



Davis Graham & Stubbs LLP

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*Via Facsimile & U.S. Mail*

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Re: Church Rock Facility - Procedural Roadmap

Dear Mr. de Saillan and Mr. Turner:

Thank you for your April 11, 2001 and May 7, 2001 letters regarding UNC's suggested "procedural roadmap" for allowing UNC to complete corrective action at the Church Rock facility. We appreciate your willingness to consider a technical impracticability waiver for certain New Mexico groundwater standards. UNC is encouraged by NMED's acknowledgment that it may not be technically practicable to attain NMED numeric cleanup standards for certain groundwater constituents at the Church Rock facility, including TDS, sulfate and manganese. UNC agrees that a technical impracticability waiver may be appropriate once all necessary information is considered. We expect that the ongoing study of groundwater quality data that is being undertaken during the cessation of operation of the groundwater extraction system will support the need for the waiver, and we understand your desire to review data from that study prior to making a final determination. UNC appreciates EPA's and NMED's willingness to work with each other, the Navajo Nation and UNC in evaluating incoming data and determining how best to proceed.

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We want to emphasize that UNC is not contesting that TDS, sulfate and manganese were identified as ARARs in the September 1988 UNC Church Rock ROD, and we regret any misunderstanding if it was interpreted otherwise. The purpose of the discussion of these standards in UNC's May 18 letter was simply to show that flexibility exists from a legal, technical and risk perspective as to whether these State requirements can be waived under EPA and NRC regulatory programs, and to discuss various factors relevant to a consideration of whether a technical impracticability waiver is appropriate for these standards. In drafting the letter, UNC assumed that the only basis for establishing ARARs under EPA's ROD for TDS, sulfate and manganese was the State's insistence that groundwater quality standards for these constituents be attained. Mr. De Saillan's letter confirms our assumption.

Mr. de Saillan correctly notes that New Mexico has established groundwater standards for TDS, sulfate and manganese. UNC does not disagree with this; we simply are seeking: (1) recognition that it may be appropriate to waive these standards under the circumstances that are now being evaluated at Church Rock; and (2) agreement upon the appropriate procedural mechanism to waive such standards.

Our May 18 letter addressed several considerations which we believe are relevant to a determination of whether a technical impracticability waiver is appropriate for the Church Rock site. First, we pointed out that the State's groundwater standards for TDS, sulfate and manganese are "secondary standards" not health-based values. Therefore, even if groundwater concentrations exceed the standards at a given location *and* an exposure pathway exists, health risks should not occur. Moreover, there should be no adverse ecological effects because the standards are based only on the protection of drinking water aesthetics (as discussed below), not on risks to ecological receptors.

Our May 18 letter further noted that NMED's groundwater regulations identify the standards for TDS, sulfate and manganese as "other standards for domestic water supply." 20 NMAC 6.2.3103. NMED's approach is consistent with that of EPA, which has only identified "secondary maximum contaminant levels" for these constituents, not health based levels. 40 CFR § 143.3. Secondary maximum contaminant levels address contaminants that "primarily affect the aesthetic qualities relating to the public acceptance of drinking water;" and health implications are not expected except at "considerably higher concentrations of these contaminants." 40 CFR § 143.1. UNC raised this issue in the May 18 letter to emphasize that, although EPA and the State have adopted standards for TDS, sulfate and manganese, neither entity regards these constituents as posing health or ecological risks at or above the regulated levels. Simply put, our point was that the State standards, and the federal secondary maximum contaminant levels from which they derive, are not risk-based.

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Second, the limited possibility for development of ground water at the Church Rock facility means that exposure risks and potential adverse impacts associated with elevated levels of TDS, sulfate and manganese, if any, will not be manifested. Admittedly, standards may be exceeded. But this does not mean that the groundwater is impaired. Because the rationale behind the standards is the protection of the aesthetic quality of drinking water, and because the facility's groundwater has negligible if any potential for use as drinking water, exceedences do not equate with impairment.

Mr. de Saillan's letter contends that "the fact that the ground water is not a current drinking water supply . . . is irrelevant" because CERCLA requires that "the environment," not just human health, be protected. We agree that CERCLA requires protection of the environment, but do not believe that the presence of a constituent equates with an unacceptable risk to the environment. Further, whether or not ground water is a current drinking water supply is relevant to CERCLA cleanups. EPA guidance on Superfund remedy selection specifically identifies current human use of groundwater as one of several factors that should be considered when identifying remedial action objectives and preliminary remediation goals.<sup>1</sup> EPA's technical impracticability guidance identifies a contaminated groundwater's potential-for-use as a factor to be considered in determining if a technical impracticability waiver is appropriate.<sup>2</sup> Notwithstanding this, UNC's point in discussing the drinking water use of the groundwater was to emphasize that under current exposure scenarios, risk to human health and the environment is negligible (because there is no reasonable opportunity for exposure to human or ecological receptors).

It is important to clarify why UNC believes that groundwater is "very unlikely to be used as a drinking water supply in the future." This statement was based upon historic use patterns, current use and demand, availability of other sources of water and Earth Tech's detailed technical analysis included as Attachment 1 to our May 18 letter. Mr. de Saillan notes that UNC "inexplicably" cite the ROD in support of its position that the groundwater is unlikely to be used

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<sup>1</sup> See Rules of Thumb for Superfund Remedy Selection, U.S. EPA Office of Solid Waste and Emergency Response, EPA 540-R-97-013, OSWER 9355.0-69, PB97-963301 (August 1997).

<sup>2</sup> See Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration, U.S. EPA, OSWER 9234.2-25 (Sept. 1993) §5.1.3, which notes that natural attenuation of groundwater contamination is most likely to be appropriate where restoration is technically impracticable and "the affected groundwater is not a current or reasonably expected future source of drinking water, and ground-water discharge does not significantly impact surface water or ecological resources."

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as a drinking water supply. In fact, EPA's response to Resident/Citizen Comment 9 in Appendix to the ROD states:<sup>3</sup>

EPA studies indicate that the physical characteristics of Zone 1 are such that sufficient quantities of water could not be pumped from the sandstone to support volumes required for domestic or livestock purposes. Therefore, Zone 1 would not be a good candidate for locating a domestic or livestock well even if there were no impacts from tailings seepage.

(Emphasis added). Further, Appendix A to the ROD provides:

Operational results may also demonstrate significant declines in pumping rates with time due to insufficient natural recharge of aquifers. The probability of significant reductions in the saturated thickness of aquifers at the site must be considered during performance evaluations since much of the water underlying the tailings disposal area is the result of mine water and tailing discharge both of which no longer occur.

Thus, the ROD reflects EPA's determination that ground water at the site has a very limited potential for future use as a drinking water supply. EPA's responses to comments on the ROD also note that "EPA considers the groundwater at the site to be Class IIB," and that "Class IIB groundwater is groundwater that is potentially available for drinking water." However, this response should not be interpreted as implying that groundwater use at the facility is likely. A response that groundwater may be potentially available for drinking water does not address the likelihood of such use. EPA merely was stating that groundwater at the facility satisfied the criteria for Class IIB groundwater, as opposed to Class III groundwater, the latter of which contains elevated TDS or other contaminant concentrations that preclude potability. Here, the groundwater may be potable and thus potentially available for drinking water. However, there are not sufficient quantities of water to support sustained pumping for drinking water or agriculture, as EPA's responses to comments confirm. Based on EPA's findings and other information, UNC continues to maintain that it is very unlikely that the shallow groundwater at and around the facility will be used as a drinking water supply in the future.

Third, the fact that manganese is a listed "hazardous air pollutant" under section 112 of the Clean Air Act, and thus, by definition, is a "hazardous substance" under CERCLA section 101(14), does not mean that elevated manganese concentrations in groundwater at the facility

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<sup>3</sup> Comment 9, to which this response is directed, states: "The residents should be aware that tailings seepage in Zone 1 of the Gallup Sandstone will make that aquifer in the target areas unusable for generations."

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pose a risk to human health or the environment. The critical issue at Church Rock is not risk from airborne contaminants, but from constituents in groundwater. Thus water-based and soil-based listings of hazardous substances should be the focus of attention. As noted in our May 18 letter, TDS and sulfate, at least, are not CERCLA hazardous substances; and TDS, sulfate and manganese are not hazardous constituents under RCRA or NRC regulations. Further, they are not identified as pollutants for the purpose of ground and surface water protection under the State's water quality regulations. Your letter does not refute this point.

Fourth, contrary to the statements in your letter, UNC firmly believes that whether or not the groundwater standards for TDS, sulfate and manganese are "health based" is indeed relevant to the consideration of a technical impracticability waiver for the Church Rock facility. Cost-effectiveness is a necessary factor in remedy selection under CERCLA and in determining the practicability of compliance with ARARs. *See* 40 CFR § 300.430(f)(1)(D). Whether or not a remedial alternative is cost-effective and practicable depends, in part, on a balancing between the level of protection afforded and the cost of achieving that protection. This balancing must take into account the types of risks that are associated with contaminants and the attendant costs of avoiding them. In turn, a given remedial alternative may be deemed less cost-effective if it targets the aesthetic impairment of groundwater as opposed to adverse effects on human health. This is especially true where, as here, the groundwater is not even being used or likely to be used as a drinking water source.

Mr. de Saillan's letter attempts to show that the basis for groundwater standards (health, aesthetics or otherwise) "is irrelevant" by noting that "secondary drinking water regulations based on aesthetic qualities of drinking water may be ARARs." However, EPA guidance<sup>4</sup> makes clear that whether or not secondary drinking water standards should be used as state ARARs depends on site conditions:

Secondary drinking water regulations consist primarily of Secondary Maximum Contaminant Levels (SMCLs) for specific contaminants or water characteristics that may affect the aesthetic qualities of drinking water (i.e., color, odor, and taste). SMCLs are nonenforceable limits intended as guidelines for use by States in regulating water supplies. SMCLs apply to public water systems and are measured at the tap of the user of the system. . . . For States that have adopted SMCLs as additional drinking water standards, SMCLs are potential State ARARs, depending on site conditions.

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<sup>4</sup> CERCLA Compliance with Other Laws Manual: Draft Guidance, U.S. EPA Office of Emergency and Remedial Response at 4-8, EPA 540 G-89 006 (August 1988).

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(Emphasis added). Where, as here, “site conditions” are such that groundwater is not being used for drinking water—and is unlikely to be used as a drinking water supply in the future—it is appropriate to use these site-specific and risk-based factors in consideration of UNC’s request for a technical impracticability waiver.

Fifth, while UNC agrees that TDS and sulfate are not hazardous substances under CERCLA, we disagree that each is “clearly” a “pollutant or contaminant” as defined in section 101(33) of CERCLA. To be included in this definition, a substance must cause “death, disease, behavioral abnormalities, cancer genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations” to exposed organisms. 42 U.S.C. § 9601(33). The fact that no health-based standards exists for TDS and sulfate, as discussed above, and that no water quality criteria for the protection of aquatic life exist for these substances,<sup>5</sup> suggests that they do not cause the effects listed in section 101(33), at least at levels seen at Church Rock. Moreover, these substances certainly are not capable of causing the listed effects under site-specific conditions currently prevailing at the Church Rock facility, since exposure to humans or other organisms is not reasonably anticipated.

Finally, UNC takes issue with your statement that “CERCLA liability attaches to the TDS and sulfate contamination at the Site.” Under CERCLA section 107(a), liability may only be incurred in connection with the release and cleanup of “hazardous substances.” See *United States v. United Nuclear Corp.*, 814 F. Supp. 1552, 1557 (D.N.M. 1992) (“An owner of land may not be liable for the cleanup-up costs of pollutants or contaminants, but is liable for the costs incurred to clean up hazardous substances.”). As you have acknowledged, TDS and sulfate are not hazardous substances as defined under CERCLA. Therefore, UNC is not liable under CERCLA for the cleanup of these constituents at the facility.

UNC’s May 18 letter was intended to lay out the procedures to be followed in terminating corrective action at the Church Rock facility. The discussion of TDS, sulfate and manganese was meant to show that certain risk-based and policy factors support the waiver of New Mexico ground water quality standards for these substances at the facility. Other site-specific factors which are being evaluated during the temporary cessation of groundwater pumping will form the technical basis for the waiver. Our May 18<sup>th</sup> “Procedural Roadmap” was to lay out the format for achieving a consensus in procedure among the separate program requirements of the NRC, USEPA and NMED. It is this procedure that UNC seeks agreement on from the agencies.

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<sup>5</sup> See National Recommended Water Quality Criteria – Correction, U.S. EPA Office of Water, EPA 822-Z-99-001 (April 1999).

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We look forward to continuing to work with you as we move forward toward final closure of the Church Rock facility. Please feel free to call if you would like to discuss any of these issues further.

Sincerely yours,



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for  
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cc: Roy Blickwedel, Esq.  
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