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URFO:RFB
Docket No. 40-8380
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MEMORANDUM FOR: Docket File No. 40-8380

FROM: Randall F. Brich, Project Manager
Licensing Branch 1
Uranium Recovery Field Office, Region IV

SUBJECT: ANALYSIS OF COMMENTS ON DRAFT FONSI
RMEC 9-MILE LAKE R&D ISL FACILITY

Background

On April 9, 1985, the Commission published a draft Finding Of No Significant Impact (FONSI) describing it's determination to terminate, contingent upon demonstration of successful decommissioning, Rocky Mountain Energy Company's Nine-Mile Lake R&D ISL Source Material License SUA-1228. A comment period of 30 days following the date of publication in the Federal Register (April 9, 1985) was allowed. Since the 30-day comment period has expired and one commenter has submitted comments, it is necessary to analyze these comments for inclusion in the final FONSI.

Discussion

Comment No. 1:

> Permits for surface and ground-water appropriations in the State of Wyoming are granted by the Wyoming State Engineer. The notice should be changed under statement [c] to read, that "notification of POTENTIAL hazards associated with the ground-water contamination at this site would be provided to the public via the WYOMING STATE ENGINEER'S well permitting procedures."

NRC Analysis:

> The comment is an accurate representation of the State of Wyoming's permitting authority and the final FONSI has been corrected. The

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word "potential" is not considered appropriate, since the ground water is definitely contaminated.

Comment No. 2:

The record should note that no impairment of any existing ground-water right (i.e., water well) has or will occur as a result of R&D operations conducted at the site.

NRC Analysis:

The comment provides qualification of the impacts on existing water users. The comment has been incorporated into the final FONSI.

Comment No. 3:

Statement [c] should be expanded to describe the nature of the source of contamination associated with Pattern 1. The source consists primarily of gypsum ($CaSO_4$) deposited within the formation, which gradually releases calcium and sulfate (soluble salts) into solution upon contact with ground water moving through the pattern interior. It may also be appropirate to note that ambient aquifer water quality naturally occurring within one mile of the test site is essentially identical to that associated with Pattern 1.

NRC Analysis:

Item "b" of the draft FONSI adequately describes the natural water quality and relates this to identified beneficial uses. The final FONSI has been revised to reference Section 4 in the Environmental Assessment, which describes the impacts on ground-water quality.

Comment No. 4:

The record should note the presence of an overlying aquifer (Fox Hills) of better quality water and much shallower depth within a distance of one-half mile down-gradient (east) of the test site. The cost of completing a well in the Teapot, at a depth of about 1,000 feet, could easily exceed $10,000 versus a cost of $1,500 to $3,000 for completing a well in the Fox Hills. There are no existing wells of record that obtain water from the mineralized aquifer (Teapot Sandstone) within a four-mile distance down-gradient of the test site, but there are several wells completed in the Fox

Hills aquifer. The two aquifers are separated by several hundred feet of competent shale (Lewis Shale), which prevents any commingling of ground waters.

NRC Analysis:

Section 2.3 of the Environmental Assessment discusses the regional hydrology, including the Fox Hills Sandstone. No discussion is offered regarding the quality of the Fox Hills aquifer, since this aquifer is not impacted by the site. Therefore, revision of the final FONSI is not warranted.

Comment No. 5:

Monthly ground-water samples collected within the R&D site over the last three years do not support NRC's statement that "unrecoverable lixiviant" is possibly present, as implied by statement [a] of the notice.

NRC Analysis:

As stated in the Environmental Assessment, the possibility exists that unrecoverable lixiviant is present in Pattern 1. Patterns 2, 3, and 4, probably have been totally recovered. Partial explanation of the increased levels of certain trace metals and chlorides can very likely be due to the presence of unrecoverable lixiviant from the finer grain matrix. Thus, revision of the final FONSI is not justified.

Conclusions

The draft FONSI should be revised as discussed above and issued in final form. Appropriate changes are necessary in the Environmental Assessment.

/s/

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Approved by: Original Signed By
Edward F. Hawkins

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