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FCUP:MLH
40-8027
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Kerr-McGee Corporation
ATTN: Dr. J. C. Stauter, Director
Nuclear Licensing and Regulation
Kerr-McGee Center
Oklahoma City, OK 93125

Gentlemen:

The initial review of your environmental information dated April 22, 1985, submitted in support of your license amendment application dated January 24, 1985, has been completed. To enable us to continue our review, additional information is required. Enclosed is a list of environmental questions regarding Sequoyah Fuel activities.

Written responses to the enclosed questions are necessary to complete our environmental review. The environmental review schedule calls for the receipt of eight (8) copies of your response by June 25, 1985. Please call me at (301) 427-4510 if there are any problems in meeting this schedule or if I can be of assistance.

Sincerely,

Original Signed By:
W. T. Crow

W. T. Crow, Acting Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle and
Material Safety, NMSS

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Additional Environmental Questions

UF₆ to UF₄ Conversion Operation (Proposed Action)

1. Please provide an estimate of the residual Tc-99 (if any) per ton of depleted UF₆. If this information is available from DOE, please provide an estimate of the Tc-99 material balance in air effluent, recycled liquid HF, and eventually to the liquid wastes generated onsite.
2. Besides gross-alpha analysis in stack samples, will Tc-99 which is a potential contaminant of the depleted UF₆ be also analyzed on composited air samples, and also in the liquid wastes streams generated onsite?
3. Please confirm that the UF₆ cylinders are stored outside or if not, please describe in detail the safety procedures and design features to minimize the potential of a fire in the UF₆ storage area, and provide an environmental impact assessment for a major accidental fire occurrence in the UF₆ storage area.
4. Please provide a step-by-step calculation with justifications that the radiological air effluents (two streams) released from the proposed facility is about 5 percent (or 0.0042 Ci/yr) of the existing facility effluent average and the total fluoride is less than 3 percent of the existing facility effluent. Does the 5 percent represent only the operation of reactor 1, or reactors 1 and 2, or does it include future expansion?
5. What are the major uranium compounds and their solubility classification released from the air effluents? Please provide estimates of their composition in percent from the total release from the UF₆ to UF₄ operation.
6. How much cooling water is used per month? Will it be discharged through outfall 001?
7. Document that there will be no liquid waste generated.
8. Please provide more information on the steam chests. How will a UF₆ leak be detected? What are the plans for mitigating the environmental impacts if a release of UF₆ is detected? Is the steamflow turned off and water sprays turned on automatically or manually? Why does the vaporization process occur outside? How large is the holding basin to be used in case of a UF₆ leak in the steam chest? Will the water be sampled before being pumped to the plant water discharge?
9. What tests will be run for the anhydrous HF storage tanks and what are the concerns associated with these tests? Discuss the method of liquid containment and prevention of environmental impacts in case of tank leakage.

10. What is the planned throughput per year? What are the plans for future expansion (5 years)? If planned, how will expansion effect the effluent streams?

Cummulative Impact from Existing Operation

1. Solubility tests on uranium compounds collected in air filters in the second and third quarters of 1983 and third quarter of 1984 show the fraction of Y (insoluble) compound are zero. Since the operation processes do not change, please explain the major differences from the past data and provide all the solubility test curves from 1980 to 1984.

What uranium compounds generated from your operation are classified as W compounds? (The large percent of W compounds from your analysis appears to be inconsistent with your past estimation of uranium compounds released from stack.)

2. Please explain the relation of the wells identified as FTP series and FTP-A series. Please provide supplemental data (if any) on those series of wells and their locations in a map.

Please explain the high concentrations of uranium and NO_3 found in FTP-2A, and where is the source of contamination?

3. Please provide monitoring well data for the fertilizer application program at the Rabbit Hill area. What are the uses of those residential water wells identified in Figures 1 and 2 of your submittal dated April 30, 1985.
4. From the particle size data submitted, please derive the activity median aerodynamic diameter (AMAD) of the air particulates. Please provide the curves for the derivation of the AMAD.
5. In reference to your letter dated September 14, 1983, on sediment sampling and analysis along the effluent stream, please provide a detailed map showing the sampling locations along the effluent stream and individual analysis results. Please also provide an estimate on the quantity of soils along the stream that are contaminated exceeding the concentration limit in NRC's Branch Technical Position Option 1 level.

Describe what steps will be taken to minimize the further spreading of contamination from the continued discharge of liquid wastes from the plant site to the Illinois River.