

June 7, 2000

Mr. Bruce Calder
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

Dear Mr. Calder:

I am responding to your December 3, 1999 email to Mr. Sollenberger in which you discussed the applicability of supplemental standards for groundwater remediation at sites under Title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended (UMTRCA), and whether such an approach could be used to establish alternative standards for sites under Title II of UMTRCA.

As you described it in your email, the Conquista site, which is operated by Conoco, is located within less than 1500 feet immediately down gradient of the UMTRCA Title I site and, in fact, within the same hydro-geologic regime. That is, the Conoco site and the Title I site have the same uppermost aquifers. They also share essentially identical contaminant impacts. In addition, both sites have independent mill-related groundwater contamination in the uppermost aquifers, although contaminant plumes from the Title I site may, by this time, actually extend onto Conoco property, as well.

As you stated, at this time, supplemental standards are still only provided for in the regulations for Title I sites, and are not in the regulations for Title II sites. The Title I site applied for and was granted the utilization of "supplemental standards" for its "corrective action" strategy to address the groundwater contamination in the uppermost aquifers. A regulatory provision in 40 CFR Part 192 allows for the sole reliance on "natural attenuation" as a means of addressing contamination in groundwater caused by uranium milling activities, for aquifers which are not currently or potentially sources of drinking water. The Nuclear Regulatory Commission (NRC) accepted supplemental standards for this site because the groundwater in the area is considered of "limited use" (defined in 40 CFR 192.11(e) as groundwater that is not currently or potentially a source of drinking water) due to widespread ambient groundwater contamination presumed to be naturally contaminated prior to milling activities.

Your email stated that, on a couple of occasions, NRC staff has stated that the NRC has become amenable to reviewing an application from a Title II site for something like the supplemental standards for Title I under the provision in 10 CFR Part 40, Appendix A, which allows for "alternative proposals", i.e., alternatives to specific requirements. You suggested to Conoco that they explore this option since their site is a direct hydro-geologic analog to the Title I site, and the groundwater remediation plan for the Title I site was approved based on the application of supplemental standards.

Given this background, you asked three specific questions as stated below with our responses.

- (1) Could you please advise us as to how Conoco should go about making such an application?

NRC staff response: Conoco would need to submit an application for license amendment to the Texas Bureau of Radiation Control describing how its proposed alternative would provide an equivalent level of protection for public health and the environment as the specific regulatory requirements in the Texas regulations (the Texas requirements equivalent to 10 CFR 40, Appendix A). The alternative proposal may take into account local or regional conditions, including geology, topography, hydrology and meteorology. The licensee would need to provide sufficient analysis to justify approval of an alternative. The standard for approval of alternatives as set forth in 10 CFR Part 40, Appendix A, is that they will achieve a level of stabilization and containment of the site, and a level of protection of public health, safety, and the environment from radiological and non-radiological hazards associated with the site, which is equivalent to, to the extent practicable, or more stringent than the level achieved by the standards promulgated by NRC in 10 CFR Part 40, Appendix A, and by EPA in 40 CFR Part 192, Subparts D and E.

- (2) Are there any actual case histories where a Title II has applied for (and got accepted by NRC) supplemental standards?

NRC staff response: The NRC has not approved a licensee-proposed alternative similar to the Title I supplemental standards for groundwater. One licensee has proposed an alternative to the specific groundwater requirements, but it is not similar to the Title I supplemental standards. NRC staff is currently reviewing this proposal. The NRC has approved several alternate concentration limit (ACL) groundwater standards for Title II mill tailings sites, which are part of the specific regulatory requirements in 10 CFR 40, Appendix A.

The NRC has approved a licensee-proposed alternative for the cleanup of windblown material, based on site specific conditions that made the cleanup to standards nearly impossible.

- (3) Is there any NRC or Federal guidance, Staff Technical Position paper, or NUREG, etc., that would assist a licensee in applying for supplemental standards (either for Title I or II) and/or any of the same guidance that would assist a regulator charged with the responsibility of reviewing such applications?

NRC staff response: The NRC staff is in the process of finalizing the Standard Review Plan (SRP) for Title II sites to guide the staff through the review process for approval of reclamation plans including groundwater restoration. It does acknowledge that alternative standards may be requested but does not provide any additional guidance for review of such requests.

For Title I sites, the staff is developing additional guidance that does address supplemental standards, but does not provide any significant additional detail. At this time, the draft guidance directs the staff to evaluate whether the proposed concentration

limits for each groundwater protection standard are within a range that is reasonably expected to represent background concentrations; or, if alternate concentration limits or supplemental standards are proposed, to verify that the appropriate evaluations have been presented in accordance with 40 CFR 192.02 and 192.21 and 192.22. In its discussion of supplemental standards, the guidance states that:

“Requests for application of supplemental standards are based on site characterization data, modeling of remediation alternatives, and cost-benefit analysis. The comparison of environmental and health costs versus benefits is particularly important. The DOE quantifies both benefits and costs (in terms of health and the environment) as functions of increased levels of remediation. The level of remediation at which the marginal increase in cost equals the marginal increase in benefits is the appropriate level for application of supplemental standards. However, this may not be readily demonstrable inasmuch as many environmental and health benefits and costs are not quantifiable. In any case, the conceivable costs and benefits for the proposed supplemental standards are clearly defined and discussed.”

If Conoco seeks the amendment request you describe, the State may adopt alternatives to the requirements in the Texas regulations, if after notice and opportunity for a public hearing, the Commission approves the alternatives based on the standard set forth in question 1 above. The requirement for Commission approval of alternatives in Agreement States is set out in the last paragraph of section 274o of the Atomic Energy Act, as amended.

I hope this information will assist you in addressing this issue. As you can see, NRC is also considering this issue and how best to address potential alternative standards. If you have any questions regarding this letter, please contact me at 301-415-2326 or Dennis Sollenberger at 301-415-2819.

Sincerely,

/RA by Paul H. Lohaus for/

Frederick C. Combs, Deputy Director
Office of State and Tribal Programs

Bruce Calder

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****Concurrence given to D. Sollenberger at the NMA/NRC Uranium Recovery Workshop.**

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