



Via Email

November 9, 2021

Amanda White  
Program Manager  
Watershed Monitoring and Technical Services  
Tech2 Solutions  
Via email to [Amanda.white@em-la.doe.gov](mailto:Amanda.white@em-la.doe.gov)

**Re: Request for Additional Information for the Pajarito Plateau Site-Specific Water Quality Copper Criteria Demonstration**

Dear Amanda White,

On July 28, 2021, the New Mexico Environment Department (“Department” or “NMED”) Surface Water Quality Bureau (“SWQB”) received a “draft final” Demonstration Report for Copper Site-Specific Criteria for Surface Waters on the Pajarito Plateau (“Demonstration”). This Demonstration was prepared by Windward Environmental on behalf of Newport News Nuclear BWXT Los Alamos (“N3B”), the contractor currently responsible for managing the Los Alamos National Laboratory (“LANL”) legacy cleanup contract for the U.S. Department of Energy (“DOE”).<sup>1</sup> The Department notes that site-specific numeric criteria are relevant and justified when *site-specific conditions* in a watershed or specific surface water warrant a different criterion (see 20.6.4.10(D)(1) NMAC for a list of potential conditions).

The Department and the U.S. Environmental Protection Agency (“EPA”) Region 6 reviewed the Demonstration but need additional information to provide further technical review. If N3B would like the Department to provide further technical review, please submit a revised site-specific demonstration that includes the additional required elements and clarifications noted below:

- Based on the findings of the Demonstration and pursuant to 20.1.6.200 NMAC, N3B must include the amended language of 20.6.4 NMAC as it will be proposed to the Water Quality Control Commission.
- N3B must list the surface waters of the state to which the Demonstration applies, in accordance with 20.6.4.10(D)(3)(a) NMAC, including the applicable assessment unit, current designated uses, and any applicable site-specific criteria.
- N3B must show that the site-specific criteria will not be in conflict with the State’s antidegradation policy protections for existing uses, in accordance with 20.6.4.8 NMAC. N3B should provide a list of existing uses for each tributary and how these existing uses were derived, particularly as they pertain to copper, as supporting evidence.
- Consistent with 20.6.4.10(D)(1) NMAC, N3B must provide the relevant site-specific condition(s) that warrant site-specific criteria and why these criteria would not be applicable to adopt as a state-wide numeric criteria. N3B should consider why the multiple linear regression (“MLR”) translation of the biotic ligand model (“BLM”) is appropriate for this Demonstration as opposed to a broad, state-wide application.
- Consistent with 20.6.4.10(D)(2) NMAC, N3B must provide evidence in the Demonstration that the site-specific criteria fully protect the applicable designated uses and are therefore still protective of downstream uses, in accordance with 40 C.F.R. 131.10(b).
- N3B should expand Section 2.1.1 regarding relevant conditions for developing site-specific surface water

<sup>1</sup> <https://n3b-la.com/>

quality criteria to describe the physical and chemical characteristics of the site affecting the bioavailability and toxicity of copper. N3B should also explain how, even though these conditions exist, the proposed criteria will fully protect designated uses and downstream waters.

- N3B should discuss current National Pollutant Discharge Elimination System (“NPDES”) Individual Permit (“IP”) target action levels, multi-sector general permit (“MSGP”) benchmarks, and water quality-based effluent limits (“WQBELs”) for copper applicable to LANL’s NPDES discharges, and any reported exceedances.
- In Section 3.4.1, regarding sampling, N3B identifies sampling for all BLM parameters. However, from the information provided in Section 1.1 of the Demonstration, N3B is only evaluating pH, Dissolved Organic Carbon (“DOC”) and hardness. For clarification, in Section 3.4.1 of the Demonstration, N3B should include the parameters sampled, particularly if not all ten of the parameters are included in a BLM.
- Because some of the BLM input parameters are known to vary seasonally, N3B should provide at least one sampling event per season. To show this, N3B should include a distribution of sampling frequency for each month.
- N3B should include a table with sampling locations, their relative assessment units, and designated uses.
- There was insufficient information regarding the sampling schedule and quality assurance for the sampling events to evaluate the Demonstration effectively. This includes explaining how data were validated and verified and determined to be scientifically defensible, as well as custody sheets, holding times, sampling methodology (i.e. grab or 24-hour composite), sources of sample (i.e. baseflow, effluent, stormflow, combination) and the occurrence of precipitation events that would influence the flow, offsetting baseflow conditions. Until this information is provided in the Demonstration the Department and EPA are unable to evaluate the technical merit of the Demonstration effectively.
- N3B should provide the findings of steps one through seven in Section 5.1 regarding Data Quality Objectives (“DQOs”) and Data Quality Assurances (“DQAs”) prior to discussing the outcome of the process. Discussion should include the performance and acceptance criteria for the data and the frequency of the data that was determined acceptable.
- Section 5 should include figures comparing chronic exceedance ratios in addition to acute.
- In Section 6, regarding conclusions and recommended criteria, N3B concludes with chronic and acute equations for waters on the Pajarito Plateau; however, N3B did not adequately demonstrate the need for site-specific criteria nor the applicability of the chronic and acute equations to site-specific waters on the Pajarito Plateau.
- N3B should add a table comparing the current hardness based acute and chronic criteria for each of the proposed site-specific waters to the acute and chronic criteria calculated using the modified BLM equations to demonstrate the criteria are protective of designated uses and downstream waters.
- N3B should include a summary table and discussion of a sensitivity analysis supporting why only pH, hardness, and DOC are relevant for an MLR translation.

If you have any questions regarding these comments or the process, please contact Jennifer Fullam by email at [jennifer.fullam@state.nm.us](mailto:jennifer.fullam@state.nm.us) or by phone at 505.946.8954.

Sincerely,

**Shelly Lemon** Digitally signed by Shelly Lemon  
Date: 2021.11.09 10:01:38 -07'00'

Shelly Lemon, Chief  
Surface Water Quality Bureau

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