RESPONSE TO DEP COMMENTS
NOTICE OF INTENT
DEP FILE #274-25

YANKEE NUCLEAR POWER STATION
SITE CLOSURE PROJECT
ROWE, MASSACHUSETTS

AUGUST 13, 2004

PREPARED FOR

YANKEE ATOMIC ELECTRIC COMPANY
49 YANKEE ROAD
ROWE, MASSACHUSETTS 01367

PREPARED BY

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310 CMR 10.54(4)(a)2. Please demonstrate that the project will not laterally displace any volume of Sherman Reservoir.

Response: The General Performance Standard cited by DEP requires that the proposed activity not impair "the water carrying capacity of the existing channel within the Bank." The only permanent change to the Bank of Sherman Reservoir will occur where the discharge structure is located. The discharge structure currently extends into the water column (see Integrated Permit Package, Appendix E, Figure P11). The discharge structure will be demolished to below grade and the Bank will be restored with rip-rap and native plantings to match the adjacent grades (see the *Post-Decommissioning Planting Plan and Specifications* provided concurrently with this submittal). The net gain in the Bank associated with removal of the discharge structure is estimated to be less than 20 cubic yards (corresponding to an estimate of the volume of concrete that will be removed). The removal of the intake pipe and the remediation of the sediments are expected to have a negligible impact the water carrying capacity within the Bank of Sherman Reservoir.

1. *310 CMR 10.54(4)(a)4. Either obtain a written opinion from a qualified fisheries biologist or the Massachusetts Division of Fisheries and Wildlife; or replicate and/or enhance any shoreline vegetation or indigenous abiotic structure conducive to protection of fisheries habitat.*

Response: The General Performance Standard cited by DEP relates to Banks and requires that the proposed activity not impair "the capacity of the Bank to provide breeding habitat, escape cover, and food for fisheries." The following response, indicating that the proposed project conforms to the General Performance Standard, was prepared by Mr. Michael Thompson, from Woodlot Alternatives (see attached resume). Mr. Thompson has extensive experience conducting fishery evaluations, including a recent project on the Housatonic River, which was conducted in cooperation with the US Fish & Wildlife Service, the US Environmental Protection Agency, and the Massachusetts Division of Fisheries and Wildlife. Mr. Thompson also took the lead in conducting the natural resource inventory of the project area on behalf of the Yankee Atomic Electric Company (YAEC). Mr. Thompson consulted with the Massachusetts Department of Fisheries and Wildlife regional biologists as part of the overall characterization of the reservoir habitats.

The Bank of Sherman Reservoir is defined by the upper and lower operating limits of USGen New England's FERC-licensed Sherman hydroelectric facility (FERC No 2323-012). The upper limit of the Bank is found at elevation 1,107.66' and the lower limit is at 1,103.66', an approximately 4-foot operating range. Vegetation within the delineated Bank is sparse and the substrate is dominated by silt- and sand-covered cobbles.

USGen operates the Sherman project as a daily peaking project, so water levels fluctuate within the Bank throughout the day, which limits the use of the Bank by fish to the times of the day when water is present. This operating regime precludes the use of the Bank as breeding habitat for fish.

Escape cover for fish generally includes areas of dense vegetation, boulders or rocky areas with crevices, and undercut banks on flowing rivers. The delineated Bank in the project area has none of these features, and as noted above, it is dewatered throughout the day. The Bank, therefore, does not provide escape cover in its current condition.

Given the daily fluctuations in water levels, it is unlikely that the Bank in the project area provides feeding areas for any species of fish. What little value the Bank may have, however, will not be impaired by the proposed removal of contaminated sediments.

The Bank of Sherman Reservoir will be qualitatively monitored by a biologist meeting the requirements of 310 CMR 10.60(1)(b) one year after construction to determine if the functional value of the Bank to fish has been naturally restored as expected. YAEC will provide the results of this monitoring effort in a brief report to the Rowe Conservation Commission.

2. *310 CMR 10.54(4)(a)5. Please submit information demonstrating compliance with this Standard and 310 CMR 10.60. Those portions of Bank (Inland) presently not covered by structures or rip rap may be significant to the protection of wildlife habitat. Please further describe this and provide linear measurements of same.*

   Response: The General Performance Standard cited by DEP, 310 CMR 10.54(4)(a)5, pertains to Banks and requires that the proposed activity not impair "the capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60."

   The project will potentially impact up to 500 linear feet of Bank along each side of the West Storm Drain Ditch during removal of the PCB-impacted sediments and up to 250 feet of the Bank of Sherman Reservoir, exceeding the "10% or 50 feet" threshold described in 310 CMR 10.54(4)(a)(5). 310 CMR 10.60 describes procedures for completing wildlife habitat evaluations in cases where the threshold is exceeded. These evaluations were completed for YAEC by Mr. Michael Thompson, a Certified Wildlife Biologist, who meets the requirements of 310 CMR 10.60(1)(b).

The Bank of the West Storm Drain Ditch is typically a narrow (average 1 foot in width) feature associated with a ditch used to convey stormwater. The Bank is sparsely vegetated and lacks any specific features that would serve important wildlife habitat functions, such as food, shelter, and migratory and breeding areas for wildlife or over-wintering areas for mammals and reptiles (310 CMR 10.60(2)(a)). Presumably, however, small mammals (i.e., shrews, mice, or voles) could use portions of the Bank for a limited portion of their feeding needs. The Bank of the West Storm Drain Ditch could be potentially altered to a slight degree during the removal of contaminated sediments from the ditch. Any alteration, however, will be mitigated through the implementation of the *Wetland Restoration and Replication Plan* (provided concurrently with this submittal). Restoration of the Bank of the West Storm Drain Ditch will comply with the standards identified in 310 CMR 10.60(3). In summary, the Bank of the West Storm Drain Ditch has limited functional value as wildlife habitat. This limited value, however, will be restored following completion of the remediation program (i.e., there will be no loss of habitat in the long-term).

The Bank of the West Storm Drain Ditch will be monitored by a biologist meeting the requirements of 310 CMR 10.60(1)(b) beginning one year after construction to determine if the functional value of the Bank to wildlife has been restored. Details of the monitoring effort are provided in the *Wetland Restoration and Replication Plan*. YAEC will provide the results of this monitoring effort in a brief report to the Rowe Conservation Commission.

The Bank of Sherman Reservoir, as noted above, is sparsely vegetated and subject to daily water level fluctuations that influence the functional value of the area as wildlife habitat. The primary value of the Bank is as feeding habitat for resident shorebirds, such as spotted sandpipers, and migratory shorebirds (e.g., greater and lesser yellowlegs) that prefer to feed on invertebrates found on the edges of lakes with fluctuating water levels. The proposed work on the Bank of Sherman Reservoir consists of removing PCB-contaminated sediments and completion of the project will eliminate the exposure of these birds to the PCBs in sediment, if any. Invertebrates will rapidly re-colonize the Bank following completion of the remediation activities. In addition, the proposed work focuses on the removal of material deposited from the outfall from the East Storm Drain system with the goal of exposing native sediments and restoring a more natural habitat. The proposed work, therefore, will not negatively influence any existing wildlife habitat functions provided by the Bank of Sherman Reservoir, and the proposed work will restore the area following any short-term impacts.

The Bank of Sherman Reservoir will be qualitatively monitored by a biologist meeting the requirements of 310 CMR 10.60(1)(b) one year after construction to determine if the functional value of the Bank to wildlife has been restored. YAEC will provide the results of this monitoring in a brief report to the Rowe Conservation Commission.

3. *310 CMR 10.55(4)(b). See below and provide a written report to the issuing authority.*

   Response: This comment by DEP relates to General Performance Standards for replicating Bordering Vegetated Wetlands that would be unavoidably altered by a proposed project. 310 CMR 10.55(4)(b) lists performance standards for wetland replication areas and a copy of the *Wetland Restoration and Replication Plan* is provided as an attachment. There are no impacts to Bordering Vegetated Wetlands associated with work in or near Sherman Reservoir.

4. *310 CMR 10.56(4)(a)3. Either obtain a written opinion from a qualified fisheries biologist or the Massachusetts Division of Fisheries and Wildlife; or replicate and/or enhance indigenous abiotic structure (substrate) conducive to protection of fisheries habitat. Removal of stormwater-generated sedimentation can be proposed as meeting the in situ "restoration" provisions of 310 CMR 10.60(3) if adequately documented.*

   Response: The General Performance Standard cited by DEP relates to Land Under Water Bodies and Waterways and requires that the proposed activity not impair "the capacity of said land to provide breeding habitat, escape cover, and food for fisheries." The habitat was evaluated by Mr. Michael Thompson, a Certified Wildlife Biologist from Woodlot Alternatives. In Mr. Thompson's professional judgment, the Land Under Water Bodies and Waterways (LUWB) associated with the West Storm Drain Ditch has no values for fish because it is an intermittent stream and it is isolated from downstream reaches by impassable culverts. Other habitat values associated with LUWB in the West Storm Drain Ditch will be replicated in accordance with the *Wetland Restoration and Replication Plan.*

   LUWB associated with Sherman Reservoir is found in the area generally below the elevations of daily water level fluctuation associated with the operation of Sherman Dam. Habitats in this area are comprised of cobbles covered to varying depths with sediment from the East Storm Drain system and silt from Sherman Reservoir. Large rocks (i.e., >12" in diameter) are sparsely distributed throughout the area and vegetation consists of sparsely distributed stems of submerged aquatic plants. In Mr. Thompson's professional judgment, these habitats do not represent prime breeding habitat for any of the fish species found in Sherman Reservoir. These habitats may, on occasion, be used for feeding by some of the fish species found in the reservoir.

   Removal of the contaminated sediments from the LUWB in Sherman Reservoir will not impact the area's capacity to provide occasional feeding habitat for resident fish species. Forage fish (i.e., fish that other fish feed on) that utilize these habitats, for example, will continue to use them following remediation. Plants and invertebrates are expected to quickly re-colonize the site from areas immediately adjacent to the work area. In addition, the area will not be de-watered during implementation of remedial activities (i.e., dredging equipment will be used), thereby avoiding the potential impacts associated with substrate desiccation.

The proposed remedial activities will not adversely affect the LUWB's capacity to provide functions related to fish habitat and they would, in fact, enhance water quality and the ability of the area to serve as a feeding area for fish. In Mr. Thompson's professional judgment, there is no clearly identified need to "restore" altered habitat. It is appropriate to characterize the removal of stormwater generated sediments as in-situ restoration of LUWB, as noted in DEP's comments (see response to Comment 6 below). YAEC will conduct an inspection of the dredge area one year after dredging is complete to determine if the LUWB habitat has restored naturally. The results of this inspection will be provided to the Rowe Conservation Commission in a brief report.

5. *310 CMR 10.56(4)(a)4. Please submit information demonstrating compliance with this Standard and 310 CMR 10.60. Removal of stormwater-generated sedimentation can be proposed as meeting the in situ "restoration" provisions of 310 CMR 10.60(3) if adequately documented.*

Response: This comment relates to LUWB and requires that a proposed project not impair "the capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60."

In Mr. Thompson's professional judgment, the LUWB associated with the West Storm Drain Ditch has very limited value as wildlife habitat, consisting primarily of limited feeding areas for small mammals. These functions, however, will be restored through implementation of the *Wetland Restoration and Replication Plan*, which includes a detailed description of how the restoration of the West Storm Drain Ditch will be monitored to ensure its success.

Within Sherman Reservoir, no vertebrate wildlife are expected to use the LUWB because the water in the area is too deep to serve as waterfowl feeding habitat and it has limited functional value as wildlife habitat, with the potential exception of occasional transient use by turtles. There will be no adverse affect on the functional value of this area and the proposed remedial activities and removal of the stormwater-generated sediments can be considered in-situ restoration. Removal of stormwater-generated sediment will expose native substrate that will provide suitable habitat for reestablishment of benthic organisms.

The LUWB of Sherman Reservoir will be qualitatively monitored by a biologist meeting the requirements of 310 CMR 10.60(1)(b) one year after construction to determine if the functional value of the LUWB to wildlife has been naturally restored, as expected. YAEC will provide the results of this monitoring in a brief report to the Rowe Conservation Commission.

6. *310 CMR 10.57(4)(a)1. and 2. Please describe proposed compliance with these Standards.*

   Response: Activities in Bordering Land Subject to Flooding include removal of the discharge structure, excavation for capping of the intake pipe, and removal of the east storm drain pipe. These activities will not result in a loss of flood storage volume because they will involve excavation and removal of structures and restoration to existing grades. There will be no increase in the grade within the Bordering Land Subject to Flooding. The activities associated with the extension of the dam will not involve altering Bordering Land Subject to Flooding. In all cases, the existing grades will be recreated following the completion of excavation activities. See proposed grading plan in the *Post-Decommissioning Grading Plan and Stormwater Management Analysis.*

7. *310 CMR 10.57(4)(a)3. Please submit information demonstrating compliance with this Standard and 310 CMR 10.60. In order to accomplish this, please report the square footage of Bordering Land Subject to Flooding that is proposed to be altered and naturally vegetated (excluding only lawns and planting beds).*

   Response: The proposed activities may impact up to an estimated 1,500 square feet of Bordering Land Subject to Flooding that could be significant to the protection of wildlife habitat. This area represents approximately 5 percent of the 30,000 square feet of Bordering Land Subject to Flooding shown in Figure 4 of the Integrated Permit Package. In Mr. Thompson's professional judgment, the proposed activities will not impair the capacity of the resource because they will be temporary and will impact less than 10 percent of the resource area and the total impact is less than 5,000 square feet. In addition, the majority of this area is comprised of mowed lawn. Following remediation, these areas will be revegetated in accordance with the *Post-Decommissioning Planting Plan and Specifications*.

8. *310 CMR 10.58(5). See attachment. Removal of structures and impervious surfaces within Riverfront Area that are not also within other jurisdictional resource areas are exempt from 310 CMR 10.58 per 310 CMR 10.58(6)(b)6. As the applicant is already proposing soil amendments and plantings within the Riverfront Area of the Deerfield River, the ability to meet any requirements under 310 CMR 10.58(5)(f) and (h) may already be achievable, provided a planting list of indigenous species and a management plan under 310 CMR 10.58(5)(h) are submitted to the issuing authority and incorporated as part of an Order of Conditions.*

   Response: The currently degraded portion of the site within the Riverfront Area is shown in Figure 1 and the proposed work area within the Riverfront Area is shown as Figure 2. The currently degraded area is estimated to be approximately 96,000 square feet. The proposed work area is estimated to be 120,000 square feet. Although the proposed work area is larger than the currently degraded area, YAEC plans to restore more than 24,000 square feet of the Riverfront Area through the removal of existing structures, covering the area with topsoil, and seeding and planting the area as described in the *Post-Decommissioning Planting Plan and Specifications*, which is being submitted concurrently with this submittal. YAEC intends to retain Woodlot Alternatives to monitor the plantings, as outlined in Section 7 in the *Post-Decommissioning Planting Plan and Specifications.* Therefore, the project will satisfy the provisions of 310 CMR 10.58(5)(f).

9. *The applicant is advised to plan and construct any BVW replacement area per "Massachusetts Inland Wetland Replication Guidelines" (DEP March 2002). The issuing authority should insure that these guidelines are adhered to. To date, this has not been done.*

   Response: The *Wetland Restoration and Replication Plan* summarizes plans for the replication activities. The plan was prepared in accordance with the requirements of the "Massachusetts Inland Wetland Replication Guidelines" (DEP March 2002), as amended by DEP's Western Regional Office.

10. *It is only necessary to claim limited project status [see 310 CMR 10.53(3)(q)] when the proposal would otherwise fail to meet one or more General Performance Standards for work within jurisdictional resource areas. As this project proposal may be capable of meeting the General Performance Standards for work within all jurisdictional resource areas potentially affected, it may be unnecessary to file as a limited project. However, if the applicant so chooses and the issuing authority consents, it is a* ***requirement*** *of 310 CMR 10.53(3) to prepare a written alternatives; and also* ***requires*** *the applicant to demonstrate practicable avoidance and minimization of alteration to jurisdictional resource areas, and then appropriate mitigation measures for remaining, unavoidable alteration as per other comments in this letter to the extent practicable.*

    Response: The proposed project can be viewed as complying with all the General Performance Standards for work within jurisdictional resource areas, based on information submitted in association with the NOI and the responses to DEP's comments on the NOI (i.e., this document and accompanying attachments). YAEC requests that the remediation associated with the Site Closure Project need not be reviewed as a limited project.

11. *The conservation commission should correctly cite relevant plans in the Order of Conditions.*

    Response: YAEC will work with the Rowe Conservation Commission and DEP to ensure the project plans are cited correctly in the Order of Conditions.

12. *Copies of final supplemental information (written and graphic) that is supplemental to and generated during and after the Public Hearing and local review of this project should be forwarded to both the Conservation Commission and the Department's Western Regional Office.*

    Response: As requested, copies of all supplemental information related to the Notice of Intent will be forwarded to the Rowe Conservation Commission and the DEP Western Regional Office.

REFERENCES

Kleinschmidt Associates, *Post-Decommissioning Planting Plan and Specifications*, August 2004.

Kleinschmidt Associates, *Post-Decommissioning Grading Plan and Stormwater Management Analysis*, August 2004.

Woodlot Alternatives and ERM, *Wetland Restoration and Replication Plan,* August 2004.

Total Riverfront Area = 200,000 square feet
Currently Degraded Area = 96,000 square feet
% Degraded = 48%

N

Warehouse

Service Building

ilding

200' Riverfront Area
Degraded Area

Scale (1"=60')
30' 0 30' 60' 120'

Figure 1 - Riverfront Area - Existing Conditions
Yankee Nuclear Power Station - Rowe, MA

ERM

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Proposed Work Area (in Riverfront Area) = 120,000 square feet
Area Previously Degraded = 96,000 Square Feet
Area not Previously Degraded = 24,000 Square Feet

N

Warehouse

Service Building

ilding

200' Riverfront Area
Previously Degraded Work Areas (Conforming)
Work Areas not Previously Degraded (Non-Conforming)

Scale (1"=60')
30' 0 30' 60' 120'

Figure 2 - Riverfront Area - Proposed Work Area
Yankee Nuclear Power Station - Rowe, MA

ERM

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