



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PDR

AUG 20 1980

MEMORANDUM FOR: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch
THRU: John J. Linehan, Section Leader
Uranium Recovery Licensing Branch
FROM: Daniel M. Gillen
Uranium Recovery Licensing Branch
SUBJECT: MINUTES OF MEETING WITH FEDERAL-AMERICAN PARTNERS
(FAP), DOCKET NO. 40-4492

Date: July 17, 1980
Place: Silver Spring, Maryland

Purpose:

- a) Discuss status of DES and outstanding requests for additional information.
- b) Discuss all outstanding issues pertaining to environmental review and how they are to be resolved.
- c) Presentation by Federal-American Partners (FAP) of proposed studies on groundwater impacts at FAP.

Attendees:

NRC: J. Linehan ORNL (NRC Consultant): J. Baldwin
D. Gillen
T. Vandell FAP Consultants:
M. Haisfield Kaiser: D. Adams
R. Heyer M. Jones
FAP: G. Pierson Dames & Moore: L. Murdock
E. Kemp W. Highland
T. Hayslett (TVA)
R. Shell (TVA)

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

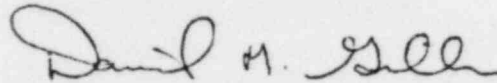
Discussion:

Following the opening introduction of all attendees and a brief summary of the purpose of the meeting, J. Linehan began by expressing the dissatisfaction of the Uranium Recovery Licensing Branch with regard to FAP's apparent lack of effort to provide prompt and complete response to required information. Particular reference was made to FAP's submittal of the below grade alternative study without any supporting engineering and geo-hydrologic data having been obtained (now being done by Dames & Moore study). FAP indicated that they realize the need for a more responsible effort to enable a timely and comprehensive review and cited internal FAP personnel changes as contributing to the problem.

The discussion was then directed towards all outstanding issues and information requiring resolution prior to publication of the Draft Environmental Statement (DES) and the geohydrology studies to be performed by Dames & Moore. The following major areas of outstanding information were discussed:

1. Detailed questions (prepared by T. Vandell) on the future Dames & Moore geo-hydrology studies, to be completed in December 1980, were addressed (See Enclosure 1) and four items requiring response by September 2, 1980 were identified. These are items 1 through 4 of the additional information list detailed as a part of the summary of conclusions and commitments (Enclosure 2).
2. Questions presented in a May 22, 1980 letter from John J. Linehan to FAP were reviewed and it was determined that questions 1, 2, 3, 4, 6d, and 6e required response by September 2, 1980.
3. Questions presented in a July 3, 1980 letter from Ross A. Scarano to FAP were reviewed and it was determined that all questions except 18 required response by September 2, 1980.
4. FAP indicated that they are proceeding on a proposed 2000 tons per day throughput. They were reminded that they must submit a letter, by no later than September 2, 1980, reporting all changes to the ER as a result of this decrease from the 3000 tons per day originally proposed.
5. Additional NRC questions regarding the effects of the incremental mining associated with the expansion were presented (See Enclosure 2).

A summary of conclusions and commitments resulting from the meeting was drawn up and signed by the principal representatives of FAP and the NRC (Enclosure 2). Key items of the summary included a September 2, 1980 deadline for FAP submittal of most requested information, other than the Dames & Moore study due in December 1980, and a requirement of bi-weekly FAP progress reports on the status of the response.



Daniel M. Gillen
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosures:

1. Comments on Geo-Hydrology Studies
2. Summary of Conclusions and Commitments

Comments and Questions on Supplement to Environmental Report
Subsurface Tailings Disposal for FAP March, 1980

1. Page 1-1 How long have mill tailings been pumped from tailings pond 2 to the solar evaporation pond?
2. Page 8-1 Well Depths and perforated intervals? W.Q. sampling methods and techniques?

Appendix by Dames & Moore
February, 1980

- *1. Pages 4, 5, and 9 Address the relationship, if any, between the east-trending normal faults and fractures and potential seepage pathways, especially the Sagebrush Fault, which has an estimated offset of 120 feet and where water levels are 40-50 feet lower on the downthrown (north) side. How will this be incorporated in the model?

Cross sections should be included showing fault offsets and the presence and magnitude of the fault, particularly with respect to seepage.

2. Page 7 Table 1, and Plate 1, which of the 11 wells are currently used for domestic purposes by FAP? Has there been any degradation to the water quality in these wells? Any wells abandoned?
3. Page 9 Are the water level discontinuities in the confined aquifer significant enough to incorporate in the Dames & Moore model? Explain why and how pit dewatering has affected the confined aquifer?
- *4. Page 9 The mudstone layer has been delineated in the Sagebrush-Tablestakes pit at a thickness of 20 to over 40 feet and will direct seepage horizontally. What are the horizontal and vertical limits of this zone over the approximate region at which seepage will occur. Particularly, with respect to the Sagebrush fault.
5. Page B-1 Did Dames & Moore's review of the geophysical logs from the boreholes listed in Table B-2 confirm the continuity of the claystone?
6. Please clarify what the current and pre-mining ground water flow directions are and were in the upper water table and lower confined aquifers. (See Dames & Moore, February, 1980, Plates 4 and 5 and Environmental Report, December, 1979, page 3-22).

*Most Important Points

Comments and Questions on the Dames & Moore
Proposal 1 dated March 3, 1980
(Sagebrush-Tablestakes Open Pit)

1. Page 3 Under Task 2, Item 3, please explain how you propose to estimate the unsaturated permeability from laboratory measurements. Please submit the published references used for this evaluation, if possible.
- *2. Page 4 Under Item a, what kind of drilling will be conducted? Would it be feasible to core some of the borings?
- *3. Page 4 Please define "baseline monitoring" and "continued monitoring." Please be certain that water quality sampling (method of collection, filtering and preservation, and analysis) is in accordance with the Wyoming DEQ Regulatory Guide 4 and EPA recommendations (1974).

All water quality data submitted to the NRC in the future should follow the format and include the information discussed in the attached "Draft NRC Standard Format for Water Quality Data Submittal to the NRC."
4. Page 4 Please explain how these newly installed wells might be used as dewatering wells. Does this tie into alternative 1 as described on page 7?
5. Page 5 Item a. Please define from what zone(s) core samples will be taken?
6. Page 5 Item b. Please submit a write-up on the laboratory procedures to be used by Utah State University to evaluate unsaturated permeabilities, porosities, and densities.
7. Page 5 Item c. What type of tests (batch, column, etc.) will be conducted to evaluate distribution coefficients? Why?
8. Page 6 Task 3. Since tailings ponds 1 and 2 have been in operation for some time, would it be feasible to calibrate the transport model based on the known seepage rate and water quality data obtained at tailings ponds 1 and 2?
- *9. Page 7 Does TARGET include contaminant transport in the unsaturated zone? How will the Sagebrush Fault be modeled? According to Roy Williams' letter (December 4, 1979), the mudstone appears to be saturated--Comment by Dames & Moore.

*Important Points

- *10. Page 7 Define in more detail the 3 pit disposal alternatives presented by Dames & Moore. Why isn't lining included? The alternatives listed in the March, 1980 report by Kaiser Engineering, Inc., address this as well as underdrain systems. Alternative 2 appears to be a reasonable approach which is not too costly and which may (depending on what the Dames & Moore study shows) be environmentally sound. Consequently, this case should certainly be modeled by Dames & Moore.
11. Page 8 Please explain what "prior to report preparation" means under Task 4, item b;

Comments and Questions on the Dames & Moore Proposal 2
dated May 23, 1980 (Tailings Pond No. 1)

- *1. Page 1 Tailings pond No. 1 (which is supposedly an evaporation pond) was "lined" with slimes last year. Are slimes adequate to prevent seepage? According to our consultant Roy Williams, they probably are not. Are the recovery wells adequate to prevent the spread of the contaminated ground water mound to the north, east, and west? What zones are these wells open to? Are we assured that they are open to the seepage pathway zones?
- According to Roy Williams, low pH values in deep wells 16 and TP1-D1 indicate contamination from seepage to the lower confined aquifer around tailings pond 1. This needs to be investigated further. If such contamination is present around tailings pond 1 (and 2), Dames & Moore must address the problem and include recommendations for "cleaning-up" the ground water.
- *2. Page 2 Are the ground water monitor wells currently being sampled? How often? For what constituents? What zones? Methods of sampling and preservation? Analysis and submittal of data? What do the data show?
- *3. Page 2 Item 1. Have Dames & Moore also review the hydrogeologic and water quality data at the existing tailings pond No. 2. Also, if ground water contamination exists, Dames & Moore may need to conduct additional field studies to determine if and what "clean-up" actions are required.

*Important Points

*4 Page 2

Item 2. Please be certain that background water level trends in the dewatering wells that will be pump tested are obtained prior to pump testing and that drawdown data are corrected for any interference effects due to external factors (such as nearby dewatering).

*Important Points

DRAFT
NRC STANDARD FORMAT FOR WATER QUALITY DATA
SUBMITTAL TO THE NRC**

1. Make certain that water quality sampling techniques and analysis are in accordance with EPA guidelines (1974).
2. All water quality data submitted to the NRC should:
 - a. Be submitted in tabular form with EPA drinking water standards and MPC's listed in the same table, for ease of data comparison. Methods of sampling and preserving, and the laboratory utilized should be indicated in the table. The depths, formation(s) sampled, and distances from the tailings pond or well field for each monitor well should be noted in the table.
 - b. Be submitted graphically to illustrate changes with time with the EPA drinking water standards, MPC's, or background water quality data (whatever is appropriate) for the particular constituent shown on the graph.
 - c. Include a shortsummary of the data interpretation, noting any anomalies, with an explanation.
 - d. Water quality data reports should include a map which shows all water quality sampling points.

, **Note: This format differs from the sample format shown in Table 3 of NRC Regulatory Guide 4.14.

Meeting July 17, 1980 w/ Federal American Partners

Summary of Conclusions and Commitments

A. FAP will submit ^{responses to} the attached required information within by Sept 2 '80.

B. The scope of the Dames and Moore study ^{due in Dec '80} will also include an assessment of the existing groundwater situation at Tailings Ponds 1 and 2 and determine the effectiveness of the existing recovery well system. Recommendations for clean up will be included. Consideration of alternative site for evaporation pond (other than Pond #1) will be addressed by a program to be prepared ^{to} FAP management.

C. Based on satisfactory response to the above requested information by Sept 2, 1980 the NRC will attempt to publish a DER on the license renewal and proposed expansion by mid October, 1980.

D. FAP shall submit a biweekly progress report to the NRC until all of the above requested information is submitted. The progress report shall be telephoned to J. Luchan (301-427-4103) and followed up with a confirmatory letter.

Enclosed: Attachments 1 and 2

John Luchan, NRC
 Paul Miller, NRC
 [Signature], FAP

Required Additional Information (Immediate)

1. Data on fault north of Sycbrush Tablestake pit, including orientation, width, type of gouge material etc.
2. Details of the proposed pre-operational monitoring program for below grade pit. Also summary of present monitoring program for entire site (locations, ^{sampling} methods etc). Also include in this summary the status and location of FAP domestic wells.
3. Preliminary ^{groundwater} data obtained in ^{Dames & Moore} field work at Tailings Pond #1, ⁴⁻⁸² together with preliminary comments and/or conclusions.
4. Results of Dames & Moore study ^{which} indicates the permeability of the mudstone layer.
5. Responses to May 22 NRC letter
Questions 1, 2, 3, 4, 6d, 6e
6. Responses to July 3 NRC letter
Questions 1-17, 19-37
7. Responses to NRC additional concerns on incremental mining. (see attachment 2)
8. Letter reporting all changes to ER as a result of the decreased proposed throughput from 3000 tpd to 2000 tpd.

Additional NRC concerns
on Incremental
Mining

1. Where will the increased ore supply come from?
2. What new mines will be opened to supply the expanded mill?
3. What existing mines will be expanded?
4. What amount of additional surface disturbance will take place at these mine sites?
5. What will the air quality impacts, both radiological and non-radiological, of the increased mining be?
6. How will increased mining operations affect water quantity and quality of area wells? ^{and both surface and underground water} Dewatering ^{systems?} and discharge should be addressed.
7. ^{What highways will be used for trucking ore?} ~~How will increased mining oper~~ ore? What is their capacity? Are they built to a high enough standard to withstand this additional traffic?