Yankee Atomic Electric Company  
19 Midstate Drive, Suite 200  
Auburn, MA 01501  
Attention: James A. Kay, Regulatory Affairs Manager

RE: Rowe-DSWM-04-253-008  
DEP Solid Waste Permitting  
SE Construction Fill Area  
CAAA Report – Permit Approval  
Yankee Nuclear Power Station  
49 Yankee Road  
BWPSW24  
Transmittal #W024473

Dear Mr. Kay:

On December 19, 2003, the Solid Waste section of the Massachusetts Department of Environmental Protection (the Department) received the Corrective Action Alternatives Analysis (CAAA, or Feasibility Study) report and permit application for the Southeast Construction Fill Area (the SCFA) of the Yankee Nuclear Power Station (YNPS) in Rowe, MA. The report was prepared on behalf of Yankee Atomic Electric Company (Yankee) by its consultant, Environmental Resources Management (ERM) of Boston, MA. The Department had previously issued to Yankee on April 9, 2002 the permit approval of the Final Comprehensive Site Assessment (Final CSA) report for the SCFA.

The Yankee plant is in the process of decommissioning, in accordance with Nuclear Regulatory Commission (NRC) regulations 10 CFR Part 50. As a part of decommissioning activities, the SCFA is being assessed and closed in accordance with the Department’s Solid Waste regulations at 310 CMR 19.000. The CAAA plans for the SCFA have been developed as part of the overall decommissioning strategy of the YNPS. All radiological issues associated with decommissioning fall under the authority of the Massachusetts Department of Public Health’s Radiation Control Program (the MA DPH), the NRC, and the United States Environmental Protection Agency (the EPA), as applicable. The SCFA is a fill area of approximately 1.2 acres in size, located southeast of the Yankee facility (within Yankee property), where debris from construction activities at the site was historically placed. It is the Department’s understanding, according to Yankee and the MA DPH, that radiological monitoring of the SCFA, the stream and the surrounding area has shown results that are consistent with natural background levels (i.e., there has been no evidence there of any facility-related radionuclides or radioactivity).

ERM identified five corrective action alternatives for remediation of the SCFA. and their estimated costs, as
ERM identified five corrective action alternatives for remediation of the SCFA, and their estimated costs, as follows:

2. Alternative 2 – Standard impermeable landfill cap, in accordance with the existing regulations at 310 CMR 19.112. Cost, including 30 years of post-closure maintenance and monitoring - $700,000.
3. Alternative 3 – An alternative landfill cap, utilizing an impermeable geomembrane over the entire landfill, deleting the gas-vent sand layer beneath the geomembrane and keeping the landfill sideslopes at the existing grade of steeper than 3:1 (horizontal/vertical). Cost, including 30 years of post-closure maintenance and monitoring - $620,000.
4. Alternative 4 – An alternative landfill cap, utilizing on-site low-permeability soils as the low permeability layer, deleting the gas-vent sand layer beneath the geomembrane and keeping the landfill sideslopes at the existing grade of steeper than 3:1 (horizontal/vertical). Cost, including 30 years of post-closure maintenance and monitoring - $560,000.
5. Alternative 5 – Excavation of the entire SCFA, with off-site disposal of all solid wastes, and re-use of soils on-site, under a Beneficial Use Determination (as may be required). Cost, including 5 years of post-closure monitoring - $978,000.

ERM recommends the completion of Alternative 5 – excavation of the SCFA, off-site disposal of all solid wastes, and re-use of soils on-site. The soil from the excavation of the SCFA is proposed to be reused on-site under a Beneficial Use Determination (BUD) permit for filling of the plant foundation holes and grading of the plant area.

ERM states the following reasons for the recommendation of Alternative 5:
- The anticipated volume of solid wastes within the SCFA is low;
- Soil from the SCFA should be able to be used for filling and grading of the plant site;
- Long-term environmental monitoring and maintenance can be greatly reduced by excavation and removal; and
- YAEC wishes to reach a goal of unrestricted future use for the SCFA area.

DEPARTMENT DETERMINATIONS

Personnel of the Department have reviewed the CAAA report and permit application for the SCFA in accordance with MGL c. 111 s. 150A, MGL c. 30A, 310 CMR 19.000, and the Department's publication Landfill Technical Guidance Manual (the LAC), revised in May, 1997. The Department has determined that the CAAA report and permit application is approved in accordance with MGL c. 111, s. 150A and MGL c. 30A, subject to the conditions outlined below.

1. The Department approves the recommendation for the completion of Alternative 5 – excavation of the SCFA, off-site disposal of all solid wastes, and re-use of soils on-site, as long as the conditions of this approval are met.

2. A Major BUD permit must be obtained from the Department for the proposed reuse of SCFA soils on-site. The Department will incorporate the appropriate requirements of its “Draft Interim Guidance Document for Beneficial Use Determination Regulations, 310 CMR 19.060”, dated March 18, 2004 (the Draft BUD Guidance), into any BUD permit(s) issued for the site. The BUD permit application(s) shall be submitted to the Department no later than the submittal date of the Corrective Action Design (CAD) Plan and permit application outlined in Item 3 below.
If you should have any questions or comments regarding this correspondence please contact Larry Hanson of this office, at #413-755-2287.

Sincerely,

[Signature]

Daniel Hall
Section Chief
Solid Waste Management

DH/lg
Yankcaaa

cc:    Kenneth Dow – Duke Engineering, Inc.
      John McTigue, LSP – ERM, Inc.
      Rowe Board of Health
      Rowe Conservation Commission
      Franklin Regional Council of Governments – Planning Dept.
      Steven Larson, MA DPH - Radiation Control Program
      John Hickman - Nuclear Regulatory Commission
      Robert McCollum – DEP/WERO/Wetlands
      David Howland – DEP/WERO
      Marvin Rosenstein – USEPA, Region I
3. By July 30, 2004, YAEC shall submit to the Department a Corrective Action Design (CAD) Plan and permit application inclusive of all design plans, specifications, and protocols necessary to implement Corrective Action Alternative 5 (excavation of the SCFA). The CAD Plan shall be prepared in accordance with the regulations at 310 CMR 19.151, and the LAC Manual, Chapters 1, 2, 3, 6, & 7, and shall specifically include the following:

A. A site-specific Health & Safety (H&S) Plan for all remedial work at the SCFA. The H&S plan shall contain all necessary measures to monitor and protect worker safety for physical hazards, and to protect public health and worker health and safety for both radiological and non-radiological parameters.

B. A proposed sampling plan for soils from the excavation of the SCFA. The sampling plan shall meet the appropriate sampling requirements of the Draft BUD Guidance for all proposed on-site reuses of the excavated soil. At a minimum, one soil sample shall be obtained for every 1,000 cubic yards of soil excavated from the SCFA and analyzed for Volatile Organic compounds (VOCs) by EPA Method 8260 (including tentatively identified compounds, or TICs), Total RCRA 8 metals, and Extractable Petroleum Hydrocarbons (EPH) by Gas Chromatography – Modified EPA Method 8100. Soil samples from borings or other sampling performed prior to excavation of the SCFA may be incorporated into the sampling plan, and counted towards the minimum frequency of sampling.

C. All soil samples shall be monitored and/or analyzed for radioactivity or radionuclides as specified by the appropriate requirements, guidance or protocol of the NRC and the MADPH.

D. Radiological monitoring shall be performed during all SCFA excavation activities, in accordance with the appropriate requirements, guidance or protocol of the NRC and the MADPH.

E. Specific procedures for the separation of solid wastes (including any contaminated soils to be disposed of off-site) from soils to be re-used on-site, including: the use of criteria from the Draft BUD Guidance document to determine the suitability of soils for reuse; and all criteria and procedures to be used for the disposal of solid wastes or soils off-site.

F. A contingency plan with procedures for dealing with any hazardous wastes or radioactive materials which might potentially be encountered during excavation activities.

G. An erosion and sedimentation control plan for excavation activities in the vicinity of Wheeler Brook.

H. All excavation activities must comply with the Wetlands Regulations of the Department, the requirements of the Rowe Conservation Commission, and any other applicable local, state or federal policies or regulations.

4. Environmental monitoring shall continue to be performed annually during the month of August at the SCFA, with results of monitoring submitted to the Department within 45 days of the date of sampling, as outlined in the Department’s April 9, 2002 Final CSA approval. Upon completion of excavation of the SCFA and as part of the submittal of the Closure Certification Report for the SCFA, YAEC may petition the Department to reduce the post-closure monitoring period from 30 years to 5 years, as proposed.

5. The Department shall be notified at least three days in advance of any fieldwork.

The Department and its agents and employees shall have the right to enter upon the site at all reasonable times, to inspect the landfill and any equipment, structure or land located thereon, take samples, recover materials or discharges, have access to and photocopy records, to perform tests and to otherwise monitor compliance with this Permit and all environmental laws and regulations. This right of entry and inspection shall be in addition to the Department’s access authorities and rights under applicable federal and states laws and regulations, as well as any permits or other agreements between the Permittee and the
Pursuant to 310 CMR 19.037(5), any person aggrieved by the issuance or denial of this permit decision, except as provided for under 310 CMR 19.037(4)(b), may file an appeal for judicial review of said decision in accordance with the provisions of M.G.L. c. 111, s. 150A and c. 30A not later than thirty [30] days following the receipt of the final permit. The standing of a person to file an appeal and the procedures for filing such appeal shall be governed by the provisions of M.G.L. c. 30 A. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the permit by a court of competent jurisdiction, the permit decision shall remain effective or become effective at the conclusion of the 30 day period.

Any aggrieved person intending to appeal the decision to the superior court shall provide notice to the Department of said intention to commence such action. Said Notice of Intention shall include the Department File Number (04-253-008) and shall identify with particularity the issues and reason(s) why it is believed the approval decision was not proper. Such notice shall be provided to the Office of General Counsel of the Department and the Regional Director for the regional office which made the decision. The appropriate addresses to which to send such notices are:

General Counsel  
Department of Environmental Protection  
One Winter Street-Third floor  
Boston, 02108

Regional Director  
Department of Environmental Protection  
436 Dwight Street - Fifth Floor  
Springfield, MA 01103

No allegation shall be made in any judicial appeal of this decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in those regulations, provided that matter may be raised upon a showing that it is material and that it was not reasonably possible with due diligence to have been raised during such procedures or that matter sought to be raised is of critical importance to the public health or environmental impact of the permitted activity.

This approval pertains only to the Solid Waste Management aspects of the proposal and does not negate the responsibilities of the owners or operators to comply with any other local, state or federal laws and regulations now or in the future.

The Department reserves the right to rescind or modify this permit approval or to require additional conditions, should available information indicate such a need.