

JUL 16 1985

DOCKET NO.: 70-1257

LICENSEE: Exxon Nuclear Company, Inc. (ENC)
Richland, Washington

SUBJECT: SAFETY EVALUATION REPORT, AMENDMENT APPLICATION DATED
MARCH 20, 1985, RE WASTE SOLUTION URANIUM RECOVERY FACILITY

Background

ENC has operated a demonstration facility for the recovery of uranium from waste liquids in the storage lagoons. In the subject amendment application, ENC proposes to expand the demonstration unit by the addition of a second identical process line and an office/change room facility.

An environmental assessment has been prepared and a Finding of No Significant Impact has been published in the Federal Register.

Discussion

ENC has demonstrated the process technology in a demonstration unit. The current construction will double the size of the demo unit. The uranium from solution in the storage lagoon will be precipitated in a large tank in the facility. The supernate will be decanted to another lagoon for eventual disposal. The crystalline precipitate will be stored until purified in ENC's solvent extraction process.

The current ENC radiation protection program will be extended to the new process line. The uranium in the waste solutions presents no unusual hazards or risks to workers or the public.

Nuclear criticality safety will be ensured by safe batch control. ENC has established administrative controls and demonstrated an organizational capability to use these controls for safe operation. While batch control is not the preferred method of control, it is acceptable to the NRC staff.

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Conclusion/Recommendation

The staff finds that the proposed operation of the facility, an expanded demonstration unit, will have no adverse effect and present no undue risk to public health and safety. Approval of the application is recommended. The Project Inspector has no objection to this action.

Original Signed by

G. H. Bidinger
Uranium Process Licensing Section
Uranium Fuel Licensing Branch
Division of Fuel Cycle and
Material Safety, NMSS

Approved by: Original signed by:
W. T. Crow
W. T. Crow, Section Leader

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