



**GE Corporate  
Environmental Programs**

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January 10, 2000

40-8907

Beiling Liu  
New Mexico Environment Department  
P.O. Box 26110  
1190 St. Francis Drive  
Santa Fe, NM 87502

Subject: Purpose and Objectives for February 24, 2000 Meeting – Church Rock Site,  
Gallup, NM

Dear Beiling:

With USEPA's issuance of the Five-year Review report for the Church Rock site, UNC has been directed to develop Alternate Concentration Limits (ACLs) or a Technical Impracticability (TI) demonstration to complete the corrective action program for groundwater. The report acknowledges that the recovery wells in Zone 1 and Zone 3 have essentially met the decommissioning criteria that were established in the Record of Decision (ROD), while the water quality standards have not been achieved. It has become apparent, during UNC's subsequent development of ACLs or TI, and the several conferences that we have had, that there are some regulatory impediments to NMED's acceptance of our proposals for ACLs or TI. The purpose of our meeting will be to overcome the impediments.

One of the key hurdles was manifested when UNC requested that Section 1 be excluded as the Point of Exposure (POE) for Zone 1 and Zone 3. This request was needed so that the POE would not be co-located with the Point of Compliance (POC) (it is not possible to develop ACLs where the POC and POE are co-located because there is no distance over which attenuating mechanisms can occur). As you know, the request was accepted for Zone 3, but not for Zone 1. The Zone 1 request was rejected during a conference call on the basis that an entity could install and use a well within Zone 1 because the TDS is less than 10,000 mg/L and the formation is at least partially saturated. UNC believed that it had presented credible reasons why such use was not possible. Confounding the matter, is the fact that the current government position contradicts statements made by USEPA in the Responsiveness Summary to the ROD. USEPA stated in response to Resident/Citizen comment no. 9, "EPA studies indicate that the physical characteristics of

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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”.

With these contrasting regulatory positions in mind, UNC has proposed to conduct a meeting with your management so that we may develop a consensus view among the regulatory agencies that have responsibility for the Church Rock site. All of the agencies seem to be in agreement that the corrective action process should be terminated; however, there is a considerable inconsistency regarding how to bring about the termination. It is UNC's position that the most promising technical and administrative means for UNC to complete the corrective action process is via a TI Waiver issued by USEPA. However, in our May 11, 1999 meeting, USEPA directed UNC to develop its ACL or TI documentation to the satisfaction of NMED and NRC. Both agencies have effectively eliminated the possibility of developing ACLs by disapproving the POE for Zone 1 as discussed above. In addition, TI seems to be disqualified on the basis that some of the regulated constituents exceed 200% of New Mexico's abatement standard. In these instances, a TI may be sought through setting alternate abatement standards; however the ACL process has been eliminated by agency restrictions on setting the position of the POE for Zone 1. UNC has thus been presented with a “Catch 22” situation with respect to ACLS and TI.

NMED has suggested that Monitored Natural Attenuation (MNA) be explored to circumvent the problems with ACLs or TI. UNC agrees that MNA may be a useful component to the overall solution, but is concerned that NRC may not terminate the Source Materials License when MNA remedies are in effect. This policy might be waived if UNC can construct an acceptable “hold harmless” agreement with USDOE should the remedy fail during Long Term Site Surveillance. Fortunately, USDOE can accept responsibility for sites when MNA remedies are in place, provided that the MNA remedy has been approved by other agencies that have responsibility for the site.

It was also suggested that Institutional Controls (ICs) be incorporated into the overall solution to this problem. UNC agrees that ICs may be a component to the solution; however, there are clearly some obstacles to ICs considering that UNC does not own the Section 1 property and therefore cannot unilaterally control groundwater development or turn over such control to USDOE. There is also the potential problem that NMED does not recognize environmental deed restrictions. These problems might be overcome, and we have directed our outside legal counsel to develop a conceptual Institutional Control Plan, and work with the Navajo Nation and the Bureau of Indian Affairs to develop workable ICs.

For our upcoming meeting, UNC is preparing a two-part presentation: the first part to go over the technical aspects of ACLs, TI and MNA; the second part to go over approaches to ICs. It is our belief that the successful completion of the corrective action process will involve a hybrid of TI, MNA and ICs. The cornerstone to this recommendation will be a



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report of recent geochemical modeling results. The geochemical model is a departure from UNC's previous attempts to resolve the technical issues (such as an ALARA or TI demonstration) through the definition of an acceptable representation of background groundwater quality. The "background" issue is complicated and has been met with much disagreement among the various government agencies. We will largely steer clear of the "background" issue for this reason.

Our geochemical analysis reveals two important conclusions: first, that any practicable corrective action scheme will not further the attainment of water quality standards; and second, that natural geochemical processes have and will continue to be the primary mechanism that prevents the migration of seepage-impacted groundwater. Using the geochemical findings as a basis for both TI and MNA, UNC will present an Institutional Control Plan to provide the necessary assurances that seepage-impacted groundwater will not be used for any purpose that could cause adverse impacts to human health or the environment. Preliminary indications are that ICs could be based upon the establishment of a right-of-way, perhaps in conjunction with the development or conveyance of an alternate water supply.

Following UNC's presentation, it is our intent that the meeting attendees work together to establish the administrative procedures whereby USEPA will consider the groundwater corrective action to be complete. This is a prerequisite to NRC terminating the Source Materials License, which is in turn a prerequisite to the turnover of the site to USDOE for Long Term Surveillance Monitoring. Our goal is to submit a single report that will meet the requirements of USEPA, NRC, NMED and Navajo Superfund. In particular, the application of "Alternatives Provisions" in Appendix A to Part 40 seem to be a viable mechanism to present UNC's findings and analysis; however, the provisions are open-ended enough that we will need direction on the content and format of a report that will meet the objectives of all agencies.

We look forward to meeting with you in February.

Sincerely,

Roy S. Blickwedel, P.G.

cc: Ken Hooks, NRC  
Greg Lyssy, USEPA  
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