations at 40 CFR §122.26 and EPA’s Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits (see also, Questions and Answers Regarding Implementation of an Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 FR 57425 (November 7, 1996)). EPA believes that these enhanced pollution prevention techniques can only act to improve existing storm water and surface water quality. Moreover, there is no indication that the permittees are unable or unwilling to implement the source controls and best management practices dictated by this permit, so as to require development of permit conditions specific to water quality criteria.

The CWA defines effluent limitations as a restriction on the quantity, rate, or concentration of pollutants that are discharged into a water of the United States, including schedules of compliance. 33 U.S.C. §1362(11). CWA § 1342(p)(3)(B)(iii) gives EPA authority to determine what pollution controls are appropriate for municipal storm water discharges by requiring “controls to reduce the discharges of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods and such other provisions as the Administrator or the State determines appropriate for the control of such

pollutants.” EPA has, through regulation, interpreted the statute to allow for non-numeric limitations or best management practices (BMPs) to supplement or replace numeric limitations in specific instances that meet the criteria specified at 40 CFR §122.44(k)(2). *See, NRDC v. Costle*, 568 F.2d 1369, 1380 (D.C.Cir. 1977) (“When numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels.”). EPA’s storm water regulations allow for the development of site-specific permitting requirements, which can reflect the wide range of impacts that are associated with storm water discharges. Where it is infeasible to include numeric effluent limitations in storm runoff permits due to lack of sufficient information, EPA has developed an interim approach by providing for the use of BMPs in initial permits and expanded BMPs in later permits as necessary to meet State water quality standards. *See*, 61 FR 57425 (November 7, 1996). While EPA does not have sufficient information to develop site-specific end-of-pipe effluent limitations, this permit is intended to ensure compliance with water quality standards (WQS) via the BMP coupled with State WQS equivalent target action levels approach through which all discharges from those SWMUs will be gradually brought into compliance with State WQS.

The NPDES regulations at 40 CFR §122.44(k)(2) and (3) provide for the use of BMPs when authorized under Section 402(p) of the CWA or when numeric effluent limitations are infeasible. EPA’s regulations provide for a test of reasonable potential to determine when water quality-based effluent limitations must be included (40 CFR §122.44(d)). This permitting approach has been upheld by the Environmental Appeals Board (EAB). The EAB has held that NPDES permits need not contain numeric limitations to ensure compliance with the Clean Water Act and its implementing regulations or with state water quality standards. *See In Re: Arizona Municipal Storm Water*, 6 E.A.D. 646 (May 21, 1998). Several federal courts have also upheld the use of BMPs as substitutes for numeric limitations in litigation involving storm water discharges. In *Defenders of Wildlife v. Browner*, 191 F.3d 1159, (9th Cir. 1999), the 9th Circuit recognized that the CWA gives EPA discretion to determine what pollution controls are appropriate. The Court held, “. . . the EPA’s choice to include either management practices or numeric limitations in the permit was within its discretion.” *See*, 191 F. 3d 1166-67.

EPA notes that some storm water permits do contain numeric effluent limitations where adequate information exists to derive such limitations. However, as noted above, EPA has found that numeric limitations for storm water permits can be very difficult to develop due to the existing state of knowledge about the intermittent and variable nature of storm water discharges and their effect on receiving waters. First, storm water discharges are highly intermittent and are often characterized by very high flows occurring over relatively short time intervals. The effectiveness of traditional end-of-pipe controls may be limited under such conditions. Second, the nature and extent of pollutants in discharges from covered sites will depend upon the activities occurring on lands which drain into the system. Additionally, the permit applicants may have limited knowledge of the volume and location of pollutant sources. Storm water presents difficult challenges in determining reasonable potential as well as in the calculation of numeric water quality-based effluent limitations because of the high degree of variability in pollutants, volumes of discharge and impacts of discharge depending on land uses, storm events and receiving

waters. Management programs that are directed at pollutant sources are often more practical and more effective than end-of-pipe controls. By using BMPs, flexible management programs with site-specific conditions can be established to address the wide range of impacts. Deriving numeric water quality based effluent limitations for any NPDES permit without an adequate effluent characterization, or an adequate receiving water exposure assessment may result in the imposition of inappropriate numeric limitations on a discharge.

After reviewing the available data for this facility, EPA has determined that BMPs are appropriate and authorized under CWA section 402(p). In addition, insufficient information currently exists concerning the sources and effects of the storm water discharges to derive appropriate numeric effluent limitations for the permit. Therefore, EPA believes that BMPs are appropriate controls to reduce the discharges of pollutants to meet the level of protection required by the CWA for this permit.

Comment 24: Technology-based effluent limitations should be required. The target levels should be incorporated with a margin of safety and then be converted to numeric limits.

Response: EPA does not believe that technology-based limits are either required or appropriate for this facility. In accordance with 40 CFR §122.44, NPDES permits must contain conditions to meet, when applicable, technology-based effluent limitations based either on EPA promulgated effluent guidelines or the best professional judgment of the permit writer (in the absence of such guidelines), and/or any conditions in addition to or more stringent than technology-based limitations necessary to achieve state water quality standards. As described in the Statement of Basis, LANL does not provide commercial hazardous waste treatment, storage, or disposal facility (TSDF) services, and thus EPA has determined that it is not appropriate to apply effluent limitation guidelines for Sector K of the Multi-sector General Permit to discharges from the SWMUs and AOCs. There are no other effluent limitation guidelines applicable to these discharges. Because EPA has not promulgated effluent limitation guidelines applicable to the storm water discharges from the Sites covered by the Permit, the imposition of technology-based effluent limits would have to be based on the best professional judgment of the permit writer (BPJ). In this instance, information in the record, including storm water monitoring data collected under the FFCA and the 2005 RCRA Consent Order indicate numerous exceedances of New Mexico water quality standards for the listed pollutants at the points of discharge. Based on this information, as well as the unique characteristics of the permittees' discharges, the permit writer has determined that technology-based permit limits would not be sufficiently stringent to meet State water quality standards. Thus, the CWA and EPA regulations require more stringent water quality based effluent limitations designed to ensure that water quality standards are met.

Comment 25: Monitoring of all sites should be included in the permit. Monitoring should be conducted at all sites during the first year of the permit.

Response: Site-specific monitoring requirements are established for all Sites for which permit coverage was requested in the permit application. While monitoring assesses the level of

pollutants, it does not contribute to reduction of pollutant runoff. EPA has focused the efforts of the first year toward BMP implementation in an effort to reduce pollutant loadings as soon as possible. EPA restates that BMPs are the core element of this permit and monitoring is used to confirm the effectiveness of BMPs. No change of permit condition is made.

Comment 26: If EPA requires monitoring at 42 additional SMAs, the permittees request a 90-day compliance schedule to provide sampling parameters for the approximately 106 new Sites proposed in the permittees' February 14, 2008, letter to EPA.

Response: Monitoring requirements for Sites that were added to the application during the public notice of the draft permit have been included in the final Permit. Because monitoring of cyanide, most metals, and radioactive substances had been required for most sites under the Federal Facility Compliance Agreement (FFCA), EPA has determined that those constituents are pollutants of concern for all new Sites added to the final permit. Monitoring of high explosives is required for Sites which were used for firing or similar activities. Monitoring of PCBs is required for Sites which were described as transformer storage or PCB only Sites including Sites 03-003(k), 16-026(b), 33-009, 33-012(a), and 53-001(a), and Sites where historic soil samples were greater than 1 mg/kg of PCBs including sites 31-001, 39-002(b), and 39-006(a). FFCA data indicates that the majority of analytical results for dioxin, semi-volatile compounds, and pesticides were below detection levels. Therefore, EPA has determined that those newly added Sites do not have the reasonable potential to discharge dioxin, semi-volatile compounds, or pesticides and no further monitoring for those pollutants is required. The request for a 90-day compliance schedule has not been implemented.

Comment 27: Previous data from FFCA sampling should not be used to exempt sites from future monitoring.

Response: Pollutants listed in Appendix C of the draft Permit were based on monitoring requirements under FFCA. If results from monitoring performed under the FFCA have demonstrated that discharge concentrations at that Site are below the target action levels, EPA considers that the permittees have demonstrated no reasonable potential to exceed the applicable target action levels. Therefore, further monitoring is not required.

Comment 28: A commenter submitted results of seven PCB samples from July 2006 – October 2007, analyzed (by Method 1668A) and taken at ACID-SMA-2 (aka E055.5). The average of these seven samples is 0.392 µg/l (range 0.0556 – 0.953). Although these have not been blank corrected, the commenter believes that this data is sufficient to document that PCBs are a pollutant of concern at this location and suggests that EPA include a monitoring requirement for PCBs for Sites within these SMAs. The commenter also provided blank corrected PCB data results from CDV-SMA-2.4 showing PCBs ranging from 0.54 to 1.43 µg/l.

Response: PCB data from some SMAs including CDV-SMA-2.4 collected in 2005, indicated the differences between raw data and blank corrected data were small. EPA agrees that this data

is sufficient to support a determination that ACID-SMA-2 and CDV-SMA-2.4 have reasonable potential to release PCBs to the environment in amounts above the PCB target action level. As a result, a requirement for monitoring of PCBs has been added to the Permit for Sites within these two SMAs.

Comment 29: All sites where LANL has had historic spills of PCBs should be included in the Permit. SWMU 21-024(m) has been identified by NMED as a PCB source. The commenter also enclosed with his comments a copy of the LANL report to EPA's Toxic Enforcement Section dated February 5, 1998, and a report to NMED dated March 15, 1999, and requested that EPA conduct a cross reference and includes those Sites in the Permit.

Response: A Site which is subject to RCRA jurisdiction may not be subject to the Clean Water Act. Site 21-024(m) was removed from the permittees' request for NPDES coverage by the permittees because the Site had received no further action (NFA) status from the State. This status was concurred on by NMED and was explained in the permittees' supplemental justification documents. EPA cannot consider the addition of a Site to the final Permit without supporting documentation in the record to supersede the permittees' justification for choosing not to seek coverage for that Site. As explained in the Statement of Basis and in Response to Comment 4, this Permit only authorizes discharges from SWMU or AOC Sites listed in Appendix A to the Permit. However, this Permit does not exempt Sites from complying with any applicable RCRA program requirements.

Comment 30: When referenced against the FFCA monitoring report, Appendix C of the draft permit is lacking critical sampling requirements. For example, monitoring for metals is not required for B-SMA-1, but copper and lead were reported as having exceedance of wSALs (water screening action levels).

Response: wSALs as established in the FFCA were based on the total form for metals, while target action levels established in the proposed Permit were based on State dissolved criteria in most cases. However, due to several factors, including the receipt of new information, EPA has determined that cyanide, metals and radioactivity are common pollutants of concern at the facility and consequently these pollutants have been listed as such for all Sites in the final Permit. As a result, the permittees must submit data (either existing data or new data) to demonstrate that analytical results for those pollutants of concern are below established target action levels.

Comment 31: "Adjusted gross alpha" instead of "gross alpha" should be used. The acute aquatic life for dissolved arsenic is 340 µg/l, so the Maximum Target Action Level (MTAL) for arsenic should be 340 µg/l instead of 200 µg/l as proposed.

Response: These have been determined to be typographical errors and corrections are reflected in the final Permit.

Comment 32: A commenter states that samples taken from some SMAs may not be representative of the contaminated Sites because the SMA drainage area may be too broad. The commenter suggests the permit should set maximum distance limits for sampling locations in relation to each Site. Also, the permittees request language to allow relocation of a SMA, similar to the language included in the MSGP, section 5.2.4.

Response: EPA understands that a representative sampling point is not always easily identified because the storm water runoff from these Sites is not discharged through any traditional outfall pipe where representative samples could be collected. However, Sites covered under this Permit vary widely in characteristics. For this reason, EPA does not believe it is appropriate to establish fixed restrictions on SMAs. In the Permit, EPA required that the permittees provide information and justification, in their SDPPP, for the selection of an SMA, including the location of the SMA, sizes of Sites and SMA drainage area, to minimize the number of misrepresentative SMAs. In the final Permit, EPA further allows the permittees to relocate a SMA with justification in the annual SDPPP update and submit such changes to EPA and NMED for review without reopening the Permit for modifications.

Comment 33: Several commenters questioned sample collection requirements such as sampling location, sampling time frame, sampling equipment and method.

Response: Storm runoff discharges from the Sites covered by the Permit are considered point sources discharges; however, as mentioned above, storm water runoff from these Sites is not discharged through any traditional outfall pipe which could be used to collect water samples. Thus, it is sometimes difficult to identify a “representative” sampling point for any particular Site; any point may be either too far or too close to be representative because of unknown factors, such as the actual “hot spot” of contamination, storm magnitude, and time to reach peak release of contaminants. Also, this facility is unique because of the size of the facility, the number of Sites, the drainage area covered by each Site, the unique geographic setting of each Site, pollutants of concern at each Site, and other Site-specific conditions. Therefore, EPA determined that it would be impractical to mandate Site-specific sampling locations, sampling time frames, sampling equipment or one specific sampling method in the Permit. Instead, the Permit provides the permittees the flexibility to make the appropriate determinations regarding sampling procedures on a truly Site-specific basis and include this information in the SDPPP. However, Part III of the permit requires representative sampling and monitoring procedures to be in compliance with the provisions of 40 CFR Part 136.

The Permit requires that the permittees update their SDPPP annually, and EPA may, based on information available, require the permittees to modify sampling locations, equipment, or methods for more representative samples, if necessary.

Comment 34: The permittees oppose the use of Method 1668A for PCB analysis, while citizens and citizen groups support the use of Method 1668A.

Response: NMED required that Method 1668A be used for PCB analysis as a condition of State certification in its letter addressed to Miguel Flores dated January 15, 2008. Pursuant to Section 401(a)(1) of the Act and 40 CFR § 124.53(a), EPA may not issue a permit unless such a certification has been granted or waived by the State. Section 401(d) further provides that any State certification provided under Section 401 of the Act “shall become a condition on any Federal license or permit subject to the provision of this section,” and 40 CFR § 124.55(a)(2) mandates that “no final permit shall be issued” unless it incorporates the State certification requirements. EPA is without authority under the Act to review the appropriateness of such requirements. Roosevelt Campobello International Park Commission, et al. v. EPA, 684 F.2d 1041 (1st Circuit, 1982). Therefore, consistent with the State’s certification, the Permit requires Method 1668A for PCB analysis.

Comment 35: Several commenters suggested that EPA require at least one sample be taken from an intensive storm event.

Response: While EPA understands that a sample from an intensive storm would be helpful to verify and confirm the effectiveness of BMPs, we also need to consider factors such as unpredictable storm magnitude, sample collection time limit, Sites in remote areas, and any possible factors such as personal safety that may hinder the effort of timely sample collection. Too much restriction for sampling may result in delay of corrective actions. As long as sample volume is sufficient for all required analyses, EPA believes that the storm event for sampling is representative.

Comment 36: Several commenters noted that contaminants may not move during snow-melt runoff events and that snowmelt sampling should not be allowed for confirmation sampling. Commenters also suggested that samples should be limited to grab samples.

Response: The final Permit restricts the sample type to grab samples. EPA also concurs with the comment concerning snowmelt samples. The permit has been modified to prohibit use of snowmelt samples for permit compliance.

Comment 37: A commenter suggested that three samples, not two, should be required as confirmation of BMP effectiveness.

Response: EPA has taken a very conservative approach in establishing target action levels by using the water quality criteria directly without considering dilution from background flow. In addition, the Permit requires corrective action if any maximum or average data is greater than any applicable target action level. Because of the use of this conservative approach, EPA believes that two samples are adequate to demonstrate that the BMP has been successful.

Further, although EPA understands that more confirmation data will likely provide more reliable results, in order to obtain more sampling results, more time to collect valid samples would obviously be required. Consequently, the lag time between the receipt of sampling results and

the start of corrective actions would be extended. As noted above, EPA has chosen to focus the permittees' efforts to the greatest extent possible toward BMP implementation in an effort to reduce pollutant loadings as soon as possible. EPA believes the requirement for two confirmation samples is consistent with this approach.

Comment 38: A commenter suggested that if only one confirmation sample could be collected during the 360 day period after installation of BMPs and it is less than the applicable target action levels, at least one more sample should be required during the next 360 day period before no further sampling is required. The commenter also suggested that EPA include a requirement to continue to collect once/year samples for the term of this NPDES Permit so that five years of data is available to better inform permitting decisions upon renewal.

Response: The Permit is consistent in that it requires no further sampling based on one data set, but also requires action in the form of more enhanced BMPs if the single data event shows values greater than applicable target action levels. As discussed above, the Permit is designed to use limited numbers of sampling events in order to expedite the remediation process. For those Sites located such that two samples could not be collected in a year due to either insufficient effluent quantity or infrequent discharge occurrence, waiting for a second sample from those Sites to determine their BMP effectiveness is likely to extend schedules for bringing those sites into final compliance.

The permittees are required to continue BMP enhancements and confirmation monitoring until all applicable target action levels are met. EPA does not believe that continuous monitoring for parameters, including PCBs, is necessary after confirmation samples have demonstrated that appropriate BMPs have been established for control of pollutants. Site inspection for continued BMP effectiveness and maintenance are required for the life of the permit.

Comment 39: NMED suggests that all Sites that have a PCB monitoring requirement should have a suspended sediment concentration (SSC) or total suspended solids (TSS) analyses run each time a storm water sample is analyzed for PCBs. As PCBs are most likely strongly bound to sediments, the understanding of both the concentration of PCBs in the suspended sediment and the amount of suspended sediment in the storm water is critical for determining a Site's potential to cause impairment.

Response: This is an interesting suggestion. But, in order to establish a SSC (or TSS)-PCBs correlation, the permit writer believes that at least three variables, SSC, PCBs in sediment, and PCBs in water, would be required to establish the correlation between total PCB in sediment and total PCB in discharge. Establishing these three variables at each Site with a PCB monitoring requirement would be unnecessary. EPA is not implementing this suggestion at this time.

Comment 40: There should be monitoring involved after any Stage III action at a site.

Response: When there is no discharge or no exposure of pollutants to runoff, to collect a representative sample becomes either impossible or meaningless. Therefore, confirmation samples for no discharge or no exposure are not required. However, the final permit has been modified so that EPA may request confirmation sampling on a case-by-case basis.

Comment 41: NMED requests clarification that EPA had used four data points for reasonable potential screening purposes, but would only use two data points for compliance determination.

Response: EPA had conducted the reasonable potential (RP) screening when EPA prepared the draft Permit and excluded monitoring requirement for constituents having shown no RP. EPA used four data points for RP screening because FFCA required four samples. But, in the final permit, irrespective of the previous RP result, all pollutants of concern are listed in the Monitoring Requirement Table, and the permittees are required to provide two confirmation data (or one confirmation data for PCBs) to demonstrate the effectiveness of BMPs.

Comments Regarding Compliance

Comment 42: The commenter challenges the legality of the compliance schedule proposed in the draft permit by citing the CWA section 301(b) which states that “there shall be achieved ... not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards....” Neither EPA nor states have the authority to extend the deadlines for compliance established in CWA section 301(b)(1).

Response: As the commenter pointed out, CWA § 301(b)(1)(C) provides that “there shall be achieved ... not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, **or schedules of compliance**, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.” CWA §301(b)(1)(C), emphasis added. Whether or not this section of the CWA allows for schedules of compliance to meet water quality based effluent limitations was the subject of a 1990 decision by the Environmental Appeals Board (EAB), In the Matter of Star-Kist Caribe, Inc. 3 E.A.D. 172, 1990 WL 324290 (1990). In that case, the EAB held that an NPDES permit may lawfully include a compliance schedule authorizing the permittee to delay compliance with state water quality standards after July 1, 1977, so long as the water quality standard itself authorizes such compliance schedules. When “a schedule of compliance is authorized by the State program, EPA’s inclusion of interim limitations pursuant to the schedule would be fully consistent with, and therefore, “meet,” the requirements of the state water quality standard as contemplated by §301(b)(1)(C).” Id. at.

In the present case, Section 20.6.4.12(J) of New Mexico’s Water Quality Standards provides for the inclusion of schedules of compliance in NPDES permits as necessary to comply with water

quality based permit limitations on a case-by-case basis. 20.6.4.12(J) NMAC. Therefore, under Star Kist, EPA has authority to include such a schedule of compliance, if appropriate, in LANL's permit. [For a discussion of why EPA believes a schedule of compliance to meet water quality based effluent limits is appropriate in this particular case, see Response to Comment No. 44]. In addition, although the EAB decision in Star Kist confirmed that compliance schedules are not allowed for effluent limitations based on water quality standards adopted before July 1, 1977, LANL's permit allows additional time to comply only with effluent limitations in the form of BMPs based on water quality standards adopted, or revised, after July 1, 1977.

Comment 43: LANL has been operating under an FFCA for control of pollutants from many of the same Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) as included in this proposed permit, since early 2005. Although credit is given for samples collected under the FFCA, EPA does not appear to address implementation of initial, and in many cases, enhanced BMPs to comply with the provisions of the FFCA. Rather, EPA allows a schedule of BMP implementation, confirmation sampling, and required follow-up activities that do not appear to begin for up to a year, and continue for up to seven years, beginning on the issuance date of this permit. SWQB suggests that EPA incorporate a schedule in the permit that accounts for activities begun under the FFCA for each Site.

Response: The permit requires that appropriate BMPs be installed for every Site. EPA believes that proper basic BMPs will reduce significant amounts of pollutants entering into the waters of U.S. EPA does not presume that appropriate BMPs have been installed at every Site although various levels of BMPs might have been installed at many Sites. EPA believes that it is reasonable to give the permittees a year to evaluate their site-specific BMPs and do anything they consider necessary to meet the BMP requirements. The permittees must identify which sites need installation of BMPs and which sites have had BMPs in their first year's SDPPP. EPA prefers to provide LANL more flexibility to prioritize their site management and coordinate with their efforts to comply with schedules set forth in their RCRA Consent Order.

Comment 44: The compliance schedule included in the permit is illegal. First, a compliance schedule is not "necessary" to allow LANL to attain compliance with CWA requirements. LANL has had years to comply with requirements in previous permits and the FFCA and has not done so. Further, the compliance schedule is too long. LANL can comply in much less time, and therefore the compliance schedule is not appropriate. Although the schedule includes interim requirements, it fails to require numeric effluent limits in order to ensure compliance with water quality standards. The one-year compliance schedule for installation of enhanced BMPs after knowledge of discharge of concentrations above target action levels is too long. For the most contaminated sites, the requirement for final BMPs should be enacted during years 1 or 2. Finally, the compliance schedule extends beyond the life of the permit without including final effluent limitations, or any mechanism to ensure enforceability as required by CWA section 502(17).

Response: Any compliance schedule included in an NPDES permit must meet the requirements of 40 CFR §122.47, which provides that compliance schedules may be used “when appropriate” and that they must “require compliance as soon as possible.” 40 CFR §122.47(a) and (a)(1). These requirements are echoed in the State of New Mexico’s water quality standards, which allow compliance schedules when “necessary” and provide that they “require compliance at the earliest practicable time.” 20.6.4 NMAC. EPA believes it is clear that the permittees cannot immediately comply with the Permit’s water quality based effluent limits upon the effective date of the permit. The very nature of the Permit’s effluent limits (in the form of Site-specific BMPs sufficient to reduce effluent concentrations to levels at or below applicable target action levels) dictates that the permittees will need time to install and implement the required BMPs. Due to the large number of Sites identified at the LANL facility, as well as the varying complexities at each site, including the geographic setting, size, and pollutants of concern, EPA has determined it is both appropriate and necessary to provide a reasonable period of time for the permittees to evaluate the various sites and design and install the most effective BMPS for each site in order to reduce pollutant loads below target action levels and attain the ultimate goal of compliance with state water quality standards.

While it is true that the permittees have previously held (and continue to hold for certain discharges associated with conventional industrial activities) storm water permit coverage under EPA’s NPDES general permit for storm water discharges from industrial activity, also known as the MSGP, the individual storm water permit at issue in this proceeding differs significantly from the permittees prior coverage. Unlike the MSGP (and the FFCA, which was intended only as an interim compliance measure prior to issuance of this individual storm water permit), the permit at issue in this proceeding takes a site-specific approach to storm water pollution control at LANL’s facility and requires the permittees to select, design and install appropriate BMPs for each of 405 Sites. The permittees’ task is complicated by the need to coordinate the requirements of this permit with the requirements of their RCRA Consent Order. Although it can be argued that the permittees could install basic “Stage 0” BMPs for certain small and non-complicated Sites in less than one year, EPA believes it is reasonable to allow the permittees the flexibility to assess all Sites as a whole to determine the most efficient and effective way to proceed. EPA believes such flexibility will result in better BMPs and, ultimately, better storm water control. As a result, the final permit maintains the deadline of one (1) year from the effective date of the permit for installation of “Stage 0” BMPs.

Further, under the schedule set forth in the Permit, tens or even hundreds of BMPs may need to be installed each year during the first few years of the permit. As discussed above, EPA believes it makes sense to allow the permittees flexibility to coordinate to the extent possible the requirements of this Permit with the schedules and priorities established in the RCRA Consent Order issued by the New Mexico State Hazardous Waste Bureau, and to design an overall plan to address all Sites as effectively and efficiently as possible. Upon assessing all Sites as a whole, it may well be that the permittees will decide to accelerate installation of enhanced “Stage III” BMPS for more contaminated sites, but EPA does not believe such a requirement should be placed in the Permit at this time. However, the option for accelerated installation of enhanced

BMPs is included in the final Permit for all pollutants and is mandatory for Sites where PCB levels are greater than the Wildlife Habitat criterion of 0.014 µg/L.

In response to the commenter's statements that the compliance schedule must include numeric interim effluent limitations and that it extends beyond the life of the Permit without including final effluent limitations or any mechanism for enforceability, EPA disagrees. As discussed in greater detail in Response to Comment 23, neither the CWA, federal regulations, or New Mexico's water quality standards require water-quality based effluent limitations to be in the form of numeric effluent limits. This is true of both final and interim limitations. Further, neither the CWA, federal regulations, nor New Mexico's water quality standards limit the length of compliance schedules to a permit's term. However, EPA agrees that "[a]ny compliance schedule that extends past the expiration date of a permit must include the final effluent limitations in the permit in order to ensure enforceability of the compliance schedule as required by CWA §502(17) and 40 CFR §122.2 (definition of schedule of compliance)." Memorandum from James Hanlon, Director of the EPA Office of Wastewater Management to Alexis Strauss, Director of EPA Region 9 Water Division, dated May 10, 2007. The Permit at issue here does so. Part I., Paragraph A.3.c.(3)(c), of the final Permit requires that final effluent limitations in the form of BMPs sufficient to reduce pollutants to levels at or below applicable target action levels must be installed and implemented at all Sites no later than October 1, 2015. Therefore, the Permit's compliance schedule, although in effect allowing LANL up to seven years to come into compliance with the final limitations, is an enforceable sequence of actions or operations leading to compliance with water quality-based effluent limitations as required by CWA §502(17) and 40 CFR §122.2.

In light of the complexities inherent in achieving compliance at 405 Sites varying greatly in size, geography and pollutant makeup, EPA has concluded that it is reasonable to believe that it will take the permittees up to seven years to come into full compliance with the Permit's final water-quality based effluent limits and that it is thus reasonable to believe that seven years is "as soon as possible" pursuant to 40 C.F.R. § 122.47(a). EPA also believes that based on the record as a whole, it is reasonable to conclude that the Permit's compliance schedule will lead to the permittees' compliance with the Permit's final water-quality based effluent limitations and ultimately with the State of New Mexico's water quality standards by the end of the timeframe established by the compliance schedule as required by Sections 301(b)(1)(C) and 502(17) of the CWA.

Comment 45: One commenter suggested that EPA should require LANL to start BMPs right away.

Response: The Permit does require the permittees to begin evaluating and installing BMPs as of the effective date of the permit, and it requires basic or "Stage 0" BMPs to be installed at all Sites by the end of the first year. However, as discussed above in Response to Comment 44, EPA believes it is reasonable to allow the permittees the flexibility to assess all Sites as a whole to determine the most efficient and effective way to proceed. EPA believes such flexibility will

result in better BMPs and, ultimately, better storm water control. Once basic BMPs have been installed for a specific Site during the first year of the Permit, the permittees may proceed with confirmation monitoring for that Site and installation of enhanced BMPs if necessary.

Comment 46: NMED requests that if samples collected by NMED from a cease-monitoring site show values greater than applicable target action levels, LANL should take corrective action.

Response: EPA agrees. The final permit reflects such changes.

Comment 47: NMED noted that the permit language for monitoring of PCBs in the proposed Permit was confusing.

Response: Language has been added to the final Permit to clarify the compliance schedule and confirmation sampling requirement for PCB sites.

Comment 48: NMED requested that EPA add language to clarify that two representative discharges must be monitored within 360 days if two discharges occur at the Site within 360 days. But if there are less than two representative discharges within 360 days, then the remaining confirmation samples must be collected as soon as possible. NMED also suggested that two confirmation samples, although probably adequate to assess the need for enhanced BMPs, are inadequate to determine the long term effectiveness of BMPs, which may include elimination of the source of the pollutants. NMED asked that EPA include a requirement to continue to collect one/year samples from all Sites or SMAs for the term of the Permit.

Response: The Permit clearly states that two or more confirmation samples (or one confirmation sample for PCBs) shall be collected with one year after installation of BMPs. If only one confirmation sample could be collected, that single sampling result will be used to determine whether more enhanced BMPs are required or not. If no confirmation sample could be collected during the one-year period, confirmation sampling will continue until one sample is collected. EPA does not believe that continuous monitor is necessary once confirmation sampling results demonstrate in compliance. No change of sample number has been made to the Permit.

Comment 49: A commenter asked if immediate reporting is required if monitoring results show that values are greater than applicable target levels.

Response: The Permit includes a 24-hour reporting requirement whenever monitoring results show values greater than the maximum target action levels (MTALs).

Comment 50: In reference to the statement in the Statement of Basis that if PCBs become the only pollutant of concern at a Site or SMA, EPA will consider soil sample data, the BMPs installed at the Site and any supporting documentation to determine compliance, NMED

requested that EPA clarify that soil sample data for PCBs must be analyzed using Method 1668A.

Response: EPA will require the most sensitive method for soil data if soil samples would be used to determine compliance with target action levels under the Permit. The condition of State certification requires Method 1668A to be used for water samples. EPA reserves the option to require an alternative method, such as Method 1668B if appropriate, for soil sample analysis as long as the alternative method provides more sensitivity than congener-based MQLs.

Comment 51: The permittees proposed to submit baseline studies to establish background levels for PCBs and other contaminants and requested that EPA include in the final Permit a compliance schedule for these studies and adopt the background levels established by these studies as the applicable target levels by which to measure compliance status.

Response: As described in the Statement of Basis and previously in Comment 15, EPA will consider “naturally occurring” or background concentrations in determination of compliance in cases where appropriate BMPs are installed and pollutants of concern are still detected above target action levels. The final Permit adds a sub-section Alternative Compliance under Sampling Requirements. If the permittees want to conduct baseline studies for future actions EPA encourages this as a prudent activity, but EPA will not require or provide a “compliance schedule” for such studies.

Comment 52: If compliance with Permit target action levels is, or becomes, a compliance issue in part due to background concentrations, NMED suggests that LANL take all practicable steps to eliminate background sources from its outfalls by diverting offsite flows or otherwise reducing contributions from sources not directly attributable to the Sites themselves. This should include locating the SMA as close as practicable to the actual Sites.

Response: The basic BMP requirements in the Permit address reduction of run-on to sites. EPA has requested that the permittees review locations of SMAs to insure representative samples could be collected. EPA will review the background issue only after proper BMPs have been installed.

Comment 53: The “no exposure” described in EPA’s guidance manual may not be applicable to LANL’s SWMUs. LANL suggests “no exposure means that all industrial materials or activities are protected from exposure to storm water, including rain, snow, snowmelt and/or runoff.”

Response: Revised “no exposure” language has been added to the final Permit as follows: “No exposure in this permit means that all pollutants of concern are protected from being exposed to storm water, including rain, snow, snowmelt and/or runoff.”

Other Comments

Comment 54: There should be another public hearing on Sites added by supplement to the final application subsequent to the March 4, 2008, public hearing.

Response: EPA extended the public comment period on the proposed Permit from March 14, 2008, to April 28, 2008, to provide adequate time for the public to review and comment on the newly added Sites. Comments received during this extended comment period – whether written or verbal – were considered by EPA and given the same weight as comments received prior to the extension and/or during the public hearing. In addition, the proposed Permit conditions themselves, which were the subject of the March 4, 2008, public hearing, were not affected by the addition of the new Sites, and the final Permit conditions apply equally to those Sites included in the application at the time of the public hearing and to those added subsequently. For these reasons, EPA does not believe it is necessary to hold another public hearing.

Comment 55: EPA should release a spreadsheet which has all 2,129 Sites listed by the Tiger Team.

Response: EPA has not developed any such spreadsheet pursuant to this Permit action and the EPA permit writer has no knowledge of the existence of such a spreadsheet. The commenter should make the request directly to LANL.

Comment 56: One commenter suggested a memorandum of agreement (MOU) should be developed between NMED and EPA to reflect the joint coverage of the LANL Sites under this Permit and the RCRA Consent Order issued by the New Mexico State Hazardous Waste Bureau.

Response: EPA does not consider such a MOU to be necessary. EPA's jurisdiction over the Sites pursuant to its NPDES permitting authority and this NPDES Permit does not overlap with the RCRA jurisdiction of NMED. Each agency is governed by its separate and distinct statutes and regulations and each agency is aware of its responsibilities. That said, this NPDES Permit does allow the permittees the time and flexibility to efficiently and effectively coordinate its obligations under the Permit and the State RCRA Consent Order.

Comment 57: Part 3.3 of EPA's MSGP, effective September 29, 2008, states that discharges under the permit "must not be causing or have the reasonable potential to cause or contribute to a violation of water quality standards." One commenter requested that this requirement be explicitly stated in the final Permit.

Response: This concept is inherent in all NPDES permits. In accordance with 40 CFR §122.4(d), no permit may be issued that does not comply with the applicable water quality requirements of all affected states. EPA does not believe that an implicit statement is necessary in the Permit itself. It is EPA's determination in issuing this Permit that, through proper

selection and implementation of BMPs, discharges from covered Sites will not cause or contribute to violations of New Mexico State water quality standards.

Comment 58: One commenter noted that not all impaired waters were addressed in the Statement of Basis. (The commenter enclosed a list of impaired waters with the comment letter. Pollutants of concern include gross alpha, metals, radium, and PCBs.) The commenter suggested that SMAs within those impaired waters should be required to monitor for the associated impaired contaminants. The commenter also stated that the Permit does not meet any of the three scenarios identified by EPA in a letter to the Vermont Agency of Natural Resources (VANR) dated September 16, 2003 as appropriate for discharging into impaired waters. The three situations that EPA identifies as appropriate for discharges into impaired waters prior to TMDL development are “first where the discharge does not contain the pollutant for which the water is impaired; second, in circumstances involving non-bioaccumulative and non-persistent pollutants where the permit contains effluent limits that are at or below either the numeric criteria or a quantification of the a narrative water quality criterion such that the effluent will not increase the pollutant concentration in the waterway; and third, where the increased load is offset by load reductions from other sources discharging to the impaired segment.”

Response: Gross alpha, radium, and metals have been determined to be common pollutants of concern and the final Permit requires the permittees to monitor for these pollutants at all Sites. Monitoring requirements for PCBs are determined on a case-by-case basis.

In terms of meeting the three scenarios set out in EPA’s 2003 letter, first, this Permit does not authorize new discharges to add additional loads of pollutants into the streams; second, this Permit sets forth Water Quality Standards-equivalent Target Action Levels at the point-of-discharge; and three, this Permit will result in a decrease of pollutant concentrations and loads to the storm water runoffs which in most of cases are the sole source of water of receiving streams. EPA also made the following statements in the letter:

“We expect that water quality-based effluent limitations in NPDES permits for designated storm water discharges would be expressed in most cases as best management practices because of the difficulty of establishing numerical effluent limits.”

“Vigorously implemented controls that otherwise might be voluntary may provide a reasonable basis to defer designation of a particular source.” And,

“When legally permissible, EPA may include a compliance schedule in the permit itself; in other circumstances, EPA may incorporate a compliance schedule into an administrative order issued simultaneous with or soon after permit issuance.”

The Permit conditions are consistent with EPA’s 2003 guidance to VANR.

Comment 59: One commenter noted that there are nine SMAs located in Ancho Canyon. The commenter suggested that because Ancho Canyon has a perennial flow, Section 20.6.4.99 of the New Mexico State WQS should apply to those nine SMAs.

Response: The effect of storm water discharge on aquatic life is likely to be acute even if it discharges to a perennial stream because the discharge itself is non-continuous and of short duration. Although when a discharge flows to a perennial stream, the discharge may be diluted and therefore may cause less adverse impacts on designated uses, this Permit does not allow for dilution. No change has been made to the permit.

Comment 60: One commenter urged EPA to maintain a number of the proposed Permit's provisions, including, the availability of the SDPPP for public review, elimination of pollution sources, and the use of Method 1668A for PCB analysis, in the final permit.

Response: With the exception of the "elimination of pollution sources," the provisions requested by the commenter remain in the final Permit. As discussed in Response to Comment 10, the proposed Permit was not intended to require "total elimination" of the source, discharge or exposure of pollutants. This language has been clarified in the final Permit.

Comment 61: The permittees opposed the proposed provision that conditions resulting from the TMDL process may be imposed on the permittees without reopening the Permit. The permittees urged that new conditions resulting from the TMDL process should be imposed pursuant to a major modification or permit renewal process.

Response: EPA agrees and the proposed language has been removed from the final Permit.

Comment 62: The permittees requested that the Permit include a provision under which if no sample can be collected or no discharge verified from a Site for a period of 2 years, during a period of rainfall which is equal to or greater than the average for the Los Alamos area, the permittees may apply to delete the Site from the Permit.

Response: EPA does not believe such a provision is appropriate. The Permit requires BMPs to be installed at all Sites. However, pursuant to Part I. D. of the Permit, if the permittees demonstrate that required BMPs have been installed and the Site has ceased all discharge, the permittees may request deletion of the Site from the Permit.

Comment 63: The permittees stated that they do not have flow gages for the hundreds of Sites and groups of Sites covered by the Permit and requested a permit condition allowing for the estimation of flows based on best professional judgment, notwithstanding any other requirements in the General Conditions in Part III, section C.6.

Response: EPA believes it is reasonable to use an engineering estimate, instead of measuring device, for the flow volume of storm water discharge due to the great number of Sites. However,

because the Permit does not require report of discharge flow, EPA does not believe any additional permit condition is necessary to address the concern.

Comment 64: The permittees requested that EPA add a permit re-opener clause to allow for changes made necessary by changes to New Mexico water quality standards and regulations.

Response: A general permit re-opener clause is included in Part II of the permit.

Comment 65: The permittees requested that EPA remove Sites 01-001(a), 01-001(o), 21-013(a), 21-024(b), 21-024(g), and 21-026(d) from the list submitted with the supplemental permit application dated February 14, 2008, because the permittees believe these Sites do not discharge to Waters of the United States and therefore are not covered by the Clean Water Act.

Response: Based on the permittees' request, EPA has not included these sites in the final Permit. The final Permit does not authorize discharges of contaminated storm water from these sites.

Comment 66: The permittees requested that EPA remove 20 Sites (i.e., 21-013(b), 21-018(a), 21-023(c), 21-013(g), 53-002(a), 00-018(a), 00-018(b), 00-030(f), 01-002(b)-00, 45-001, 45-002, 10-001(a), 10-001(b), 10-001(c), 10-001(d), 10-004(a), 10-004(b), 10-008, 10-009, and 03-003(k)) from the final Permit because the permittees investigated those Sites under the RCRA Consent Order and determined that they do not contain significant industrial material. Therefore, the permittees have determined they are not industrial sites pursuant to 40 CFR 122.26.

Response: EPA consulted with NMED on this request. Because the NMED Hazardous Waste Bureau has not issued either an NFA or Certificate of Completion regarding these Sites, these Sites remain covered by the final Permit. If additional information is forthcoming they may be removed as outlined in the final Permit.

Comment 67: The permittees requested that those Sites that are co-located with conventional industrial activities be removed from the Permit because in the Statement of Basis EPA states that "The proposed permit does not cover storm water discharges associated with current conventional industrial activities or discharges from Sites co-located with the current conventional industrial activities. Discharges associated with conventional industrial activities will continue to be covered by the MSGP."

Response: EPA included this statement in the Statement of Basis based on a belief that co-located sites would continue to be covered by the MSGP, instead of the individual permit. EPA has since verified that the FFCA does not exclude sites co-located with conventional facilities from being subject to the individual permit and has determined to provide coverage for these Sites in the final Permit.

Comment 68: NMED suggested that EPA clarify that Site remediation activity needing a Construction General Storm Water Permit (CGP) is covered under this Permit. NMED also suggested that additional inspection requirements listed in Part 3.10 of the CGP should apply to these activities during construction and recommended that EPA add these inspection requirements to the final Permit.

Response: Part I.A.1.h. of the final Permit specifies that the Permit authorizes all storm water discharges from the covered Sites, including those resulting from construction activities related to installation of BMPs to reduce the discharge of pollutants to levels at or below applicable target action levels. The Permit clarifies that the permittees are not required to file a separate Notice of Intent under the CGP for discharges resulting from remediation activities. In addition, a Site inspection requirement of once per week has been added to the final Permit in keeping with the requirements of Part 3.10 of the CGP.

Comment 69: The Fish and Wildlife Service (FWS) does not have sufficient information to concur with EPA's finding that the permitted discharges "may affect, but are not likely to adversely affect listed species."

Response: In its Statement of Basis for the draft permit, EPA concluded this permit action would have *no effect* on all listed endangered or threatened species, except for the Mexican spotted owl. After compiling and reviewing additional information, EPA now concludes that all potential effects this NPDES permit may have on listed species, including the Mexican spotted owl, and their critical habitat, have been considered in prior consultations between FWS and DOE.