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 CUTTER,A.B. Carolina Power & Light Co.
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 VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Requests amend to 841108 EIA,allowing disposal of slightly
 contaminated soil in ash pond.Expeditious approval
 requested.

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Carolina Power & Light Company
MAR 06 1985

SERIAL: NLS-85-070

Director of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
DISPOSAL OF SLIGHTLY CONTAMINATED SOIL - REQUEST FOR
AMENDMENT TO ENVIRONMENTAL IMPACT APPRAISAL

Dear Mr Varga:

SUMMARY

Your letter dated November 8, 1984 approved Carolina Power & Light Company's (CP&L) request to transfer slightly contaminated sediment from two settling ponds to the ash pond at our H. B. Robinson Steam Electric Plant (HBR). Recent sampling indicates that excavation for a planned radwaste facility will generate a quantity of very slightly contaminated soil. In addition, there is in storage at HBR a quantity of previously excavated, very slightly contaminated soil. The Company requests an amendment to the November 8, 1984 Environmental Impact Appraisal to allow disposal of this material in the ash pond.

DISCUSSION

A. Soil Stored in Containers

Within the last several years, 38.3 cubic meters of slightly contaminated soil has been accumulated and stored near the Reactor Auxiliary Building within the protected area of the plant. The soil is contained in one hundred forty 55-gallon drums and three 1.1 x 1.1 x 2.2 meter (2.7 cubic meters) dumpsters. Most of the stored soil is damp. The contaminated soil originated from a variety of sources but principally from recent excavation activity associated with major on-site construction and maintenance projects. The source of contamination is occasional primary-to-secondary leaks in Unit 2. The soil contains total anthropogenic radioactivity concentrations of between 1.43 E-6 to 3.91 E-6 $\mu\text{Ci/g}$ dry and 6.66 E-8 to 9.17 E-5 $\mu\text{Ci/g}$ wet.

The soil was stored for over six months and consolidated into one hundred forty 55-gallon drums and three 2.7 cubic meters dumpsters. Each drum was sampled once and each dumpster was sampled twice. All samples were submitted for gamma spectrometric analysis, and the results are summarized below:

<u>Radionuclide</u>	<u>Ave. Activity</u> <u>($\mu\text{Ci/g}$ wet)</u>
Cobalt 60	8.77 E-6
Cesium 137	4.80 E-7

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This represents 501 μCi of Co-60 and 28 μCi of Cs-137 in 38.3 cubic meters.

The alternative to ash pond disposal is disposal at the licensed shallow land burial site at Barnwell, South Carolina. This would entail extensive repackaging and an inappropriate consumption of licensed burial ground space.

B. Soil to be Excavated for Radwaste Facility

The quantity of soils to be excavated is estimated to be 994 cubic meters. Fifty-seven samples were taken and analyzed. This indicated the following results:

<u>Radionuclide</u>	<u>Ave. Activity ($\mu\text{Ci/g wet}$)</u>	<u>No. Greater than MDA*</u>	<u>Max. Conc. ($\mu\text{Ci/g wet}$)</u>
Cobalt 60	2.83 E-7	17/57	5.33 E-6
Cesium 137	8.29 E-8	16/57	5.90 E-7
Cesium 134	1.70 E-7	4/57	4.24 E-7

*For soils with less than MDA, an average MDA value was used for estimating "Average Activity."

This yields a total activity of:

Cobalt 60	421 μCi
Cesium 137	124 μCi
Cesium 134	<u>253 μCi</u>

Total 798 μCi in 994 cubic meters.

The source of contamination is thought to be occasional primary-to-secondary leaks or possible spillage from prior use of the site for radwaste packaging.

C. Disposal of Soil

Disposal of the soil in both cases would utilize standard construction equipment; i.e., backhoe, dump trucks, or front end loaders, as appropriate. In evaluating the potential airborne hazard to workers handling the soil, a dusty atmosphere of respirable particles of $63 \mu\text{g}/\text{m}^3$ (from South Carolina total suspended particulate data) was assumed. This would yield airborne concentrations due to soil excavation and disposal as follows:

<u>Isotope</u>	<u>Ave. Activity of Soil ($\mu\text{Ci/g wet}$)</u>	<u>Est. Air Activity ($\mu\text{Ci/ml}$)</u>	<u>MPC ($\mu\text{Ci/ml}$)</u>
Co-60	2.83 E-7	1.78 E-17	3 E-10
Cs-137	8.29 E-8	5.22 E-18	5 E-10
Cs-134	1.70 E-7	1.07 E-17	4 E-10

Mr. Steven A. Varga
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The estimated air activity in this evaluation is several orders of magnitude lower than the MPC, therefore, soil handling activities would constitute an insignificant hazard. The soil stored in containers is damp and would generate a minimal airborne hazard upon disposal. In an unrealistic worst case evaluation of the stored soil hazard, the results would be similar because of similar average activity.

SUMMARY

Transfer of the two sets of soil will involve adding 1032.3 cubic meters of soil containing 922 μ Ci of Co-60, 152 μ Ci of Cs-137 and 253 μ Ci of Cs-134 for a total activity of 1.33 mCi.

Disposal of this material would be appropriate under the 10 CFR 20.302 permission granted by your November 8, 1984 letter. The safety analysis of ash pond operations transmitted in our March 9, 1984 submittal is applicable to the current amendment request. The total amount of soils to be disposed is approximately 1032.3 cubic meters compared to a previously authorized volume of 60,000 cubic meters of sediment. The contamination, both in concentration and total amount, is minimal: the present request is to dispose of 1.33 millicuries whereas the total activity projected to accumulate over the life of the ash pond is about 1700 millicuries. Disposal of this soil would not result in exceeding the five provisions stipulated in your November 8, 1984 approval; our letter dated December 7, 1984 formally committed CP&L to incorporate these provisions into our procedures.

Your expeditious approval is requested.

Questions regarding this matter may be referred to Mr. Jan Kozyra at (919) 836-7924.

Yours very truly,



A. B. Cutter - Vice President
Nuclear Engineering & Licensing

ABC/JSK/ccc (1212JSK)

cc: Mr. E. Branagan (NRC)
Dr. J. Nelson Grace (NRC-RII)
Mr. G. Requa (NRC)
Mr. H. Krug (NRC Resident Inspector - RNP)