



# CONNECTICUT YANKEE ATOMIC POWER COMPANY

## HADDAM NECK PLANT

362 INJUN HOLLOW ROAD • EAST HAMPTON, CT 06424-3099

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CY-04-243

Mr. Peter Hill, LEP  
Bureau of Waste Management  
Connecticut Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

Haddam Neck Plant  
Transmittal of Task 2 Supplemental Characterization Report

Dear Mr. Hill:

Connecticut Yankee Atomic Power Company (CYAPCO) hereby submits for your review the Task 2 Supplemental Characterization Report. This report presents the results of additional investigations into the groundwater systems underlying the CYAPCO Haddam Neck Plant (HNP). These investigations address tasks developed in the Phase 2 Hydrogeologic Investigation Work Plan (Malcolm-Pirnie, 2002) and data needs identified in the Phase 2 Hydrogeologic Characterization Work Plan Task 1 Summary Report (CH2M HILL, 2004).

The following supplemental characterization activities have been performed and are described in the report:

### **Bedrock Aquifer Characterization**

- Packer testing of six bedrock boreholes (BH-118, BH-118A, BH-119, BH-120, BH-121, BH-121A) in 2003
- Geophysical logging of four bedrock boreholes (BH-118A, BH-119, BH-120, BH-121A) in 2003
- Supplemental packer testing of one borehole (BH-121A) in 2004
- Down-hole video logging of four bedrock boreholes (BH-118A, BH-119, BH-120, BH-121A) in 2004
- Hydrophysical logging of four bedrock boreholes (BH-118A, BH-119, BH-120, BH-121A) in 2004

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### Long-term Water Level Monitoring

- Assessment of hydrographs for 29 monitoring wells for the period from January through August 2004
- Assessment of hydrographs for the Connecticut River for the period from January through August 2004
- Assessment of responses to on-site precipitation, tidal fluctuation and river stage of the Connecticut River, and on-site pumping activities

### Repair and Maintenance of Monitoring Wells

- Well repairs
- Abandonment of unneeded and unusable wells

### Performance of an Aquifer Pumping Test

- Seventy-two-hour constant rate aquifer test in a new well screened in the unconsolidated deposits
- Monitored drawdown response in surrounding wells using pressure transducers

These site characterization data are being used to develop a numerical flow simulation to describe the movement of groundwater beneath the site. The simulations will support remedial action decisions and design of the final status groundwater monitoring system.

If you have any questions regarding this report, please call me at (860) 267-3938.

Sincerely,

Gerard van Noordennen 11-29-04  
Gerard P. van Noordennen Date  
Regulatory Affairs Manager

Attachment: Task 2 Supplemental Characterization Report, November 2004

cc: Mr. Michael Firsick, CTDEP, Bureau of Radiation Protection  
Mr. Gary Ginsberg, CTDPH  
Mr. Ron Bellamy, USNRC Region 1  
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Mr. Ted Smith, USNRC Headquarters  
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