



Texas Department of Health

William R. Archer III, M.D.
Commissioner

1100 West 49th Street
Austin, Texas 78756-3189
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Charles Bell, M.D.
Executive Deputy Commissioner

Radiation Control
(512) 834-6688

January 23, 2001

UNITED STATES NUCLEAR REGULATORY COMMISSION
ATTN PAUL H LOHAUS DIRECTOR
OFFICE OF STATE PROGRAMS
MAIL STOP O3H20
WASHINGTON D C 20555

Dear Mr. Lohaus:

As you are aware Texas has three former conventional uranium mines which are in the process of closure. Recently one has requested termination of their license and has asked that we forward their proposed method for meeting the requirements of Appendix A of 10 CFR 40. Attached is the cover letter and fact sheet (all the information we have been provided at this time) for review by yourself and/or your staff. Our question is whether the method the licensee proposes, if properly supported by appropriate documentation, would be considered appropriate by the NRC for termination of such a site.

If you have any questions, please call me at (512) 834-6688 extension 2208.

Sincerely,

Eugene (Gene) Forrer
Chief, Uranium Licensing Project
Division of Licensing,
Registration, and Standards
Bureau of Radiation Control

attachments

OSP-006 Yemplete
RIDS Dist. : SP08



Conquista Project
P. O. Box 309, Falls City, Texas 78113, (210) 254-3581

January 8, 2001

Texas Department of Health
Bureau of Radiation Control
1100 West 49th Street
Austin, TX 78756-3199

Attn.: Mr. Eugene Forrer,

RE: CONOCO CONQUISTA PROJECT – REQUEST FOR TERMINATION OF PERMIT #LO-1634

Dear Mr. Forrer:

As we discussed in our meeting on November 10, 2000, Conoco is requesting termination of Permit LO-1634 and title transfer of the Conquista Site to the U.S. Department of Energy (DOE). The closure work performed by Conoco at the Conquista site has achieved *“a level of protection for public health, safety, and the environment from radiological and nonradiological hazards”* consistent with Appendix A of 10 CRF 40. The basis for this conclusion was presented to the Texas Department of Health (TDH) during the November 10th meeting, and is documented in the attached Fact Sheet.

In summary, the key factors that demonstrate this level of protection are:

- The DOE with concurrence of the TDH and the Nuclear Regulatory Agency (NRC), has designated the upper aquifer (Deweesville sandstone) as a “limited use” aquifer;
- Mine wastes at the upgradient DOE site were stored in excavations in the Deweesville sandstone during operations;
- The final waste storage facility at the DOE site is also located on Deweesville outcrop;
- Available data indicate that affected groundwater from the DOE site is migrating under the Conquista site;
- The Conquista tailings facility is constructed on the Conquista clay, which overlies the Deweesville sandstone;
- Deweesville groundwater quality is better at Conquista than at the DOE site;
- Mean groundwater quality at Conquista meets UMTRA MCLs and/or is better than background water quality for the Deweesville; and
- Conoco completed closure of the Conquista site in late 1993.

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TDH

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RADIATION CONTROL

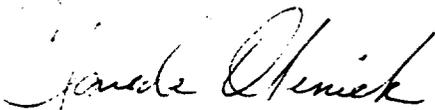
Mr. Forrer
January 8, 2001
Page 2

Based on these factors, Conoco is requesting termination of the Conquista permit under the provision of 10 CFR 40, Appendix A that allows licensees to propose alternatives to the specific requirements of Appendix A.

During our November 10th meeting, it was agreed that the NRC should concur with the permit termination. Conoco proposes that a joint meeting between Conoco, TDH and the NRC be scheduled in order to present the request and supporting information. To facilitate this request, we ask that the TDH forward copies of the enclosed Fact Sheets and this cover letter to the appropriate person(s) in the NRC.

We appreciate your consideration of this request and are available to provide any additional information you may require. Should you have any additional questions regarding this proposal, please do not hesitate to contact me at (830) 254-3581.

Respectfully,
Conoco, Inc.



Claude W. Olenick
Conquista Project Manager

- cc: Rod Grebb – SRK Consulting, Fort Collins
- Jeff Parshley – SRK Consulting, Reno
- Chesley N. Blevins – Lloyd, Gosselink, Blevins, Rochelle, Baldwin & Townsend, P.C.

Conquista Project

Site Conditions

Conoco's Conquista Project is a Title II Uranium Tailings Impoundment located approximately 50 miles southwest of San Antonio, Texas (Figure 1). The Conquista site is immediately adjacent to the Department of Energy's (DOE) Title I Falls City UMTRA Project (Figure 2). Conoco is in the process of license termination with the Texas Department of Health (TDH) and site transfer to the DOE. Part of the process is to determine if the potential for groundwater contamination will pose an unacceptable risk to human health and the environment. Conoco is proposing a groundwater compliance strategy similar to that adopted by the DOE at the Falls City Project.

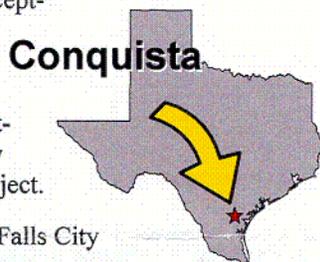


Figure 1 - Project Location

In 1997, the DOE closed the Falls City UMTRA site using a *no remedial action* strategy based on application for supplemental standards. DOE determined in the application that the uppermost aquifer (Deweeseville Sandstone) is classified as *limited-use* groundwater. The Nuclear Regulatory Commission (NRC) and the TDH concurred with the DOE groundwater protection strategy.

Geologically, the DOE Falls City Project is sited on the outcrop of the Deweeseville Sandstone. Historical uranium tail-

ings ponds were placed directly on the Deweeseville Sandstone at the Falls City Project. During the closure of the site, the DOE consolidated these historical uranium tailings into a disposal cell also located on Deweeseville Sandstone outcrop. The disposal cell is located in an area where pre-existing uranium tailings ponds and mine pits were sited (Figure 2).

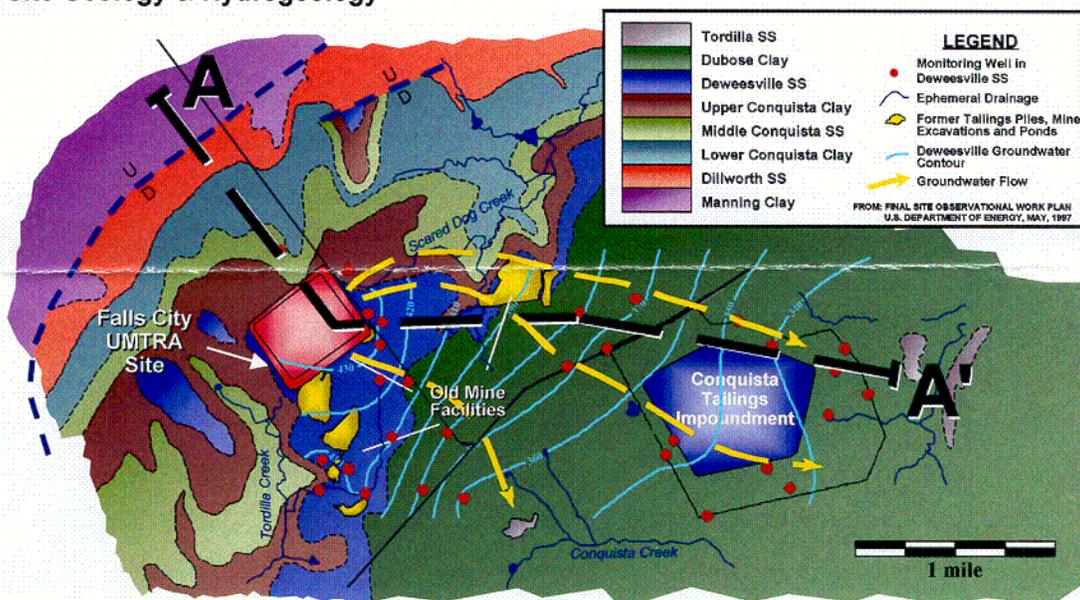
The Conquista Project is sited on the Dubose Clay (Figure 2), which overlies the Deweeseville sandstone. The Dubose Clay contains isolated sand channels typically associated with a marginal coastal marine depositional environment. These isolated sand lenses are not a regional aquifer. The Deweeseville sandstone is a water-bearing unit and is the uppermost aquifer of concern (Figure 3).

Groundwater Conditions

Hydrologically, the Conquista Project is immediately down-gradient of the DOE Falls City Project. Geochemical comparison of recent Deweeseville sandstone groundwater chemistry from both sites indicates that the groundwater types from the DOE Falls City and Conquista sites are nearly identical.

Groundwater quality data from both sites are summarized in Table 1. The data are compared against established UMTRA standards and background groundwater data. Conquista water quality is consistently better than that from the DOE Falls City site.

Figure 2 - Site Geology & Hydrogeology



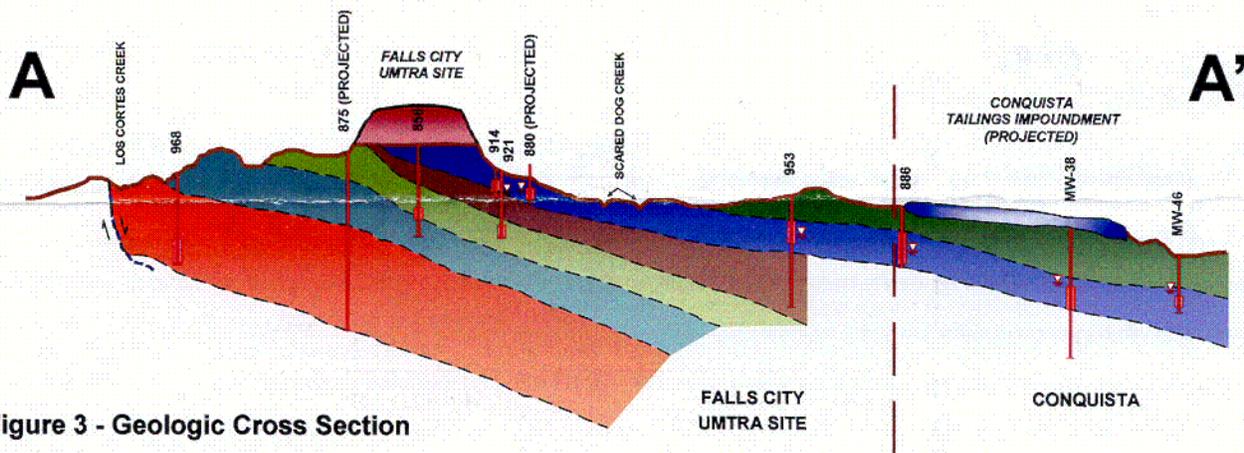


Figure 3 - Geologic Cross Section

Site Closure

The Final Site Observational Work Plan (U.S. DOE, 1997) concluded that the closed Falls City Project site did not pose a threat to public health, safety and the environment. The Conoco site currently has and should continue to have post-closure conditions similar to or better than the upgradient DOE site, and consistent with the requirements of 10 CFR 40 Appendix A.

Appendix A of 10 CFR 40 provides a means for licensees of Title II sites to "propose alternatives to the specific requirements in [Appendix A] (10 CFR 40 Appendix A). The alternative proposals may take into account local or regional conditions, including geology, topography, hydrology, and meteorology. The Commission may find that the proposed alternatives meet the Commission's requirements if the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of this Appendix and the standards promulgated by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E."

Because groundwater at the upgradient DOE site, which is lower quality, has already been found to meet the required protection criteria, the groundwater beneath and downgradient of Conquista should also meet those criteria. Therefore the Conquista closure plan, as submitted, approved and implemented will provide a level of protection consistent with Appendix A and 40 CFR 192, Appendices D and E. It is Conoco's belief that the Conquista site is closed in accordance with the appropriate regulations and protection goals. For these reasons, Conoco intends to request that its license be terminated without requiring an application for supplemental standards.

An application for supplemental standards as defined in the regulations would require Conoco to determine Alternate Concentration Limits (ACLs) for groundwater. An ACL submittal would need to show that groundwater quality downgradient of the Conquista Project will meet the lowest human health risk for the highest predicted concentration of a potential contaminant. ACL's were not applied at the adjacent DOE site. Furthermore, in order to predict the highest concentration, numerical modeling would need to consider all contaminant inputs into the system. Because uncontrolled contaminant input from the upgradient DOE site is known to exist and has already impacted groundwater beneath the Conoco site, a reassessment of the DOE site closure would be required.

Table 1 - Groundwater Chemistry

Constituent	UMTRA MCLs	Falls City (mean)	Falls City (max)	Background (max)	Conquista (mean)	Conquista (max)
As	0.05	0.01	0.04	0.03	0.01	0.02
Ba	1.0	N/A	N/A	0.1	N/A	N/A
Cd	0.01	0.05	0.417	0.009	0.01	0.03
Cr	0.05	N/A	N/A	N/A	N/A	N/A
Pb	0.05	0.002	0.006	0.002	0.003	0.021
Hg	0.002	N/A	N/A	<0.002	0.001	0.004
Mo	0.1	0.01	0.04	2.3	0.02	0.07
NO ₃ as N	10.0	7.2	38	812	N/A	N/A
Se	0.01	0.03	0.18	0.05	0.01	0.04
Ag	0.05	N/A	N/A	N/A	N/A	N/A
²²⁶ Ra + ²²⁸ Ra	5 pCi/L	5.1 pCi/L	22.8 pCi/L	7.1 pCi/L	3.6 pCi/L	13.8 pCi/L
²³⁴ U + ²³⁸ U	0.005 mg/L	0.62 mg/L	4.84 mg/L	2.57 mg/L	0.03 mg/L	0.22 mg/L
Gross alpha	15 pCi/L	207 pCi/L	2765 pCi/L	123 pCi/L	5.6 pCi/L	10 pCi/L

*mg/L unless noted

Blue = above MCL

Red = above MCL and maximum background

Conoco is preparing a request for license termination based on an alternative strategy that is consistent with the Commission's requirements for closure alternatives as described in 10 CFR 40, Appendix A. However, before making this request, Conoco is seeking agency input regarding this proposed approach.

For more information contact:



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