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

MAR 25 1980

Project WM-38

The Anaconda Copper Company
ATTN: Mr. Glen Davis
1400 Bank & Trust Tower
Corpus Christi, Texas 78477

Dear Mr. Davis:

Pursuant to discussions in our meeting of February 14, 1980, I am enclosing a copy of the meeting summary (Enclosure 1).

I have also enclosed a copy of NRC questions (Enclosure 2) on the Anaconda report supplied during the meeting on the proposed mill tailings scheme for the Rhode Ranch project. These questions are asked based upon information submitted at the meeting and site visit. We provide these in advance of our review of all information, which is to be submitted by Anaconda, to expedite the review process. These questions are intended to focus Anaconda's attention on NRC's concerns about the proposed disposal scheme, some of which have already been discussed during our meeting (see Enclosure 1).

In addition, please note that the Anaconda request regarding the Rhode Ranch project has been assigned an NRC project number, WM-38. Any future transmittals from Anaconda should include reference to this number to facilitate processing.

If you have any questions, please call me or George Wu at (301) 427-4103.

Sincerely,

H. J. Miller
for Hubert J. Miller
Uranium Recovery Licensing Branch
Division of Waste Management

- Enclosures:
1. Meeting Minutes
2. NRC questions

cc: E. Bailey, TDOH (w/o enclosure)

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MEMORANDUM FOR: Files

THRU: Hubert J. Miller, Section Leader
Uranium Recovery Licensing Branch *HJ Miller*

FROM: George Wu
Uranium Recovery Licensing Branch

SUBJECT: MEETING SUMMARY FOR VISIT TO ANACONDA SITE,
CORPUS CHRISTI, TEXAS

Date: February 14, 1980

Place: Corpus Christi, Texas and nearby Anaconda
Mill Site

Participants: Meeting between Anaconda Company, Texas State
organizations, and NRC

Anaconda:

Glen Davis
Stephen Williams
Rick Moore
Robert Hill
Joseph Wright
William Gray
David Shearer, Camp, Dresser & McKee (CDM)
Douglas Sethness, CDM

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8003310399.*

Texas:

Edgar Bailey, Texas Department of Health (TDH)
John Haygood, TDH
Joseph Gorrel, TDH
William Hellums, TDH
Donald Spraggins, Texas Rail Road Commission (TRRC)
Kenneth Launius, TRRC
Barbara Stanton, Texas General Land Office (TGLO)
Mark Thompson, TGLO

NRC:

Hubert Miller, NMUR
George Wu, NMUR
Robert Fehner, OELD
Roy Williams (Consultant)
Frank Young, OSP

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Purpose:

Under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), ownership of sites used for permanent tailings disposal is required to be transferred to the Federal Government. Anaconda has proposed to dispose of tailings in underground mined out pits at the Corpus Christi mill site. Anaconda states the tailings will be essentially dry and the mines are at least sixty feet deep. Anaconda has requested to be exempt from the UMTRCA requirement for transfer of ownership based upon the claim that this transfer is not necessary to assure tailings impoundment stability and a need for continued monitoring. The State of Texas has requested NRC assistance in evaluating Government ownership of the site. Under UMTRCA, only NRC can make a determination that the land ownership requirements of the Act can be dispensed with.

The purpose of the meeting was to discuss the scope of NRC review and associated schedules, review the proposed Anaconda tailings disposal program, and to conduct a site visit to the mine and mill areas.

Summary:

The following is a summary of the important points discussed and agreements reached during the meeting:

1. NRC (H. Miller) stated that in making a determination on land ownership, NRC will need to document its independent assessment of the issue; the issue which will essentially be addressed is: Will continued monitoring of the disposal site be required following completion of reclamation to protect public health and safety and the environment? If not, land ownership by a government agency would not be necessary.

The determination would be conditioned on Anaconda meeting the technical design and performance specifications presented in their proposal (e.g., moisture content of tailings going into the pits) and other conditions determined to be required by NRC in its assessment. The scope of the NRC technical review (leading to a determination on land ownership) will focus primarily on geohydrologic aspects of the proposed tailings disposal mode, the final depth of burial (distance from surface to top of tailings), and the mill process and tailings disposal methods; broader short-term environmental impacts will be addressed by the mill licensing process.

2. NRC stated one aspect to be dealt with in its review is the provision in Section 83 of the UMTRCA that, where there is no government ownership of the disposal site, possession of the tailings shall be pursuant to an NRC license. If it is determined no monitoring and, hence, no land ownership is necessary, NRC has an option to fulfill this provision by issuance of a general license with essentially few or no conditions.

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3. NRC (H. Miller/R. Fonner) stated it would need a direct request from Anaconda, which it agreed to do, for a determination on the subject issue. The request should be addressed jointly to the State and NRC. This should include a title abstract including opinion of counsel concerning the ability of Anaconda to transfer title of the tailings area to the government.

NRC stated it would complete an assessment as requested by Anaconda; however, the fact that the applicable section of UMTRCA (Section 83) is not effective until November 1981 will make it necessary for NRC to reaffirm the determination after November 1981. NRC stated that careful and complete documentation of the assessment and its determination, and some opportunity for public comment, is called for in view of this.

NRC will be consulting with the State of Texas in completing its assessment and determination. NRC and the State are working out an arrangement for this consultation.

4. NRC stated there was, pursuant to 10 CFR Part 170, a possibility that a licensing fee be charged of Anaconda for making the determination.
5. Anaconda presented at the meeting an assessment of the subject issue; Anaconda stated that the assessment essentially contained the information promised in the "Work Scope" forwarded to NRC by the State in a letter dated December 12, 1979. Anaconda briefly reviewed for NRC and the State the major points included in their assessment. Two copies of the assessment report were provided to NRC. NRC stated that its schedules for making a determination are subject to the report containing the information stated by Anaconda as being provided in the Anaconda "Work Scope." This would include a description of the methods used to establish the parameters which were to be provided under Section 2.1.7.1 of the "Work Scope."

Information regarding mining operations have been described in a report submitted by Anaconda in their mining application to the Texas Rail Road Commission. Anaconda supplied two copies of this report to the NRC following the meeting.

6. NRC made the following technical points and identified the following information needs, in response to the limited presentation by Anaconda:

Anaconda should consider options for dewatering of tailings other than by belt filtering to achieve the tailings moisture levels proposed (approximately 25%)

by weight). The assessment will be done assuming tailings will be dewatered to this degree or the slurry solution be subjected to dissolved solids removal so that contaminated water cannot migrate out of the pit via ore zone sands.

Information available on local wells should be provided and should contain, for example, the following:

- Location.
- Depth, depth to and elevation of static groundwater levels in wells.
- Water quality.

Conceptual alternatives to disposal in the pit should be evaluated; i.e., those alternatives Anaconda states they would have to pursue if the land ownership dispensation is not given. This should include disposal below grade at a location where Anaconda could obtain control of land.

Results of permeability tests recently run by Anaconda on the material beneath the ore zone should be provided.

Information concerning the test methods used to gather data on tailings contaminants (raffinate) should be provided.

Information concerning the controls (specifications) which can be placed on replacement of fill over the tailings to avoid recharge of the tailings from surface runoff flow should be provided. The degree of compaction and permeabilities which will be obtained for the tailings cover should be evaluated.

Information should be provided to substantiate the Anaconda statement that percolation of rainfall does not penetrate more than a few feet below the surface at the site.

7. NRC described its schedule for completing the assessment following submission of needed technical and legal information required by Anaconda is as follows:

Following the submission by Anaconda, approximately three months will be needed for NRC to complete the assessment report, at which time a notice must be placed in the Federal Register (FR) for public notification.

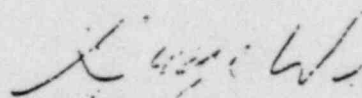
There will be a thirty day waiting period following the FR notice to provide an opportunity for the public to comment on the action, before the determination can become effective.

Therefore, there will be about a four month period between the Anaconda submission and the effective date of the determination. In the early phase of the assessment (i.e., within roughly the first month following the Anaconda submission), NRC will identify and attempt resolution of comments regarding the Anaconda proposal and supporting information.

8. Anaconda stated their current schedule for the mill is as follows:

- . June 1980, Anaconda will complete their feasibility studies on belt filtering and mill.
- . Mid-1981, mill construction begins.
- . Early 1982, mining begins.
- . Early 1983, mill construction complete.

A handwritten version of this meeting summary was completed by the parties involved before adjournment. The summary was read and understood by G. Davis of Anaconda, H. Miller of NRC, and E. Bailey of Texas. Copies of the handwritten meeting summary were distributed to Anaconda, Texas Health Department, and NRC at the meeting.



George Wu
Uranium Recovery Licensing Branch
Division of Waste Management

COMMENTS ON ANACONDA MILL TAILINGS DISPOSAL REPORT

In general, statements about site characteristics of the mine area made in the report appear to be consistent overall with the visual observations made by the NRC staff during the site visit; however, the data upon which these statements are based are not specific enough to support the claims made about the hydrogeological aspects of the site. Generalized summary remarks in the report should be substantiated by more specific information. The following are specific data that are needed for the analysis of the proposed tailings disposal scheme.

-Page 12, para. 2 & 3:

The first three statements are not substantiated by any data in the report. Visual inspections confirm the existence of various types of rocks at various depths in the exploratory pit. However, no grain size distribution data and no mineralogical data are available. Such data should be provided, for example, from boreholes or cores in various locations, before these statements can be substantiated for the overall area. It is the staff's understanding, through conversations between R. Williams (NRC consultant) and E. Reed (hydrogeological contractor of Anaconda), that the relevant data is currently being gathered.

-Figure RRA-2:

The figure indicates core tests have been conducted, but no data on the grain size and mineralogical parameters are given from these tests. Such data should be provided. Similar to the above item, the staff has been informed that such data gathering is currently being done.

-Page 13, bottom para.:

The statements made in this paragraph are based on the data in Table 3-1, which has not been provided. The report indicates the table will be supplied by Anaconda. The data in this table must be given to substantiate the statements in the paragraph.

The Anaconda "Work Scope" presented before the February site visit indicated that various data on groundwater would be given. The parameters that were listed in the Work Scope but not presented in the report include the following: potentiometric contour maps, hydraulic gradients, permeabilities, porosities, storage coefficients, and thicknesses of the hydrostratigraphic units. These data should be provided.

-Page 17:

Discussions about the properties of the Oakville sands on this page are based on data gathered from wells located more than two miles from the proposed mine area. Further, the data from these wells appear to be sparse. More definitive hydrological data about the mine areas should be provided. As discussed in the meeting (see Enclosure 1), information on local wells (e.g., Jug Well) should be provided and should contain, for example, the following:

- Location.
 - Depth, depth to and elevation of static groundwater levels in wells.
 - Water Quality.
- The NRC staff, in making an assessment of the Anaconda tailings disposal scheme, is concerned with any possibility of groundwater contamination by the tailings. The staff considers that any significant occurrences of recharge or infiltration in the area may encounter the tailings and can become a potential for groundwater contamination. Anaconda should, therefore, provide site characterization data to substantiate its claim that infiltration of precipitation cannot penetrate more than a few feet into the ground and that, consequently, there is little potential for infiltration to reach the tailings. More specifically, any infiltration that may be occurring currently at the site should be evaluated. For example, there are several local farm ponds in the vicinity of the proposed mine site; this may provide an opportunity for Anaconda to substantiate the claim that no significant infiltration of precipitation (e.g., surface water) will occur.

In addition, any seepage of moisture or contaminant migration from the tailings may potentially lead to contamination of groundwater. Anaconda should, therefore, provide physical property data (such as grain size distribution, storage coefficient, and conductivity) of the overburden rocks, which will serve as backfill, and the rocks underlying the disposal zone, to allow an assessment of any potential for seepage from the tailings or recharge of water through these rocks. Such an analysis is needed to allow the staff to determine whether or not the Anaconda tailings disposal scheme meets the requirement of this case that no significant seepage or contaminant migration will occur from the tailings impoundment during operation or over the long term.

- Other specific information that should be provided are as follows:
 - The surface drainage contour for the area following reclamation (a surface drainage map) indicating the amounts and directions of drainage should be provided;

- 3 -

- An evaluation of the potential for human use of the groundwaters in the Oakville and the Catahoula formations in the area should be provided;
- A delineation of the methods or techniques used to determine the concentrations of contaminants in the tailings leach filtrate from the pilot plant test should be given (Page 30 of the report).
- A more detailed analysis of the potential for migration of the mobilized constituents of the tailings should be provided (e.g., arsenic, selenium, and radium). Anaconda's claim on the presence of H_2S in the sands and its effects on the immobilization of such constituents should be evaluated with definite data and a more detailed evaluation should be provided (Page 31 of the report).