



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
WATER QUALITY DIVISION  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733

June 16, 2014

**MEMORANDUM**

**SUBJECT:** Review of LANS's Response to Comments on the *Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A\_047-Dissolved Copper Pollutant Pair*

**TO:** Daniel Reid, Monitoring and Assessment  
Water Quality Protection Division

**Through:** Richard Wooster, Chief  
TMDL Section

**From:** Katrina Higgins-Coltrain, State Coordinator  
TMDL Section

A handwritten signature in black ink, appearing to read "Higgins", is located to the right of the "From:" field.

On March 5, 2014, the New Mexico Environment Department Surface Water Quality Board (SWQB) received the *Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A\_047-Dissolved Copper Pollutant Pair*, submitted by Los Alamos National Security, LLC (LANS) and the Department of Energy. The document was then sent to the U.S. Environmental Protection Agency (USEPA) for review. On April 4, 2014, the SWQB, and LANS participated in a conference call to discuss the report and comments received. By letter dated May 14, 2014, the SWQB received the *DOE/LANS Response to the Environmental Protection Agency's April 8, 2014, Review of the Category 4b Demonstration* (DOE/LANS Response) while EPA received a May 15, 2014, email notification that the DOE/LANS Response was available for download and review. The purpose of this memorandum is to provide a summary of the DOE/LANS Response for your consideration.

In the April 8, 2014, EPA memorandum, three elements of the Category 4b Structure were identified as the primary areas of concern and were essential to the evaluation of the Category 4b Demonstration and its acceptance as an alternative to a total maximum daily load (TMDL). The three elements identified were (1) Identification of assessment unit and statement of problem causing the impairment; (2) Description of pollution controls and how they will achieve water quality standards; and (3) Monitoring plan to track effectiveness of pollution controls. In addition, section-specific comments were included

to assist with responses and revisions under each of the three elements. Based on the review of the DOE/LANS responses, all three elements and specific-section comments have been adequately addressed and the provided information clarifies work completed, describes work underway, and summarizes future work to be implemented.

The purpose of the Category 4b Demonstration is to demonstrate and document that current and future regulatory controls are stringent enough, in place, and monitored such that development of a TMDL is unnecessary because both mechanisms would essentially achieve the same surface water quality goal. LANS has provided information related to the following regulatory controls and associated compliance monitoring.

Resource Conservation and Recovery Act Consent Order

- Site investigations and corrective actions have been and continue to be implemented to address site contamination in order to protect human health and the environment.

NPDES Permit NM0028355

- The Industrial Point Source NPDES permit regulates 3 outfalls associated with the Upper Sandia Canyon assessment unit.

NPDES Permit NM0030759

- The Storm Water Individual NPDES permit regulates 13 solid waste management units and areas of concern associated with the Upper Sandia Canyon assessment unit.

NPDES Permit NMR05GB21

- The Storm Water Multi-Sector General Permit NPDES permit regulates 7 operational industrial facilities associated with the Upper Sandia Canyon assessment unit.

Army Corp of Engineers Nation-wide Permit #38 under CWA, Section 404

- The permit allowed for construction of a grade-control structure at the head of the Sandia Wetland.

In addition to the regulatory controls listed above, LANS is planning to complete complementary actions to support attainment of water quality standards.

- LANS plans to update and revise the *Background metals concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico*<sup>1</sup>, with additional data. The purpose is to determine background concentrations in the undeveloped reference watershed and western locations and determine the baseline/non-point source concentrations of metals in urban/developed areas runoff. The DOE/LANS response indicates that this report was not formally reviewed and accepted by the Agencies; however, copies were provided. LANS intends to collect more data and is working with NMED and the communities to finalize the sampling for 2014. LANS further explains that the undeveloped background and urban/developed background values are used as a tool to explain exceedances of the storm water individual permit (IP) and the storm water multi sector general permit (MSGP) benchmark values. It is also stated that there is no

---

<sup>1</sup> Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico, Los Alamos National Laboratory, LA-UR-13-22814 (ERID-239557), April 2013.

formal agreement that the undeveloped background and urban/developed background baseline values are acceptable and representative.

This report will be critical to understanding the nature of urban storm water runoff associated with the Upper Sandia Canyon assessment unit's drainage area.

- LANS plans to develop an Urban Storm Water Management Plan to address storm water runoff from urban developed areas on Laboratory property. *“This plan will aid in further identifying storm water runoff locations, quantifying runoff volumes, identifying potential pollutant sources affecting water quality, and assisting in the identification of appropriate Best Management Practices and control measures for both current and future sites and activities.”*<sup>2</sup>
- LANS plans to implement an Effectiveness Monitoring Strategy for the 4B Demonstration that will be developed in conjunction with the regulatory agencies. This plan will include
  - a description of and schedule for monitoring milestones to track the effectiveness of the pollution controls (e.g., sampling of gages E-121, E-123, and S-SCA-2 quarterly and after storm events).
  - water quality monitoring that will be performed to determine the combined effectiveness of the pollution controls on ambient water quality (e.g., sampling for TSS, total and dissolved copper, ph, and wetland performance criteria).
  - water quality monitoring upgradient and downgradient of the segment quarterly and after storm events.
  - application of the estimated 4b Demonstration loadings as targets for point and non-point discharges.

Based on the regulatory control in place, the additional controls LANS is planning to implement, and the effectiveness monitoring strategy that will be developed, this 4b Demonstration may lead to attainment of the dissolved copper (acute) water quality criterion and designated use. The Urban Stormwater Management Plan, Effectiveness Sampling Strategy, and the Background sampling and analysis report are essential documents that must be developed for a successful project, and should be reviewed by and acceptable to the Agencies that will be evaluating effectiveness.

USEPA regulations recognize that alternative pollution control requirements that are stringent enough, in place, and monitored may make the development of a TMDL unnecessary because both mechanisms would essentially achieve the same surface water quality goal. Specifically, TMDLs are not required if technology-based effluent limitations, more stringent effluent limitations, or other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are stringent enough to implement an applicable water quality standard (WQS) [see 40 CFR 130.7(b)(1)] within a reasonable period of time. Alternatively, an assessment unit can be moved from Category 4b to Category 5 if the original Category 4b Determination can no

---

<sup>2</sup> Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A\_047-Dissolved Copper Pollutant Pair, Los Alamos National Laboratory, LA-UR-13-28670, March 5, 2013.

longer be supported.<sup>3</sup>

When LANS revises the document, the following revisions are requested.

1. Figure 4: All of the 2008 results are not plotted.
2. Section 2.1.3:
  - a. Identify the equations used to calculate each column of the data used to develop the flow duration curve. This can be provided as a footnote.
  - b. Identify the process and equation used to calculate the TMDLs 0.248 lbs/day, 0.0499 lbs/day, and 0.0375 lbs/day shown in Figure 2.
3. Table 7: it is noted that the loadings are based on total copper concentrations rather than dissolved copper concentrations. Please include a discussion and clarification in the text.

---

<sup>3</sup> Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act. Memorandum from the Office of Wetlands, Oceans, and Watersheds. July 29, 2005. Washington, D.C.