

EG&G ROCKY FLATS

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December 23, 1992

92-RF-14872

Robert M Nelson, Jr
Manager
DOE, RFO

Attn S R Grace

FINAL PHASE II RFI/RI AQUIFER TEST REPORT – TCG-126-92

A response to the attached review comments is being conveyed relative to the Final Phase II RFI/RI Aquifer Test Report. Comments were received several days prior to the subcontractor's due date for delivery of the document to EG&G. EG&G was instructed to review and respond to the comments only if there was sufficient time and budget to do so.

Despite pressing time constraints, all of the review comments were evaluated and, where appropriate, incorporated into the text of the document. The budget did not allow for the subcontractor to create a formal "Document Review and Comment Record." However, the discussion below addresses "Major Concerns" and "General Comments."

Major Concern

One major concern of the reviewer is that the distribution of subcropping Arapahoe Sandstones was determined using seismic interpretations, which are model dependent and subject to error. It is stated that "the selection of pump test sites should have been based on geologic well logs from adjacent borings and monitoring wells."

Response

The distribution of the subcropping Arapahoe Sandstone was predicted using core data from all available well and borehole control. Also, as stated in the text of the aquifer test report, the selections of pump test sites were determined using data from all available wells and boreholes.

General Comments

Under "General Comments," the sedimentary model for the Arapahoe sandstone Number 1 is criticized, and the 1991 Groundwater Protection and Monitoring Program Plan is referenced. The reviewer states that the preservation of a continuous, sinuous Arapahoe sandstone channel is unlikely. In addition, it is suggested that the hydraulic conductivities measured in the pump testing program not be used to model groundwater flow.

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Response

The 1991 Groundwater Protection and Monitoring Program Plan is still a draft document currently being revised. However, the geologic interpretations presented there were taken from the Geologic Characterization Report, July 31, 1991. The Geologic Characterization Report presents two explanations for the deposition of Arapahoe sandstone Number 1, "Interpretation 1" and "Interpretation 2" (Figures 14 and 15 and Maps 2, 2A and 3, 3A, Geologic Characterization Report, July 31, 1991). "Interpretation 1", the interpretation under criticism, shows a continuous single channel system. "Interpretation 2" depicts a multiple channel system containing migrated point bar deposits. The second interpretation is the depositional model which was used when pump test sites were selected. The Operable Unit (OU) 2 map presented in Figure 2 of the aquifer test report is consistent with "Interpretation 2," and it shows the approximate limits of fluvial deposition in OU 2. This does not imply, however, that the area of fluvial deposition represents a single continuous channel.

The aquifer pump testing program was designed to assess aquifer parameters, not to interpret environments of deposition. However, the recent OU 2 drilling program has generated much control, which is being used to construct new maps of the shallow Arapahoe sandstone Number 1 aquifer. Parameters determined through aquifer testing and analysis will be evaluated and used with respect to these more detailed maps.

If you have any concerns relative to these comments, please feel free to contact Connie Dodge at extension 8536.



Thomas C. Greengard
Acting Director
Environmental Science and Engineering
EG&G Rocky Flats

CJD jlm

Orig and 1 cc - S R Grace

Attachment
As Stated

<u>SCENARIO</u>	<u>FY93RI</u>	<u>IRAP</u>
- INDUSTRIAL AREA	\$0	\$2.16M
- SECURITY AREA	\$9.1M	\$2.16M
- PROTECTED AREA	\$11.25M	\$2.16M
- NO IRAP	\$30.0M	\$0
- OPTIMAL	\$5.23M	\$2.16M

Rich - Regulators are reluctant to process affected Work Plans because awareness of proposed PA/IRAP.

- DOE approves \$2.16M in FY93 for O/IRAP.
- Do up-front analysis of O/IRAP developing scenarios for how the entire (life cycle) project would be done, the \$'s, and schedule.
- In FY93, DOE approves revised \$'s in OU Work Packages to start non-intrusive activities.
- DOE approves cost reduction efficiencies shown in EG&G FY93 redistribution for other Work Packages as proposed.
- EG&G will coordinate with F. Lockhart to prepare FY93 supplemental request for DOE approval.
- EM-453 (Ciocco) will contact G. Hill to discuss current GC position on Onsite Water Management Issue.
- EM-453 (Ciocco) will pursue EM-50 funding for Onsite Water Management activity "Low Level Radionuclide ID Work and Development of Low Level Removal Technology" = approx. \$150k.
- Discussion on how much sitewide characterization is necessary now, when we are not making OU milestones and funding is tight. If no hard regulatory requirement exists should we pursue it? Discussion included how sitewide geologic/hydrogeologic modeling supports a better understanding of the site which is not provided by OU-specific investigations. DOE-RF management requested that proposed scientific activities have sufficient justification through regulatory requirements. Action to present regulatory correspondence and other material necessary to justify funding.
- EG&G will prepare a recommendation on the "Charge-Back" system for lab sample processing - Due 12/3/92.
- DOE-RF will notify EM-453 on 11/30 as to when the MSA baseline will be resubmitted to EM-453.