



# CONNECTICUT YANKEE ATOMIC POWER COMPANY

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

MAR - 8 2005  
Docket No. 50-213  
CY-05-040

Re: 10 CFR 50.82(a)(11)

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555-0001

Haddam Neck Plant  
Final Status Survey (FSS) Final report – Phase II

The Haddam Neck Plant (HNP) License Termination Plan (LTP) (Section 1.4) describes the process of releasing land from the HNP Operating License. On April 29, 2004, Connecticut Yankee Atomic Power Company (CYAPCO) submitted a request to release a portion of the HNP site (Survey Area 9532) from the Part 50 License. This request did not contain a Final Status Survey (FSS) Final Report for Survey Area 9532 because this area is characterized as non-impacted. The site release and removal of Survey Area 9532 from the HNP License was approved by the NRC on September 1, 2004.

The HNP LTP Section 5.9.2 states that the FSS Final Report will be prepared and submitted in a phased approach. The non-impacted area release (Survey Area 9532) was the first phase of site release and as stated above, a FSS Final Report for Survey Area 9532 was not submitted. For the remainder of decommissioning project, CYAPCO plans to submit a total of three FSS Final Reports. CYAPCO is hereby submitting the FSS Final Report – Phase II (Attachment 1) in support of the Phase II partial site release from the facility Part 50 license. Based on the current schedule, Phase III and Phase IV FSS Final Reports will be submitted to the NRC in December 2005 and December 2006, respectively. This Phase II FSS Final Report addresses fourteen (14) land area Survey Units and one (1) subsurface soil Survey Unit within the east mountainous and low land survey areas of the Haddam Neck Plant site (Figure 1-1 of Attachment 1). This report contains a compilation of all fifteen (15) Survey Unit Release Records that are within the Phase II scope. Table 1 provides a listing of all Survey Units addressed in this report including the classification and general description for each unit.

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The report documents the results and conclusions of the survey unit and was prepared in accordance with guidance and requirements contained in the following:

- Haddam Neck Plant License Termination Plan,
- NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), Section 8.6 and
- NUREG-1757, Volume 2, Consolidated NMSS Decommissioning Guidance – Characterization, Survey, and Determination of Radiological Criteria, Section 4.5.

In the HNP LTP Section 5.4.7.1, Equation 5-1 expresses the total dose contribution from three components; soil contribution, existing ground water contribution and future ground water contribution. The survey data results for all Phase II Survey Units address the dose component due to soil as provided in the HNP LTP compliance Equation 5-1. The second component of Equation 5-1 is addressed within the submittal (Attachment 2). The dose contribution from the third component of Equation 5-1, future groundwater, is zero because there are no structures, systems or components containing residual radioactivity as noted in this Phase II Report.

The Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) performed confirmatory survey activities on selected open land survey units at the HNP site during the period of September 29 through October 1, 2003 and March 16 through 17, 2004. The survey units included in the scope of Independent Verification Team (IVT) survey are identified on Table 1 of this submittal. The results of the survey are documented in the "ORISE Revised Final Report-Confirmatory of Open Land Survey Units at the Connecticut Yankee Haddam Neck Plant, Haddam, Connecticut", dated July 27, 2004<sup>1</sup> and the NRC Integrated Inspection Report dated September 20, 2004<sup>2</sup>. The results of the survey activities confirmed that the radiological conditions of open land area survey units that are part of these confirmatory survey activities met the approved site-specific Derived Concentration Guideline Levels (DCGLs). These results also confirmed that the survey units had been classified correctly.

CYAPCO hereby requests the NRC review this Phase II FSS Final Report for acceptance of this portion of the HNP site final radiological survey by July 31,

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<sup>1</sup> ORISE Revised Final report-Confirmatory of Open Land Survey Units at the Connecticut Yankee Haddam Neck Plant, Haddam, Connecticut (Docket No. 50-213, RFTA No. 03-008), dated July 27, 2004.

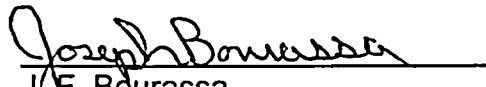
<sup>2</sup> C. Gordon (NRC) letter to W. Norton (CYAPCO), NRC Integrated Inspection Report 05000213/2004001, dated September 20, 2004.

2005. We expect to submit the request to release the Phase II land area from the Part 50 license by April 30, 2005.

There are no regulatory commitments contained in this submittal.

If you should have any questions regarding this submittal, please contact Mr. G. P. van Noordennen at (860) 267-3938.

Sincerely,

  
J.F. Bourassa                      3/8/05  
Director, Nuclear Safety/Regulatory Affairs                      Date

Attachment 1: Final Status Survey (FSS) Final Report – Phase II  
Attachment 2: Assessment of Existing Groundwater Dose for Phase II Release  
Areas of Final Status Survey Report

cc: S. J. Collins, NRC Region 1 Administrator  
T. B. Smith, NRC Project Manager, Haddam Neck Plant  
R. R. Bellamy, Chief, Decommissioning and Laboratory Branch, NRC  
Region 1  
E. L. Wilds, Jr., Director, CT DEP Monitoring and Radiation Division

**TABLE 1**  
**Phase II Survey Unit Classification and Description List**

Survey Area	Survey Unit	Class	General Description of the Survey Unit
9523 <sup>1</sup>	0000	3	Southeast Wetland Area; land area (151,364 m <sup>2</sup> )
9524	0000	3	South Site Grounds; land area (61,975 m <sup>2</sup> )
9525	0000	3	Southeast Site Road; land area (28,000 m <sup>2</sup> )
9526 <sup>1</sup>	0000	3	Northeast Mountain Side; land area (444,700 m <sup>2</sup> )
9526 <sup>1</sup>	0001	2	Northeast Mountain Side; land area (6,504 m <sup>2</sup> )
9526 <sup>1</sup>	0002	2	Northeast Mountain Side; land area (6,6068 m <sup>2</sup> )
9528 <sup>1</sup>	0000	3	Southeast Mountain side; land area (508,000 m <sup>2</sup> )
9528 <sup>1</sup>	0003	2	Southeast Mountain Side; land area (10,000 m <sup>2</sup> )
9528	0004	2	Southeast Mountain Side; land area (3,100 m <sup>2</sup> )
9535	0001	1	Southeast Landfill Area; land area (1860 m <sup>2</sup> )
9535	0002	2	Southeast Landfill Area; land area (3,320 m <sup>2</sup> )
9536 <sup>1</sup>	0000	2	Construction Piles Near Rifle Range; land area (1,536 m <sup>2</sup> )
9537 <sup>1</sup>	0000	2	Permitted Landfill Area; land area (850 m <sup>2</sup> )
9538 <sup>1</sup>	0000	2	Material Storage Area; land area (1,500 m <sup>2</sup> )
9806	0000	A	Southeast Landfill – 9535; subsurface soils (5,180 m <sup>2</sup> )

<sup>1</sup> The survey Units were included in scope of the ORISE IVT Survey.