

December 14, 2001

Mr. Oliver D. Kingsley, President
and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: APPROVAL OF 10 CFR 20.2002 REQUEST TO DISPOSE OF DREDGED
MATERIAL - OYSTER CREEK NUCLEAR GENERATING STATION
(TAC NO. MB1088)

Dear Mr. Kingsley:

By letter dated December 29, 2000, as supplemented on August 9 and September 25, 2001, AmerGen Energy Company, LLC (AmerGen) submitted a letter to the U.S. Nuclear Regulatory Commission (NRC) requesting approval to dispose of previously-dredged material pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 20.2002.

AmerGen submitted a request for approval of disposal of about 180,000 cubic yards of previously-dredged material which contains licensed radioactive material onto the Finninger Farm property immediately to the east of the Oyster Creek Nuclear Generating Station (Oyster Creek). This property is owned by the licensee but is not considered part of the Oyster Creek Plant site as defined in the Updated Final Safety Analysis Report. The material was generated as a result of dredging portions of the Oyster Creek and Forked River in 1978, 1984, and 1997. The licensee's dredging of these waterways was performed in accordance with the final environmental impact statement for Oyster Creek and the New Jersey Board of Public Utilities to remove sediment from the creek and river bottom. The disposal method consisted of pumping the dredge material to a dewatering basin allowing the material to dry.

AmerGen performed a radiological evaluation of the dredged material located in a 17.5 acre area on the 600 acre Finninger Farm property. The evaluation included data from the radiological analyses of the sediment performed prior to the last dredging in 1997. These samples were analyzed for gamma emitting radionuclides in accordance with the licensee's Radiological Environmental Monitoring Program. The maximum concentrations of radionuclides in the sediment attributable to effluents from Oyster Creek were 0.08 picocuries per gram for Cobalt-60 and 0.270 picocuries per gram for Cesium-137. Sampling and analyses performed on the 1978 and 1984 dredged material showed the radionuclide activity to be less than that of the 1997 material. The radionuclide concentrations in the dredged material are small fractions of the NRC's default Derived Concentration Guidelines (DCGLs) of 3.8 picocuries per gram for Cobalt-60 and 11 picocuries per gram for Cesium-137. The default DCGLs for each isotope correspond to an all pathways exposure to a resident farmer of 25 millirems (mrem) per year. The dose impact from the existing dredged material will not approach the dose limits in 10 CFR 20.1301, "Dose limits for individual members of the public," or 20.1402, "Radiological criteria for unrestricted use."

AmerGen calculated the potential annual dose to the average member of the critical group (i.e., a resident farmer) from the probable exposure pathways (i.e., direct exposure, inhalation, consumption of crops and water) based on the volume of disposed material, the radionuclide composition, and the activity. The assessment is conservative because: (1) no background activity has been subtracted, (2) radionuclide concentration averages are based only on the positive sample results, and (3) no adjustment for radioactive decay to the present date was included. The resultant calculated annual dose to a member of the public is less than one (1) mrem.

The NRC staff finds the licensee's application to dispose of about 180,000 cubic yards of dredged sediment will result in a potential annual dose to a member of the public of less than one (1) mrem. This calculated dose is well within the 10 CFR Part 20 annual dose limit of one hundred (100) mrem and less than the decommissioning criteria for unrestricted use of twenty-five (25) mrem in a year. The staff finds the licensee's application, pursuant to 10 CFR 20.2002, will not have an adverse impact on the public and is acceptable.

Sincerely,

/RA/

John A. Zwolinski, Director
Division of Licensing Management
Office of Nuclear Reactor Regulation

Docket No. 50-219

cc: See next page

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John A. Zwolinski, Director
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See Previous Concurrence*

SE input dated 10/30/01 was provided on 11/7/01
and no major changes were made

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OFFICIAL RECORD COPY

Oyster Creek Nuclear Generating Station

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