



# CONNECTICUT YANKEE ATOMIC POWER COMPANY

## HADDAM NECK PLANT

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

January 5, 2017

CY-17-001

10 CFR 50.82(a)(7)

ATTN: Document Control Desk  
Director, Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555 - 0001

72-039

Connecticut Yankee Atomic Power Company  
Haddam Neck Plant Independent Spent Fuel Storage Installation  
NRC License No. DPR-61 (NRC Docket No. 50-213)

Subject: Notification of Changes in accordance with 10 CFR 50.82(a)(7)

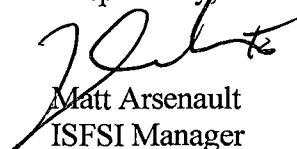
Connecticut Yankee Atomic Power Company (CYAPCO) is notifying the U.S. Nuclear Regulatory Commission (NRC) of significant changes to the decommissioning schedule in accordance with 10 CFR 50.82(a)(7) prior to incorporating these changes into the Haddam Neck Plant (HNP) Post-Shutdown Decommissioning Activities Report (PSDAR). This schedule change reflects a new decommissioning cost estimate that includes a cost estimate for management of irradiated fuel and Greater than Class C waste that was approved by the Federal Energy Regulatory Commission on November 15, 2016.

Currently, the HNP PSDAR provides a schedule and cost estimate for the management of irradiated fuel and GTCC waste and decommissioning of the ISFSI for the time period of 2016 through 2033. This time period will be extended from 2016 through 2036. The attachment to this letter provides a mark-up of the HNP PSDAR that establishes the applicable changes regarding the decommissioning schedule and the cost estimate. CYAPCO will update the HNP PSDAR to reflect this new schedule and cost estimate in February 2017.

In addition, CYAPCO is sending a copy of this letter to the State of Connecticut as required by 10 CFR 50.82(a)(7).

If you have any questions regarding this letter, please do not hesitate to contact me at (860) 267-6426 x303.

Respectfully,

  
Matt Arsenault  
ISFSI Manager

NM5524  
NM5526

Attachment: Mark-up of Revision 5 of the Haddam Neck Plant Post-Shutdown Decommissioning  
Activities Report

cc: D. Dorman, NRC Region I Administrator  
R. Powell, Chief, Decommissioning Branch, NRC, Region I  
J. Goshen, NRC Project Manager  
J. Semancik, Director, CT DEEP, Radiation Division

**ATTACHMENT TO CY-17-001**

**MARK-UP OF REVISION 5 OF THE HADDAM NECK PLANT**

**POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT**

**Haddam Neck Plant**

**Post Shutdown Decommissioning Activities Report**

**Revision 56**

**January 2016 February 2017**



## HADDAM NECK PLANT POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT

likely to a DOE facility). The date of DOE's acceptance of the spent fuel and GTCC waste is assumed to occur in year ~~2034~~2034; however, a precise schedule of when the spent fuel and the GTCC waste will be removed from the HNP site is not available.

### ***Decommissioning of the ISFSI***

Following the removal of the spent fuel and GTCC waste, the ISFSI will be decommissioned. The current plan is to utilize the rip and ship method to dispose of the ISFSI pad and ISFSI casks.

Soils and pavement for areas associated with the ISFSI will be surveyed and characterized as described in the License Termination Plan. As necessary, soils and pavement will be remediated (i.e., removed, processed and disposed of at a licensed facility) if determined to contain contamination levels above the NRC site release criteria [10CFR20, Subpart E].

### **SCHEDULE FOR REMAINING DECOMMISSIONING ACTIVITIES**

The following milestones define the schedule for the remaining major decommissioning activities (significant activities completed or scheduled). This schedule is based on the assumption that spent fuel and GTCC waste will be stored at the ISFSI until the material is removed from the site (most likely to a DOE facility).

Operating License Land Areas Reduced to ISFSI Only	- 11/2007
Transfer of Spent Fuel and GTCC Waste to DOE Complete	- <del>2034</del> <u>2035</u>
ISFSI Demolition Complete	- <del>2033</del> <u>2035</u>
Final Site Survey Complete	- <del>2033</del> <u>2036</u>
CY License Termination	- <del>2033</del> <u>2036</u>

Note: The decommissioning schedule is updated periodically; therefore, the dates of selected activities may differ from the dates presented above. CYAPCO will inform the NRC of significant schedule changes in accordance with 10 CFR 50.82(a)(7).

### **COST ESTIMATES FOR ISFSI DECOMMISSIONING AND MANAGEMENT OF SPENT FUEL AND GTCC WASTE**

The current ~~Federal Energy Regulatory Commission (FERC) approved~~ decommissioning cost estimate (~~Docket # ER13-1399-000~~) and cost estimate for management of spent fuel and GTCC waste (~~Docket # ER16-2723~~) was filed with the Federal Energy Regulatory Commission (FERC) on September 30, 2016 and approved by FERC on November 15, 2016 with no objections from the State



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~~Agencies that were party to the April 30, 2013 is based on the April 30, 2013 Stipulation and Settlement Agreement (Docket #ER13-1399-000) including between CYAPCO and the Connecticut Public Utilities Regulatory Authority, the Connecticut Office of Consumer Counsel, the Maine Public Utilities Commission, the Maine Office of Public Advocate, the Massachusetts Department of Public Utilities, and the Attorney General of Massachusetts.~~

This cost estimate includes the cost associated with the projected ISFSI decommissioning costs and a funding assumption of 15 years of operations costs to manage spent fuel and GTCC waste. A funding mechanism provides that damage awards and settlement proceeds that CYAPCO receives in future phases of its litigation with the Department of Energy (DOE) will be applied to maintain the adequacy of the Nuclear Decommissioning Trust (NDT) to cover 15 years of ISFSI operations (as well as all other projected decommissioning costs). In addition, CYAPCO has the right to resume collection of decommissioning charges from its customers subject to the submittal of a proposal under section 205 of the Federal Power Act, if needed.

CYAPCO has an account within its NDT entitled, "ISFSI Radiological Decom," that segregates the funds for radiological decommissioning of the ISFSI from the larger balance of funds for ongoing management of spent fuel and GTCC waste held in the NDT.

The assumptions of the current decommissioning cost estimate are discussed in the Decommissioning Funding Plan submitted to the NRC on December 14, 2015 in accordance with 10 CFR 72.30(c) (Reference 15). The decommissioning cost estimate incorporates the most recent assumptions with respect to the remaining decommissioning activities and related costs (i.e., those associated with the HNP ISFSI). The total un-escalated cost estimate for decommissioning the ISFSI, including contingency is ~~\$19.8 million and \$20.3 million in 2015 and 2016 dollars, respectively.~~ This includes ~~\$17.9 million and \$18.3 million for radiological removal in 2015 and 2016 dollars, respectively, and \$1.9 million and \$2.0 million for non-radiological removal in 2015 and 2016 dollars, respectively.~~

ISFSI operations will continue until DOE removes the spent fuel and GTCC waste, allowing for the decommissioning of the ISFSI. CYAPCO expects that the ISFSI operating costs will continue to cover a number of categories, including payments for the storage of wet fuel at the General Electric facility in Morris, Illinois, regulatory fees, and costs for insurance, labor, security, materials and supplies, miscellaneous expenses, outside services, property taxes, regulatory fees, rentals and leases and utilities. The un-escalated cost estimate for the management of spent fuel and GTCC waste from 2016 through ~~2031~~2034, including contingency, is ~~\$208.2 million and \$213.4 million in 2015 and 2016 dollars, respectively.~~ \$213.4254.4 million in 2015 and 2016 dollars, respectively. ~~This is based on the estimate submitted to the NRC on December 14, 2015 (Reference 15).~~



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The total un-escalated cost estimate is approximately \$~~274.7228~~ million and ~~\$233.7 million~~ in ~~2015 and~~ 2016 dollars, ~~respectively~~, for decommissioning the ISFSI and managing the storage of spent fuel and GTCC waste for the time period of 2016 through ~~2033~~2036.

CYAPCO will continue to inform the NRC regarding the status of this funding by complying with the obligations defined in: 1) 10 CFR 50.75(f)(1) and (2) to submit an annual Decommissioning Funding Status Report; 2) 10 CFR 50.82(a)(8)(v) to submit an annual financial assurance status report regarding decommissioning funding; 3) 10 CFR 72.30(c) to resubmit the decommissioning funding plan at intervals not to exceed three years; and 4) 10 CFR 50.82(a)(8)(vii) to submit an annual report regarding the status of the funding for managing irradiated fuel.

### ENVIRONMENTAL IMPACTS

CYAPCO performed an environmental review [Reference 9] to evaluate the actual or potential environmental impacts associated with the proposed decommissioning activities. The basis for this evaluation was NUREG-0586, "Final Generic Environmental Impact Statement (FGEIS) on Decommissioning of Nuclear Facilities" [Reference 3]. Two previous site-specific environmental assessments from the conversion of the provisional operating license to a full-term operating license [Reference 4] and most recently, from the re-capture of the construction period time duration [Reference 5] in the operating license were also considered. This evaluation was reported in Revisions 0 and 1 of the PSDAR.

In November 2002, the NRC published Supplement 1 to NUREG-0586, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (Reference 10). The intent of this supplement is to consider in a comprehensive manner all aspects related to the radiological decommissioning of nuclear reactor facilities by incorporating updated information, regulation, and analyses. Since the 1988 NUREG-0586 FGEIS was written, the NRC and the industry have gained substantially more nuclear power facility decommissioning experience. The NRC noted that the activities which are performed in conjunction with decommissioning, such as ISFSI construction, maintenance, and decommissioning, as well as spent fuel storage and maintenance, are not considered within the scope of the 2002 Supplement 1 to NUREG-0586. The NRC also noted that the environmental impacts described in this supplement supersede those described for power reactor facilities in the 1988 NUREG-0586.

The environmental review concludes that the impacts due to decommissioning of the HNP and the HNP ISFSI will be bounded by the previously issued environmental impact statements, (specifically the FGEIS) and previously issued environmental assessments as well as Supplement 1 to NUREG-0586. This is principally due to the following reasons:



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4. USNRC, Final Environmental Statement, Haddam Neck (Connecticut Yankee) Nuclear Power Plant, Docket No. 50-213, October 1973.
5. Letter, USNRC to CYAPCO, "Environmental Assessment for Proposed License Extension," dated November 23, 1987.
6. Letter, CYAPCO to USNRC, "Haddam Neck Plant Certifications Of Permanent Cessation Of Power Operation And That Fuel Has Been Permanently Removed From The Reactor," dated December 5, 1996.
7. Letter, CYAPCO to USNRC, "Revision 1 of Haddam Neck Plant License Termination Plan and Re-Submittal of License Amendment Request," dated August 20, 2002.
8. Letter, CYAPCO to USNRC, "Revision 1a to the Haddam Neck Plant License Termination Plan," dated October 10, 2002.
9. CYAPCO's Decommissioning Environmental Review issued August 1997, submitted via CYAPCO letter to USNRC, "Submittal of Decommissioning Environmental Review," dated August 1, 2000.
10. Supplement 1 to NUREG-0586, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities", November 2002.
11. Letter, CYAPCO to USNRC, "Revision 2 to Post Shutdown Decommissioning Activities Report (PSDAR)," dated April 28, 2004.
12. Letter from T. Smith (NRC) to W. Norton (CYAPCO), "Haddam Neck Plant – Release of East Site Grounds from Part 50 License," dated September 1, 2004.
13. Letter from T. Smith (NRC) to W. Norton (CYAPCO), "Haddam Neck Plant – Release of Phase II Areas from Part 50 License," dated February 27, 2006.
14. Letter from K. McConnell (NRC) to W. Norton (CYAPCO), "Haddam Neck Plant - Release of Land from Part 50 License," dated November 26, 2007.
15. Letter from C. Pizzella (CYAPCO) to Document Control Desk (NRC), "Three-Year Update to the Independent Spent Fuel Storage Installation Decommissioning Funding Plan," dated December 14, 2015.
16. Letter, Alston & Bird LLP to FERC, "Connecticut Yankee Atomic Power Company Docket No. ER1316-\_\_\_\_-000," dated ~~May 1, 2013~~ September 30, 2016.