

YANKEE ATOMIC ELECTRIC COMPANY

Telephone (413) 424-5261



49 Yankee Road, Rowe, Massachusetts 01367

January 31, 2005
BYR-2005-008

Ms. Ellen Babcock
Conservation Commission
Town of Rowe, Massachusetts
P.O. Box 279
Rowe, MA 01367

**Subject: 2004 Annual Monitoring Report
Yankee Nuclear Power Station, Rowe, MA
DEP File #274-25**

Dear Ms. Babcock:

Yankee Atomic Electric Company (YAEC) has prepared this 2004 annual monitoring report to summarize activities in Resource Areas (see 310 CMR 10.04) conducted at the Yankee Nuclear Power Station in Rowe, Massachusetts, as required by Condition 24¹ of the Order of Conditions for File Number 274-25. The work covered in the report includes removal of PCB-impacted sediments from the West Storm Drain Ditch and East Storm Drain Outfall/Sherman Reservoir and removal of the circulation water intake pipe that extended into Sherman Reservoir. This report covers activities from the beginning of the project in October 2004 through the end of December 2004.

This annual report serves as an overview of the activities performed. More detailed information and photographs can be found in the weekly compliance monitoring reports that were submitted to the Conservation Commission in response to Condition 29 of the Order of Conditions beginning on October 26, 2004. Consistent with the weekly compliance report, this annual compliance monitoring report includes the following topics:

- West Storm Drain Ditch Remediation
- East Storm Drain/Sherman Reservoir Remediation
- Sediment Handling
- Intake Pipe Removal

Activities and monitoring associated with each of the above topics are described in the following sections.

During performance of this project, minor modifications and clarifications were communicated by the Compliance Monitors to the Rowe Conservation Commission and the Massachusetts Department of Environmental Protection (Department) pursuant to General Condition 13 of the

¹ Condition 24 – “The applicant shall submit to the Commission a written annual monitoring report of activities conducted on the site that are subject to this Order on or before January 31st of the following year.”

Order of Conditions. In addition, the Rowe Conservation Commission and the Department made site inspections during performance of the project. A summary of those communications, approvals and site inspections is provided in Table 1.

West Storm Drain Ditch Remediation

Remediation activities were conducted during October and November 2004 to remove PCB-impacted sediments from the West Storm Drain Ditch (WSDD). This work included alteration of an intermittent stream and its associated Bank (310 CMR 10.54) and Bordering Vegetated Wetlands (310 CMR 10.55). Prior to initiating excavation activities, shrubs, trees, and herbaceous vegetation were removed from the work area to facilitate excavation of PCB-impacted sediments. Storm water entering the WSDD was diverted around the work area to allow sediments to dry and to facilitate sediment removal and handling. Temporary check dams constructed with hay bales and stone were also placed within the ditch as measures to avoid erosion and sedimentation. The number and location of the check dams within the ditch varied depending upon the status of the remediation activities being performed at that time. Additional erosion and siltation controls, including a line of hay bales placed perpendicular to the stream channel, were placed on the downstream end of the work area.

Sediments were removed using an excavator along the 500 feet of the ditch between the outfall pipes and a culvert below the access road to the Sherman Dam Powerhouse. Sediments from the upper portion of the ditch (upstream portion of WSDD) were dry enough to be loaded directly into intermodal containers for off-site transportation and disposal. The remaining sediments were transported to the sediment handling and dewatering pad.

In addition to the excavation activities, outfall pipes at the upstream end of the ditch and the culvert pipes on the downstream end of the ditch were cleaned using manual methods.

Confirmatory sampling was performed to determine if the remedial objectives had been achieved. Based on results of the initial confirmatory sampling, additional removal activities were conducted in two locations, which were then resampled to confirm that no further remedial actions were required. A total of approximately 290 cubic yards of sediment was excavated from the WSDD.

Sampling results confirming that no further remedial actions were required were received in early December 2004. Since the remedial activities extended beyond the planting season described in the wetland replication plan, all restoration/replication work, including earthwork and plantings, will be performed in the Spring of 2005. Re-grading and placement of soil at this time is intended to avoid the potential for erosion for the soils and subsequent deposition into the Deerfield River. As described in the Winter Erosion Control and Monitoring Plan - December 2004, submitted to the Conservation Commission and the Department on December 16, 2004, the WSDD was stabilized for the winter by placing sand bags along sections of the bank, placing geotextile fabric over the wetland areas and spreading hay over disturbed areas. In addition, check dams are present within the ditch. During the winter, YAEC will monitor the West Storm Drain Ditch and will implement corrective actions in consultation with the Compliance Monitor, as necessary (see Condition 25 of the Order of Conditions).

East Storm Drain/Sherman Reservoir Remediation

Remediation activities were conducted in November 2004 to remove PCB-impacted sediments from the work area in Sherman Reservoir. Resource areas (310 CMR 10.04) involved with this work included Land Under Water Bodies and Waterways (310 CMR 10.56), Bank (310 CMR 10.54), Bordering Land Subject to Flooding (310 CMR 10.57), and Riverfront Area (310 CMR 10.58). Prior to initiating remediation activities, silt fencing was installed around the work area on the peninsula and a silt curtain was deployed in Sherman Reservoir to enclose the work area (see Condition 26). A small area on the peninsula was excavated to a depth of approximately 12 inches to allow for the creation of a safe, structurally-sound base for the crane. The excavated soils were stockpiled on the peninsula, covered with plastic, and surrounded by hay bales and silt fence (see Condition 28). Approximately 12 inches of clean fill was used to construct the crane pad.

Electrofishing was performed prior to remediation to clear the work area of longnose suckers, a species of special concern, as required by the Massachusetts Natural Heritage and Endangered Species Program. Principally, yellow perch, golden shiners, and fallfish were collected. No longnose suckers were captured.

Sediments were removed from Land Under Water Bodies and Waterways and Bank resource areas by dredging using an environmental bucket. The dredging activities were conducted within 125 feet of the East Storm Drain Outfall. Dredge depths and locations were monitored with a Global Positioning System (GPS) unit installed on the crane and pressure transducers on the environmental bucket. The dredged sediments were deposited by the environmental bucket into a container located on the peninsula. The sediments were allowed to settle out of the water column within the container and the excess water was decanted and pumped into a storage tank on the peninsula for later treatment and discharge. The sediments were then transported by a water-tight dump truck to the sediment handling area. A total of approximately 300 cubic yards of sediment was removed from Sherman Reservoir.

Turbidity monitoring was performed three times per day during the dredging operations. The turbidity levels remained below the action level of 50 NTUs throughout the duration of the project.

In addition to the sediment dredging activities, soil between the outfall pipe and the high water line was manually excavated. Approximately three cubic yards of soil were removed.

Confirmatory sampling was performed to determine if the remedial objectives had been achieved. As of the end of the reporting period, December 2004, it had not yet been determined if additional removal of sediment and/or soil from Land Under Water Bodies and Waterways or Bank resource areas would be required to achieve remedial objectives. YAEC received verbal agreement from the U.S. Environmental Protection Agency (EPA) on 4 January 2005 that additional removal of sediment from Sherman Reservoir would not be required to meet the cleanup objective. Therefore, sediment dredging activities are complete. Based on recent discussions with the EPA, additional remedial activities will be required in the Spring to address the soil between the outfall pipe and the high water line.

Due to the onset of freezing conditions, removal of the crane pad and silt curtain and restoration activities will be performed in the Spring of 2005. Hay was spread over the disturbed areas.

Sediment Handling

A sediment dewatering pad and water treatment system were constructed at the site to manage and dewater the sediments generated during remediation activities. The sediment dewatering pad and sump were constructed by placing HDPE plastic on the ground, covering it with geotextile fabric, and then placing approximately six inches of stone on top. An earthen and hay bale berm was installed around the pad and silt fence was installed on the downhill side of the work area.

Sediments from the WSDD and Sherman Reservoir were transported to the dewatering pad and placed into stockpiles. The stockpiles were covered with polyethylene sheeting when not being actively managed. After the sediment passed the paint filter test, lime was mixed with the sediments to make them suitable for off-site transport, as needed. The sediments were loaded into intermodal containers and transport bags. However, due to the onset of freezing conditions, approximately 100 cubic yards of material (primarily the dewatering pad gravel and plastic) could not be loaded into containers this winter. The stockpile that remains was secured for the winter by covering it with a tarpaulin and anchoring it in place. This material will be loaded into containers in spring 2005 for off-site disposal.

Water generated by dewatering activities was treated on-site (in accordance with NPDES Exclusion #MA 04I-096) by passing the water through a sand filter, bag filter and two carbon vessels. Approximately 18,000 gallons of water from the dewatering pad was treated and discharged to the Deerfield River. The treatment system was temporarily relocated to the peninsula and was used to treat 14,000 gallons of water stored on the peninsula. The discharges occurred in December 2004. Testing was performed to confirm that the PCB concentrations were below the discharge limits established by the National Pollution Discharge Elimination System (NPDES) Exclusion. The system operated within the limits of the exclusion permit.

Intake Pipe Removal

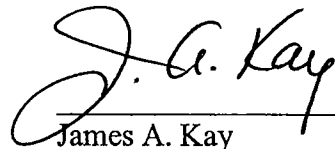
Intake pipe removal activities were initiated in December 2004, involving both Land Under Water Bodies and Waterways and Bank resource areas. The crane used for dredging was moved further west on the peninsula for pipe removal activities. A second crane pad was constructed on the peninsula by leveling the ground surface and laying down oak mats to ensure crane safety and stability, as discussed with the Conservation Commission in November 2004.

Pipe removal activities required divers to cut the pipe into sections and then to attach the pipe sections to either rigging on the crane or flotation bags. The intake pipe sections were lifted out of the water onto the peninsula using the crane. Through the end of December, approximately 57 feet of pipe had been removed, as well as the trash rack. Intake pipe removal and processing continued at the site in January 2005.

We appreciate your continued cooperation and we look forward to discussing this project further in 2005. Should you have questions or require additional information, please contact Mr. Kenneth Dow, Environmental Manager (413) 424-2245.

Sincerely,

YANKEE ATOMIC ELECTRIC COMPANY



James A. Kay
Principal Licensing Engineer

Enclosures: Table 1- Summary of Meetings and Written Communication with the
Conservation Commission and the Department

cc: D. Howland, DEP Western Regional Office
D. Foulis, DEP Western Regional Office