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DOCKET NO: 70-1257
APPLICANT: Exxon Nuclear Company, Inc. (ENC)
FACILITY: Richland, Washington
SUBJECT: SAFETY EVALUATION REPORT, APPLICATION DATED
OCTOBER 10, 1985, RE CONSTRUCTION AND OPERATION
OF INCINERATOR

Background

ENC intends to modify the Specialty Fuels Building (SFB) so as to permit the incineration of uranium contaminated combustibles. The subject application requests authorization to construct and operate the incinerator (which will be inside the SFB) and support facilities (which will be outside the SFB).

Discussion

The incinerator will be installed in Room 173 of the SFB. Room 173 is currently licensed for the storage of contaminated equipment which had been used to process mixed oxide (oxides of plutonium and uranium) fuel. ENC has initiated a plutonium decontamination program for the room so that, with respect to plutonium, it can be released for unrestricted use. When this has been done, ENC will request that the license be amended to authorize incineration of uranium-contaminated combustibles. Construction inside the room will not commence until the NRC has conducted a confirmatory survey, following the ENC decontamination effort.

The supporting services for the incinerator will be constructed outside of the SFB adjacent to Room 173. These services include an air lock-type room for moving combustibles into, and ash out of, the incinerator room. Other support systems include an exhaust stack, a boiler and fuel tanks, a cooling tower, storage tanks, and a drum storage pad.

Construction activities should have no adverse effects on the environment. The area outside of the SFB is already committed to industrial activities. No virgin land will be affected by this activity.

An operational safety demonstration will be required from ENC prior to operation of the facility. In the demonstration, ENC will be required to demonstrate the adequacy of technical and administrative controls for nuclear criticality safety and radiological safety. By reducing the plutonium contamination to or below the levels specified in the license, the radiological safety program will be based on ENC's existing radiological safety program for uranium.

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An environmental assessment of the effluent releases will be required. Effluent limits and controls established in the license will be applicable to the incinerator. Incineration of the material in about 13,000 drums which are stored outdoors will reduce the potential for an inadvertent environmental release of the material.

Conclusion/Findings

The staff concludes that construction of the facilities will have no adverse effect on the environment. Operation of the incinerator and support facilities is not expected to have a significant environmental impact. An environmental assessment will be made, however, before operation is authorized.

The staff has no objection to construction of the outdoor facilities. Upon completion of the plutonium decontamination effort, the staff has no objection to erection of the indoor facilities. In accordance with 10 CFR 51.22(c)(11), no Environmental Impact Statement or Environmental Assessment is needed at this time. Pending review of the license amendment application, operation of the facility is not authorized.

Original signed by

George H. Bidinger

G. H. Bidinger

Uranium Process Licensing Section

Uranium Fuel Licensing Branch

Division of Fuel Cycle and

Material Safety, NMSS

Original Signed By:
M. Katalach

Approved by:

W. T. Crow, Section Leader

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