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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 23, 2011

Certified Mail: 91 7108 2133 3935 2171 2525

Mr. Miguel Flores
Director
Water Quality Protection Division
United States Environmental Protection Agency
Region 6 (6WQ)
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Requests for Approval of Non-Substantial Underground Injection Control Program Revisions to Establish an Aquifer Exemption in the Goliad Formation, Goliad County, and in the Goliad Formation, Duval County

Dear Mr. Flores:

I am writing in response to the determinations by Environmental Protection Agency (EPA) Region 6 that the Texas Commission on Environmental Quality's (TCEQ) applications for the above-referenced non-substantial program revisions of the TCEQ's Underground Injection Control (UIC) Program are incomplete. As explained below, the TCEQ disputes the determinations that the applications for program revisions are incomplete and disagrees with the novel interpretation by Region 6 of the aquifer exemption requirements under 40 CFR 146.4. Therefore, the TCEQ requests that EPA continue to process and consider the TCEQ's applications for non-substantial program revisions without the requested modeling analysis.

EPA ignores the word "currently"

The demonstration required for exempting an aquifer is a two-prong test. The first prong of the test under 40 CFR 146.4 is that the proposed exempted aquifer or portion thereof does not **currently** serve as a source of drinking water. In order to evaluate the first prong of the test, EPA is now requesting modeling that extends into the future through all projected periods of production and restoration phases of the uranium mining projects. This is not an evaluation of **current** conditions but an evaluation of **future** conditions.

Webster's Dictionary defines currently as "at present." (*Webster's Third New International Dictionary,* Merriam-Webster, 2002.) To determine whether a proposed exempted aquifer currently serves as a source of drinking water, the TCEQ reviews the proposed area to establish if there are any existing wells within the proposed boundary that provide water for human consumption. For both the URI and UEC aquifer exemption designations (and all other previous aquifer exemptions), the TCEQ reviewed the proposed areas and determined that there are no existing water wells within the proposed exempted area that provide water for human consumption.

If a portion of an aquifer could serve as a source of drinking water for a well outside of the established boundary, it could only serve as a source of drinking water at some unknown future point in time. However, many hydrologic conditions would have to be determined or assumptions made to link the water in a particular water well to a portion of an aquifer some distance away. The hydraulic connectivity or disconnectivity between the aquifer well and the well's screen, perforations, or open hole (assuming that such information about older wells is available); the hydrologic gradient in the area; the design of the well and well components; the influence of other wells in the area; the influence of injection or groundwater withdrawal during mining or restoration; and, any legal or regulatory requirements on groundwater usage are all factors that could influence whether a particular water well can draw groundwater from a portion of an aquifer some distance away. Consideration of such factors is not needed to determine whether the proposed exempted aquifer currently serves as a source of drinking water.

EPA ignores applicable case law

TCEQ is aware of only one appellate case that addresses aquifer exemptions under 40 CFR Section 146.4. In *Western Nebraska Resources Council v. United States Environmental Protection Agency*, 943 F.2d 867, an environmental organization challenged EPA's approval of a Nebraska UIC program revision to include a 3000-acre aquifer exemption associated with an *in situ* uranium mining project in Nebraska. In addition to challenging the entire concept of the aquifer exemption, the environmental organization argued that the boundary of the aquifer exemption was "gerrymandered" so that no present water wells would be included and that the exempted area was unnecessarily large. In considering the EPA's aquifer exemption rule in 40 CFR Section 146.4, the court rejected these arguments. The court supported the purposeful delineation of the aquifer exemption boundary to exclude existing wells from the aquifer exemption because the existing wells outside the aquifer exemption will not lose protection under the Safe Drinking Water Act. In the Nebraska case, the court upheld the 3000 acre size of the aquifer exemption finding that it corresponds to the ore zone boundaries and that the EPA appropriately concluded that the uranium could be commercially produced.

The TCEQ's interpretation of 30 Texas Administrative Code Section 331.13 (30 TAC 331.13) and 40 CFR 146.4 is consistent with the holding in *Western Nebraska*. In determining whether a proposed exempted aquifer is currently serving as a source of drinking water, the TCEQ determines whether there are any wells within the boundary. Groundwater outside the aquifer exemption boundary remains protected as an underground source of drinking water.

EPA ignores Guidance 34

The TCEQ relied on the EPA memorandum "Guidance for Review and Approval of State Underground Injection Control Programs and Revisions to Approved State Programs. GWDB Guidance #34" (Guidance 34) in preparing its program revisions to reflect the designation of these aquifer exemptions. TCEQ has received no indication that Guidance 34 is no longer valid. Attachment 3 of Guidance 34 includes specific guidelines for reviewing program revisions associated with aquifer exemptions. The TCEQ provided information to satisfy all of the evaluation criteria specified in Attachment 3 of Guidance 34. Guidance 34 specifies that exemption requests should demonstrate that the aquifer does not currently serve as a source of drinking water to satisfy 40 CFR 146.4(a). To demonstrate this, Guidance 34 states "the applicant should survey the proposed exempted area to identify any water supply wells which **tap** the proposed exempted aquifer." For both the UEC and URI aquifer exemptions, there are no drinking water wells that tap the proposed exempted aquifer. Wells outside of the proposed exempted aquifer boundary do not tap the proposed exempted aquifer.

Guidance 34 further suggests that the area to be surveyed should cover the exempted zone and a buffer zone outside the exempted area, extending a minimum of ¼ mile from the boundary of the exempted area. Guidance 34 also requires that any water wells located should be identified on the map showing the proposed exempted area. Guidance 34 makes no reference of any modeling analysis required to demonstrate that a proposed exempted area does not currently serve as a source of drinking water.

Guidance 34 also specifies the type of information required to demonstrate under the second prong of the test that the proposed exempted aquifer cannot now and will not in the future serve as a source of drinking water because it is mineral producing or can be demonstrated to contain minerals that are expected to be commercially producible. To demonstrate that new *in situ* mining is expected to contain commercially producible quantities of mineral, Guidance 34 suggests the following information be provided: summary of logging which indicates that commercially producible quantities are present, a description of the mining method to be used, general information on the mineralogy and geochemistry of the mining zone, and a development timetable. The applicant may also identify nearby projects which produce from the formation proposed for exemption. Guidance 34 does not specify any type of modeling to show that the formation contains commercially producible minerals. To demonstrate that producible quantities are present when expanding an existing aquifer exemption, Guidance 34 indicates that upon stating the reasons for believing that producible quantities exist in the expanded area, a history of mineral production will be sufficient proof that this standard is met. Without mentioning Guidance 34, EPA Region 6 hints that a request for additional modeling to satisfy the second prong will be forthcoming.

The forms included in Guidance 34 certainly make it appear that EPA's consideration of a program revision to recognize an authorized state program's designation of an exempt aquifer is a ministerial function that follows the technical evaluation by the state. To assist EPA's review of the TCEQ's requested program revisions, I am enclosing information to support TCEQ's applications organized according to the Guidance 34 criteria. I hope this information will allow EPA's prompt consideration and approval of the TCEQ's program revisions.

EPA ignores its Memorandum of Agreement (MOA) obligations

The current Memorandum of Agreement between TCEQ and EPA requires EPA to promptly inform the TCEQ of any proposed or pending modifications to federal statutes, regulations, guidelines, standards, judicial decisions, policy decisions, directives, resource allocations or any other factors that might affect the state program or the TCEQ's ability to administer the program. EPA must promptly inform the TCEQ of the issuance, content, and meaning of federal statutes, regulations, guidelines, standards, judicial decisions, directives, and any other factors that might affect the state program. The TCEQ has received no notice or other indication that the aquifer exemption regulation in 40 CFR 146.4 has changed or that Guidance 34 has been revised or superseded by new guidance, guidelines, or interpretation of Section 146.4. The EPA Region 6 request for modeling on the TCEQ's non-substantial program revisions is a departure from EPA regulations and established EPA guidance and was not promptly communicated as required by the MOA.

The purpose of the MOA notice requirements is to allow the TCEQ to maintain an effective UIC program and keep apprised of any upcoming changes at EPA. The TCEQ's aquifer exemption requirements in 30 TAC 331.13 are based on the EPA's requirements in 40 CFR 146.4 and were approved by the EPA as reflected in 40 CFR 147.2200. TCEQ has established permit application requirements based on these rules, and permit applicants rely on the TCEQ rules in developing business projects and permit applications before the TCEQ. URI's and UEC's requests to designate

exempt aquifers were based on these existing rule requirements and the applicable guidance. The TCEQ, the regulated community and the public expect to be able to rely upon EPA's formally promulgated regulations and guidance and expect that any changes to existing regulations be conducted through formal rulemaking.

EPA ignores prior approval of program revisions on aquifer exemptions
EPA has approved approximately 36 aquifer exemptions in the State of Texas as part of the original UIC program or subsequent program revisions. For the URI Rosita project, EPA approved a program revision for the initial aquifer exemption in 1988 and approved a program revision expanding the size of the exempted aquifer in 1998. EPA did not request a modeling analysis to demonstrate that a proposed exempted aquifer does not currently serve as a source of drinking water in approving the TCEQ's initial UIC program or any of the subsequent program revisions. Further, the TCEQ can find no other examples where EPA has requested from other states groundwater modeling in order to approve a non-substantial program revision associated with an aquifer exemption. The TCEQ can provide many examples where EPA has approved a program revision associated with aquifer exemptions for other states without requiring groundwater modeling. Because EPA has approved numerous other program revisions without modeling, TCEQ's applications are not incomplete, and the pending applications for program revision can be approved without the requested modeling.

EPA ignores the applicable UIC program in Texas
The TCEQ, and not the EPA, implements the authorized UIC program in Texas. Under Section 1422 of the Safe Drinking Water Act and 40 CFR 147.2200, the state laws in rule and statute establish the UIC program under the Safe Drinking Water Act for the State of Texas, and the TCEQ has primary enforcement responsibility. EPA's request for modeling on the non-substantial program revisions associated with the aquifer exemptions disregards the determinations made by TCEQ that the designated aquifer exemptions comply with the requirements of 30 TAC 331.13.

The requests from UEC and URI to designated aquifer exemptions were carefully reviewed under 30 TAC 331.13 by professionally-licensed TCEQ staff. The applications were subjected to public notice, opportunity for public comment, and opportunity for an evidentiary contested case hearing. Public meetings on both applications were held in the local area, and TCEQ responded to all of the comments submitted on the applications. On the UEC designation, a contested case hearing before the State Office of Administrative Hearings was conducted on the application for the Class III injection well area permit, the application for a production area authorization, and the designation of the exempt aquifer. After considering all evidence in the record, the Administrative Law Judge concluded that UEC demonstrated by a preponderance of the evidence that the proposed exempted aquifer meets the applicable criteria of 30 TAC 331.13 and is supported by the holding in *Western Nebraska Resources Council v. United States Environmental Protection Agency*. The TCEQ commissioners affirmed the judge's findings and conclusions with respect to the designation of the exempted aquifer. On the URI designation, TCEQ provided an opportunity for affected persons to request a contested case hearing and received no such requests. TCEQ's Office of Public Assistance held a public meeting on URI's application to provide an opportunity for the public to ask questions of the applicant and of TCEQ staff and to take public comments. The TCEQ's own consideration of these aquifer designations was not taken lightly.

TCEQ implements a successful program for the regulation of injection activities associated with *in situ* mining of uranium. It is compliance with TCEQ permit and rule requirements, and not the size or shape of the aquifer exemption, that protects underground sources of drinking water. TCEQ requires mining to occur within a production area (within the exempted aquifer), requires monitoring wells to

surround the production area, requires the containment of mining solutions, and requires the restoration of groundwater after mining.

EPA's request for new modeling to make the same determination already made by the TCEQ amounts to second-guessing and disregards the TCEQ's status as the primary enforcement authority under the Safe Drinking Water Act.

EPA's request is ambiguous, presents a moving target, and provides no path for resolution

Even if the TCEQ were to attempt to provide the requested modeling, TCEQ fears that it will lead to a never-ending process as EPA further refines or modifies what is sought. The request seeking "modeling analysis demonstrating the aquifer within the proposed boundary either currently serves or does not serve as a source of drinking water" is vague. EPA does not specify software, codes, assumptions or conditions to be used by TCEQ in the modeling. EPA's letter affirms TCEQ's fears of an ongoing ordeal to comply with the request. First, before any modeling is conducted, EPA would like the opportunity to review a modeling work plan and a conceptual model. This review will, no doubt, lead to further refinement of the modeling sought. Second, EPA indicates that it is only providing a preliminary review of the program revision applications. EPA states that additional comments may be forthcoming, once the application is deemed complete—in other words, other surprises may be coming. And finally, EPA states that the modeling requested only seeks to address the first prong of the aquifer exemption requirements—whether the aquifer currently serves as source of drinking water. EPA promises to request additional, but unspecified, modeling analysis on the second criterion.

The TCEQ has always enjoyed a good relationship with EPA Region 6 regarding the TCEQ's UIC Program. I hope the information I have provided conveys the TCEQ's position regarding its UIC program revision applications. The TCEQ firmly believes that EPA regulations, EPA guidance, and EPA precedent support the consideration and approval of the TCEQ's non-substantial program revisions associated with these aquifer exemptions without providing the requested groundwater modeling. Your letters invite TCEQ to meet with EPA to discuss the requested groundwater modeling. For the reasons stated above, TCEQ does not believe there is any legal basis for EPA to request groundwater modeling in this matter; therefore, TCEQ declines a meeting with EPA to discuss modeling. However, the TCEQ is available to meet to discuss its position on the requirements for program revision associated with an aquifer exemption. If you have any questions regarding the TCEQ's applications for UIC program revision, or if you want to meet to discuss our position, please contact me at 512-239-5105 or contact Ms. Susan Jablonski, P.E., Director of the Radioactive Materials Division, at 512-239-6731.

Sincerely,

Mark R. Vickery, P.G., Executive Director
Texas Commission on Environmental Quality

Enclosure