

SEP 7 1962

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UNION CARBIDE NUCLEAR CORPORATION, TUXEDO PARK, NEW YORK
DOCKETS 40-6857 AND 40-687

L&R:RLL

The following information is necessary to continue our evaluation of the subject application as it pertains to the possession and use of source and special nuclear material.

1. A more detailed description of the proposed uses of the source and special nuclear materials including a description of the facilities in which these materials will be processed and the associated ventilation and filtration systems. For example, on page 11 of the Hazards Report, mention is made of the use of specifically designed equipment for handling alpha emitting radionuclides but it is not further described.
2. More detailed description of the hoods in the Radiochemistry Laboratory including the following:
 - a. Minimum face velocity maintained through hoods.
 - b. Maximum amount of plutonium or U-233 to be used in the hoods.
3. Will there be any work done on radioactive material in the Maintenance Shop. If so, please describe.
4. More detailed description of the wipe test procedures including the method of analyzing. Do these wipe tests extend to the Radiochemistry Laboratory and unrestricted areas.
5. Description of your method for monitoring personnel for alpha contamination including type equipment.
6. Description of the method of determining the concentrations of alpha radioactivity within the gaseous effluent from the source and special nuclear material processing facilities including type equipment, and location.

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7. Description of method for determining the personnel exposure to airborne radioactivity in the Rad Chem Lab including type equipment, frequency and location of such surveys.
8. More detailed description of the cell entry procedures including the following information:
 - a. Are air concentrations determined prior to cell entry.
 - b. Are there provisions for in-line air supply and masks for emergency entrance to cells.
9. More detailed description of emergency evacuation procedures including the following:
 - a. Detailed plans for evacuation of all personnel and schedule for testing such emergency procedures.
 - b. Emergency notification procedures for key personnel in the event of incident during off-duty hours.
10. More detailed description of the manner in which the spent fuel elements are stored during periods when not in use in the cells including analysis of the heat dissipation and shielding during storage.
11. More detailed description of the operations to be conducted in Cell 5 including clarification of the statement regarding reprocessing of spent reactor fuel.
12. On page 8 mention is made of high level waste resulting from research and development with nuclear fuel elements but such operations are not described elsewhere, please clarify.
13. Regarding spent fuel elements please clarify statements made on page 28 item 6 and page A-10 item T regarding maximum amount of special nuclear material to be contained in a cell at any one time.
14. What provisions have been made to prevent the back flow of contaminated water into the canal through the cover hatch in Cell 1.

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15. Is there a possibility of contamination flowing along the trough provided for the cell door wheel rails. If so, how prevented.
16. What is the maximum range of the radiation monitors within the cells.
17. Please describe the air flow patterns within the cells, i.e., location of inlet and exhaust ducts within the cells.
18. In the event that processing of highly radioactive materials is done in lab hoods, and additional shielding is required, what floor loading will these hoods withstand.

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