

40-8027

MAY 17 1973

Kerr-McGee Corporation  
 ATTN: Mr. W. J. Shelley, Director  
 Regulation and Control  
 Kerr-McGee Building  
 Oklahoma City, Oklahoma 73102

Gentlemen:

Amendment No. 2 to Source Material License No. SUB-1010, issued May 3, 1973, authorized certain specified methods of treatment of raffinate liquid waste generated at your Sequoyah UF<sub>6</sub> Plant. Our letter transmitting this amendment noted that the treatment methods authorized were subject to further evaluation in connection with our environmental review and preparation of the environmental statement for the Sequoyah UF<sub>6</sub> Plant. Of particular interest at this time, as it relates to possible alternatives for interim disposition of the raffinate, is the use of the submerged combustion burner for limiting the rate of accumulation of raffinate solution in the retention ponds.

Appendix D of 10 CFR 50 requires in the content of Environmental Reports identification and discussion of alternatives to a proposed action. The regulation further states that the discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring appropriate alternatives, including a cost-benefit analysis which considers and balances the environmental effects and the alternatives available for reducing or avoiding adverse environmental impact. The Report should include alternatives which provide levels of environmental protection above the action proposed when, although not necessarily economically attractive, they are practicable on technological grounds. Accordingly, in keeping with these requirements, please supplement your Environmental Report with respect to the disposition of raffinate giving specific consideration at least to the following:

1. You have indicated that the storage of the raffinate in the retention ponds is an interim measure pending development of a permanent method of disposal. You have also indicated that construction of additional retention ponds may be necessary. We have discussed with your representatives our concern with seepage with the present pond design. The potential for uncontrolled seepage over the long-term would be minimized by constructing new ponds utilizing a long-lived, impervious, synthetic lining material combined with an underbed drainage seepage monitoring system similar to that described in "Chemical Engineering", pp. 67-70, February 5, 1973.

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JERothfleisch - Correspondence

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2. Installation of lined ponds as described above along with one or more submerged combustion evaporators to partially dewater the raffinate thereby increasing the effective pond capacity. (The discussion and analysis of this alternative must consider the impact of fuel consumption by the evaporators.)
3. Construction of a lined pond described above along with use of the evaporator approved by Amendment No. 2 to License No. SUB-1010. The system would be operated in a manner directed toward emptying the existing ponds by feeding raffinate from these ponds to the evaporator and discharging the slightly concentrated evaporator product to the new lined ponds. With sufficient evaporation capacity coupled with the projected decreased raffinate production rate for the next few years, it may be feasible to empty the existing retention ponds and eliminate any environmental impact from seepage.

In addition to supplementing your Environmental Report with a discussion and analysis of at least the above alternatives for interim disposition of the raffinate, please update and submit discussions and cost-benefit analyses for long-term or permanent methods of disposal that have been or are under consideration. (e.g., material in Exhibit E of your May 10, 1972 submittal; Item 37 in your Environmental Report Supplemental #2 of December 1972, and the information in Appendix A of your letter dated April 9, 1973).

Our efforts on preparation of the draft environmental statement for the Sequoyah Plant are proceeding on a priority basis. Accordingly, please establish a similar high priority for submitting the requested information. Mr. Rothfleisch of my staff, who is the Project Manager for this case, will contact you after you have received this letter to determine the date at which we can expect your response.

Sincerely,

L. C. Rouse, Chief  
Fuel Fabrication and Reprocessing  
Branch  
Directorate of Licensing

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MAR 26 1973

Karr-McGee Corporation  
ATTN: Mr. W. J. Shelley  
Director Regulation  
and Control  
Karr-McGee Building  
Oklahoma City, Oklahoma 73102

Dear Mr. Shelley:

I wish to thank you and the other members of the Karr-McGee staff for the courtesy and cooperation extended to Mr. Rothfleisch and me during our visit to the Sequoyah UP<sub>6</sub> Plant on March 21, and 22, 1973. I am confident that the information obtained from our plant inspection and discussions should help considerably in our preparation of the Draft Environmental Statement for this facility.

Based on these discussions, I understand that the following additional items will be furnished at the earliest opportunity to further expedite the issuance of this document:

- (1) A proposal covering the short-term treatment as well as the planned ultimate solution to the solvent extraction raffinate disposal problem.
- (2) Ground level concentrations of radioactive and chemical pollutants along Oklahoma Highway 10 along with annual average significant organ doses to individuals and total doses (man-rem/year) to the transient population using this highway.
- (3) Copies of the data that have been furnished to the U.S. Corps of Engineers and the Environmental Protection Agency on liquid effluents being discharged from the process.
- (4) A complete process flow chart with particular emphasis on all gaseous, liquid and solid effluent streams along with one or more tables keyed to the flow chart identifying the effluent and indicating the source, total flow rate, discharge rate of each constituent, and destination of each stream. Additional information such as the

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height, temperature, and velocity of each gaseous discharge including those from building roof vents should be provided. Wherever possible, average rates at the plant designed throughput of 5000 tons per year of uranium should be used with the data source indicated (calculated, estimated, or measured) and explanations given when ranges rather than specific values are presented.

Mr. Rothfleisch plans to contact the plant staff by telephone to clear up a few minor points that were not resolved in our discussions.

Thank you once again for your assistance.

Sincerely,  
ORIGINAL SIGNED BY  
JAMES C. MALARO

James C. Malaro, Chief  
Materials Branch  
Directorate of Licensing

cc: Burnell Brown  
Facility Manager

bcc: JCMalero, L:MB  
JERothfleisch, L:MB  
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