

Docket File 40-8793

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SEP 10 1982

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Docket No. 40-8793
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MEMORANDUM FOR: Docket File No. 40-8793

FROM: Yvonne A. Young, Project Manager
Operating Facility Section I
Uranium Recovery Licensing Branch
Division of Waste Management

SUBJECT: CONOCO INCORPORATED'S REQUEST FOR WITHDRAWAL OF RUBY
RANCH IN SITU URANIUM PROJECT APPLICATION - NRC
DOCKET NO. 40-8793

In December 1981, Conoco Incorporated requested a source material license for the proposed Ruby Ranch In Situ Uranium Leach Project.

Initially, the Nuclear Regulatory Commission accepted Conoco Incorporated's application based on the assumption that the pump test methodology depicted in the Environmental Report would be adequate to determine ore zone confinement at the Ruby Ranch Project site. Following application acceptance, the NRC's staff immediately initiated an independent review of Ruby Ranch's Environmental Report. Subsequently, additional information (requests, comments, and questions related particularly to groundwater monitoring, modifications to the leak detection systems, and the geotechnical engineering aspects of the evaporation ponds) concerning the Ruby Ranch Project site was requested in a letter from the NRC, dated February 11, 1982. Conoco was requested to respond by March 15, 1982.

A delay in Conoco's submittal of the requested information, in addition to NRC's concerns about the adequacy of the pump test conducted on May 6, 1981 resulted in a May 5, 1982 meeting between Conoco Incorporated and the Nuclear Regulatory Commission. Conoco's May 6, 1981 pump test analysis (analyzed using the Hantush method) was reviewed by our Consultant Hydrologist, Dr. Roy E. Williams. Dr. Williams' review, dated March 12, 1982 indicated that the primary deficiency of Conoco's pump test was that the hydraulic characteristics of the multiple aquifer-aquitard system using the Hantush method had not been adequately defined. Therefore, it should not be concluded, as Conoco did, that the overlying sand was hydraulically isolated from the "70" sand.

Dr. Williams further concluded that in order to determine the amount of water that was released from storage in the aquitards, and to determine the vertical hydraulic conductivity of the aquitards, it was necessary

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to measure changes in pore water pressure that occurred in the aquitards during the pump tests (using the state-of-the-art method, the ratio method, by Neuman and Witherspoon in evaluating multiple aquifer-aquitard systems). Therefore, a new aquifer pump test was recommended to collect these data.

At the May 5, 1982 meeting NRC staff indicated that review of Conoco's application for the Ruby Ranch Project site could proceed no further until information requested on February 11, 1982 was received. Conoco committed to provide NRC with a proposed response date by May 20, 1982. By letter dated May 13, 1982 Conoco indicated that the proposed response date to our February comments would be August 15, 1982.

Conoco's plans were not to conduct an additional pump test determined necessary by NRC and WDEQ until after an NRC license and WDEQ permit were issued. The NRC staff explained that additional pump testing could not be deferred unless the staff could make a determination of ore zone confinement using existing information. If this was found to be the case, then NRC could proceed with the licensing review. If a decision was then made to issue a license, it would be conditioned to require a pump test to be run prior to injection of lixiviant, and that NRC's review of this pump test might result in tighter operational controls and more stringent monitoring.

Conoco agreed to submit a proposed design for additional pump testing to NRC.

Additionally, Conoco Incorporated agreed to submit the following additional information supporting a determination of ore zone confinement by June 4, 1982.

1. Geophysical and lithologic logs for pump test area, proposed R&D well field area, and area between (if available),
2. Preliminary estimate of vertical permeabilities and travel times and,
3. Potentiometric data to show that the different hydrogeologic units are separate and distinct.

Within four weeks of receipt of the above requested information the NRC agreed to notify Conoco whether the existing and supplemental information was adequate to determine basic ore zone confinement at the proposed Ruby Ranch Project site or if an additional pump test was required to make this determination.

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Subsequently, upon receipt and review of Conoco's additional submittal dated June 3, 1982, the NRC staff concluded that existing information was inadequate to determine basic ore zone confinement at the Ruby Ranch Project R&D well field site. It was noted that new, additional information that wasn't discussed in the original environmental report (ER) (the original ER was the basis for the NRC's acceptance of the application) showed significant differences between the hydrogeologic characteristics in the mine area and the pump test area. In particular, data included with the June 3 submittal indicated that the "80" sand was a significant hydrogeologic unit (the first aquifer above the uranium-bearing aquifer) at the R&D well field site. Evidently, detailed identification of this hydrogeologic unit was inadvertently omitted from the original application. The "80" sand is not found in stratigraphic sections of the pump test site and therefore was not a factor in the original review of Conoco's pump test analysis. After reviewing the data of the June 3 submittal NRC staff concluded that the assumption of similarity of hydrogeologic characteristics between the pump test site and R&D well field site was incorrect; thus, invalidating the May 6, 1981 pump test for use in determining confinement of the ore zone at the well field site. The above findings were called to the attention of Mr. Terry Quigley (Conoco) and Dr. Chien (Conoco). However, the NRC received no adequate response from Conoco Incorporated to remedy the situation. Therefore, the NRC had inadequate information to determine basic ore zone confinement in order to substantiate the issuance of a source material license at the Ruby Ranch Project site, and determined that it was appropriate to terminate work on the project.

On July 9, 1982, Conoco Incorporated called the NRC regarding the NRC's final licensing actions for the Ruby Ranch Project application. Ms. Yvonne Young (NRC) informed Mr. Duane Bollig (Conoco) that the NRC's management was in the process of determining the final licensing actions for the Ruby Ranch Project application and that due to the inadequacy of data submitted, the issuance of source material license would probably be denied.

On July 12, 1982 Mr. Terry Quigley (Conoco) called Ms. Yvonne Young (NRC) and arranged a July 14, 1982 meeting between Conoco Incorporated and the Nuclear Regulatory Commission to discuss the status of the Ruby Ranch Project application. Therefore, on July 14, 1982, Messrs. Duane Bollig, Jack Cearley and Terry Quigley (Conoco) met with Messrs. John Linehan, Jeffrey Pohle and Ms. Yvonne Young (NRC) for the reason specified above.

At the July 14, 1982 meeting, the NRC reiterated to Conoco that all information provided by Conoco (the original and subsequent submittals) was inadequate in determining ore zone confinement at the Ruby Ranch Project site because the new, additional information that was not discussed in the original application showed significant differences between the hydrogeologic characteristics in the mine area and the pump test area.

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Therefore, the NRC stated that no further work would be done on the project.

The NRC also informed Conoco that it was considering denying the issuance of a source material license for the Ruby Ranch Project application due to the reason mentioned above. However, Conoco Incorporated was granted the option of withdrawing their application.

By letter dated July 20, 1982, Conoco Incorporated informed the NRC of their request for withdrawal of the Ruby Ranch Project application. Conoco is in the process of phasing out their mineral operations, and therefore, will not continue with development of the Ruby Ranch Project. The NRC by letter acknowledged the receipt of Conoco's letter requesting the withdrawal of their Ruby Ranch Project application, Docket No. 40-8793.

The staff also informed Conoco Incorporated that the NRC's Licensing Fee Assessment Branch will contact them in the near future.

Yvonne A. Young, Project Manager
Operating Facility Section I
Uranium Recovery Licensing Branch
Division of Waste Management

Approved By:

John J. Linehan, Section Leader
Operating Facility Section I
Uranium Recovery Licensing Branch
Division of Waste Management

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