CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT
362 INJUN HOLLOW ROAD • EAST HAMPTON, CT 06424-3099
August 22, 1997
Docket No. 50-213
CY-97-075
Re: 10CFR50.82
U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555 - 0001

Haddam Neck Plant
Post Shutdown Decommissioning Activities Report (PSDAR)

In accordance with 10CFR50.82(a)(4)(i), Connecticut Yankee Atomic Power Company (CYAPCO) hereby submits to the NRC the Post Shutdown Decommissioning Activities Report (PSDAR) for the Haddam Neck Plant (HNP). In accordance with 10CFR50.82, the PSDAR includes:

- CYAPCO's selection of the DECON decommissioning option;
- a description of planned decommissioning activities;
- a schedule for those planned activities;
- an estimate of currently expected costs; and
- a discussion of the reasons for CYAPCO's conclusion that the environmental impacts associated with the planned activities are bounded by appropriate previously issued environmental impact statements.

Should plans further develop or change, CYAPCO will inform the NRC of changes in accordance with 10CFR50.82(a)(7).

In addition, 10CFR50.82(a)(8)(iii) requires that CYAPCO submit, within 2 years following permanent cessation of operations, an updated site-specific decommissioning cost estimate. CYAPCO intends to submit the site-specific estimate under separate cover on a schedule consistent with the rule. At that time, and in light of the rate case currently pending before the Federal Energy Regulatory Commission, CYAPCO intends to address the decommissioning funding issues identified in 10CFR50.82(c).

Similarly, 10CFR50.54(bb) requires that CYAPCO submit, within 2 years following permanent cessation of operations, a spent fuel management program describing its management and funding plans of the CYAPCO spent fuel until title and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository. CYAPCO intends to submit this plan under separate cover on a schedule consistent with the regulation.

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

Very truly yours,
CONNECTICUT YANKEE ATOMIC POWER COMPANY

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T. C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer
Enclosure
cc: H. J. Miller, Region I Administrator
M. B. Fairtile, NRC Senior Project Manager, NRR
W. J. Raymond, Senior Resident Inspector, Haddam Neck Plant
K. T. A. McCarthy, Director, CT DEP Monitoring and Radiation Division

Haddam Neck Plant

Post Shutdown Decommissioning Activities Report
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LIST OF ACRONYMS

CYAPCO Connecticut Yankee Atomic Power Company
DECON Immediate Decontamination and Dismantlement Option
DF Decontamination Factor
DOE Department of Energy
ENTOMB Encasement in Concrete with Future Dismantlement Option
FGEIS Final Generic Environmental Impact Statement
GTCC Greater Than Class C
HEPA High Efficiency Particulate Air [filter]
HNP Haddam Neck Plant
LPSI Low Pressure Safety Injection
NRC Nuclear Regulatory Commission
PSDAR Post Shutdown Decommissioning Activities Report
RCS Reactor Coolant System
RHR Residual Heat Removal System
SAFSTOR Delayed Decontamination and Dismantlement Option
UFSAR Updated Final Safety Analysis Report
10CFR61 Licensing Requirements for Land Disposal of Radioactive Waste

10CFR71 Packaging and Transportation of Radioactive Material

Haddam Neck Plant
Post Shutdown Decommissioning Activities Report

INTRODUCTION

Under the provisions of 10CFR50.82(a)(4)(i), Connecticut Yankee Atomic Power Company (CYAPCO) hereby submits this Post Shutdown Decommissioning Activities Report (PSDAR) to describe planned decommissioning activities and the schedule for those activities, provide an estimate of expected costs, and discuss the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities are bounded by appropriate previously issued environmental impact statements, specifically NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" [Reference 1] and the Haddam Neck Plant site-specific Final Environmental Statement [Reference 2] and Environmental Assessment [Reference 3].

BACKGROUND

The Haddam Neck Plant (HNP) achieved initial criticality on July 24, 1967, began commercial operation on January 1, 1968, and operated 28 years achieving an overall capacity factor of approximately 70 percent. The nuclear steam supply system is a four loop pressurized water reactor (PWR) designed by Westinghouse Electric Corporation with a thermal power design limit of 1825 MWt. The turbine generator was rated to produce 619 MWe.

Defueling began on November 13, 1996 and was completed on November 15, 1996, with all fuel assemblies being placed into the spent fuel pool for temporary storage. For economic reasons, CYAPCO opted to cease commercial operation of the HNP on December 4, 1996. Certification of permanent cessation of operation and removal of fuel, in accordance with 10CFR50.82(a)(1)(i) and (ii), was submitted to the U.S. Nuclear Regulatory Commission on December 5, 1996 [Reference 4].

CYAPCO's primary goal is to decommission the HNP in a safe and cost effective manner. CYAPCO will decontaminate and dismantle the HNP, resulting in the timely removal of the existing nuclear plant in accordance with one of the options found acceptable to the NRC in its Final Generic Environmental Impact Statement (FGEIS). The NRC regulations refer to this option as the DECON alternative resulting in prompt dismantlement of the site. Completion of the DECON option is contingent upon continued access to one or more low level waste disposal sites. Currently, the HNP has access to Chem Nuclear - Barnwell, South Carolina and Envirocare - South Clive, Utah. If there are any future changes in this regard, CYAPCO will inform the NRC of revised plans in accordance with 10CFR50.82(a)(7).

DESCRIPTION OF PLANNED DECOMMISSIONING ACTIVITIES

Decommissioning Activities and Planning

The activities planned for decommissioning of the HNP reflect the selection of the DECON option for the site. CYAPCO will complete the detailed planning required for each decommissioning activity prior to the start of such activity.

Planning Activities (Prior to Submittal of the PSDAR)

The time period between the decision to permanently shut down and decommission the plant and the submittal of this PSDAR to the NRC has been utilized by CYAPCO to establish a decommissioning organization, prepare submittals for a revised Emergency Plan, a revised Security Plan, a revised Quality Assurance Program, revised Technical Specifications, and to initiate planning for decommissioning activities.

Ongoing planning and preparation for decommissioning includes the following generalized types of tasks:

- Review existing plant programs to assess their applicability to decommissioning,

- Review and reclassify systems important to decommissioning operations,
- Revise procedures and license basis documents to reflect the plant's defueled and permanently shutdown configuration,
- Initiate radiological and hazardous material characterization of the site,
- Design and procure equipment and facilities to support decommissioning activities,
- Prepare detailed (area-by-area) work breakdown structures for decontamination/dismantling activities,
- Prepare a dose estimate for decommissioning activities, and
- Evaluate disposition options for facility components and structures.

A key step in decommissioning planning was the selection of a project staff and establishment of an organizational structure with prior decommissioning experience. This step mobilized key management personnel with decommissioning experience, permanent CYAPCO management and staff personnel, additional supplemental staff and specialty contractors (utilized as needed).

Plant Dismantlement

The decommissioning planning is based on selecting the DECON option and is expected to result in the decontamination and/or dismantlement of the majority of plant structures and facilities by the year 2004. The few facilities and structures that have to remain to support spent fuel and greater than class C (GTCC) waste storage will be decontaminated and/or dismantled after the spent fuel and GTCC wastes are taken by the DOE.

The following describes activities included in the dismantlement period:

- Establish site construction power distribution system,
- Perform primary systems decontamination,
- Perform asbestos abatement program,
- Separate the fuel building from the rest of the site's mechanical and electrical systems,
- Conduct decommissioning activities, including major component removal,
- Conduct decontamination of facility surfaces, components and piping systems as required,
- Conduct soil remediation as required,
- Ship and properly dispose of all remaining radioactive materials, and
- Perform comprehensive final status survey to demonstrate compliance with approved site release criteria [10CFR20, subpart E].

The structures and facilities that will remain after the dismantlement period to store the spent fuel and GTCC waste are as follows:

- The spent fuel building and the systems necessary to accomplish fuel cooling (Note: modifications will be made early in the HNP decommissioning process to permit the spent fuel building and its fuel cooling systems to operate independently from the rest of the site),
- Support facilities consisting of a control room, a security access point, and work areas necessary for spent fuel pool operations, and
- A security perimeter (e.g., security fence, an intrusion monitoring system, lighting, etc.)

For present planning purposes it is assumed that wet storage will be continued until the spent fuel is shipped from the site. CYAPCO will appropriately advise the NRC of any future changes to its plans in this area.

MAJOR DECOMMISSIONING ACTIVITIES

10CFR50.2 defines major decommissioning as any activity that results in permanent removal of major radioactive components (e.g., reactor vessel and internals, steam generators, pressurizer, large bore reactor coolant system piping, and other large components that are radioactive to a comparable degree), permanently modifies the structure of the containment, or results in dismantling components for shipment containing GTCC waste.

The following discusses the planned major decommissioning activities at the HNP:

Reactor Vessel and Internals

The reactor vessel and internals are described in the Updated Final Safety Analysis Report (UFSAR) Section 5.3.

An engineering evaluation determined two technically feasible alternatives for removal of the reactor vessel and internals. These alternatives are (1) removal of the vessel (including reactor head) with the internals intact, and (2) segmentation of the internals followed by removal of the vessel (including reactor head). The schedule shown in Figure 1 for large component removal activities is expected to bound both the alternative of removing the vessel with the internals intact and the alternative of internals segmentation followed by vessel removal.

Estimates of radionuclide concentrations in the vessel from neutron activation show that the limits for a 10CFR61 (disposal site) package will not be exceeded, and the specific activity of the package would be within the limitations for a 10CFR71 (shipment) package. This allows the vessel (including internals) to be qualified for normal conditions of transport. In both alternatives, the vessel (with or without the internals) would be shipped to a low level radioactive waste disposal facility inside an approved container.

Final alternative selection (expected 4th quarter 1997) will be based on an evaluation of parameters associated with project planning and execution, considering the following: safety impacts, personnel exposure, schedule impact, disposal facility availability, ease of execution cost, and regulatory acceptance.

A portion of the highly activated reactor vessel internals, if segmented, will be characterized as GTCC waste. The GTCC material may be stored in the HNP spent fuel pool until it can be transferred to the DOE.

Steam Generators

The steam generators are described in UFSAR Section 5.4.

An engineering evaluation determined two technically feasible alternatives for removal of the steam generators. These alternatives are (1) intact removal, and (2) partial segmentation. The schedule shown in Figure 1 is expected to bound either alternative.

Final alternative selection (expected 4th quarter 1997) will be based on an evaluation of parameters associated with project planning and execution, considering the following: safety impacts, personnel exposure, schedule impact, disposal facility availability, ease of execution and cost.

Pressurizer

The pressurizer is described in UFSAR Section 5.4.

The pressurizer will be removed intact in accordance with the general decommissioning activities and shipped to a disposal facility.

Reactor Coolant System (RCS) and Other Large Bore Piping

The reactor coolant system and other large bore piping is described in UFSAR Section 5.4.

The RCS and any other large bore piping will be decontaminated as appropriate and removed in accordance with the general decommissioning activities.

Containment

The containment is described in UFSAR Section 6.2.

The containment surfaces and structure (as appropriate) will be decontaminated and dismantled in accordance with the general decommissioning activities.

Spent Fuel Pool

The spent fuel pool is described in UFSAR Section 9.1.

Once all spent fuel and any GTCC waste are removed from the spent fuel pool, the facility will be decontaminated and dismantled in accordance with the general decommissioning activities.

OTHER DECOMMISSIONING CONSIDERATIONS

The decontamination and/or dismantlement of contaminated systems, structures and components may be accomplished by decontamination in place, dismantlement and decontamination, or dismantlement and disposal. A combination of these methods may be

utilized to reduce contamination levels, worker radiation exposures and project costs. General considerations applicable to these activities are described below.

Chemical Decontamination of Primary Coolant Systems

A chemical decontamination of the primary coolant systems will be performed prior to conducting major decommissioning activities. The chemical decontamination is a significant ALARA initiative being performed to reduce personnel exposure during decommissioning work activities. The decontamination effort is expected to include the entire reactor coolant system (RCS) (including reactor vessel, steam generators and pressurizer) as well as portions of the following appended systems: letdown and charging, residual heat removal (RHR), loop fill and drains, seal injection and return, and selected dead leg piping. Either the RCS pumps or the low pressure safety injection (LPSI) pumps will be used to provide the necessary decontamination flow. Modifications may be necessary to establish the required flow paths. The decontamination operation will be controlled by approved plant procedures.

General Decommissioning Activities Relating to Removal of Radiological Components & Structures

Components will be safely and efficiently removed using the techniques and methods determined to be the most appropriate for the particular circumstances and as specified in engineering documents called decommissioning work packages. Openings in components will typically be covered and sealed to minimize the spread of contamination. The components may be moved to a processing area for volume reduction and packaging into containers for shipment to a processing facility for decontamination or a low level radioactive waste disposal facility.

Contaminated concrete and structural steel components will be decontaminated and/or removed when contaminated and uncontaminated systems and equipment have been removed from the area or building. The contaminated concrete will then be removed and packaged into containers for shipment to a low level radioactive waste disposal facility. Contaminated structural steel components may be moved to a processing area for decontamination, volume reduction and packaging into containers for shipment to a processing facility for decontamination or low level radioactive waste disposal facility. Buried contaminated components (e.g., piping, drains) will be decontaminated in place or excavated. After excavation, the components will be examined to ensure that they are physically sound prior to cutting and removal. Appropriate contamination controls will be employed to minimize the spread of contamination and protect personnel.

Decontamination Methods

Contaminated systems and components will be removed and sent to an off-site processing facility or to a low level radioactive waste disposal facility. On-site decontamination of systems and components will generally be limited to activities needed to maintain personnel exposure as low as is reasonably achievable, to expedite equipment removal, and to control the spread of contamination.

Application of coatings and hand wiping will be the preferred methods for stabilizing or removing loose surface contamination. If other methods are utilized (e.g., grit blasting, high pressure water), airborne contamination control and waste processing systems will be used as necessary to control and monitor any releases of contamination.

Contaminated and activated concrete as well as other contaminated materials will be removed and sent to a low level radioactive waste disposal facility. Removal of concrete will be performed using a method which controls the removal depth to minimize the waste volume produced (e.g., scabbling, scarifying). Vacuum removal of the dust and debris with HEPA filtration of the effluent will be used to minimize the need for additional respiratory protection control measures.

These methods are the most practicable and widely utilized at this time. However, as new decontamination technologies are developed, they will be considered and used if appropriate.

Dismantlement Methods

Dismantlement methods can be divided into two basic types:

- Mechanical Methods - Mechanical methods machine the surfaces of the material that is being cut. These methods typically are capable of cutting remotely without

generating significant amounts of airborne contamination. This attribute makes these methods attractive for most of the contaminated piping, equipment, and components that will be removed at the HNP. The outside diameter machining method is best suited for cutting large bore contaminated piping. Smaller bore contaminated piping, tubing, and supports can be cut using any of the mechanical methods (e.g., band saws, reciprocating saws, hydraulic shears).

- Thermal Methods - Thermal methods melt or vaporize the surfaces of material that is being cut. The cutting debris is transported from the cut region with a gas jet or water spray. Although thermal methods are significantly quicker than mechanical methods, they have high power requirements and generate airborne contamination when used on contaminated systems in air. Generation of airborne contamination can be easily controlled when the method is used underwater. Thermal methods are suitable for segmenting large vessels in areas that can easily be sealed, filtered, or maintained underwater. The method is also suitable for use at a cutting station with air filtration. Thermal methods are appropriate for removing structural steel if it has been decontaminated or if a local contamination envelope with HEPA filtration is established. Appropriate lead paint removal controls must also be implemented.

These methods are the most practicable and widely utilized at this time. However, new dismantlement technologies developed prior to the commencement of actual decommissioning activities will be considered and used if appropriate.

Special or Unusual Programs

There are no special or unusual programs. All procedures and processes that will be used at the HNP are consistent with those considered in the Final Generic Environmental Impact Statement (FGEIS).

Removal of Low Level Radioactive Waste (LLW) and Compaction or Incineration

LLW will be processed in accordance with plant procedures and sent to LLW disposal facilities. Some LLW may be incinerated off-site at a licensed facility. No incineration will occur on-site. Onsite compaction is not expected to be used at this time.

Soil Remediation

Soils and pavement will be surveyed and characterized in accordance with the site radiological characterization program. 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 [10CFR20, subpart E] guideline values.

Processing and Disposal Site Locations

Currently, there are several facilities available for (1) the processing of waste materials to achieve volume reduction prior to disposal or (2) the disposal of low level radioactive waste. These locations include (but are not limited to) Chem Nuclear - Barnwell, South Carolina; Envirocare - South Clive, Utah; Scientific Ecology Group (SEG) - Oak Ridge, Tennessee; Hake - Memphis, Tennessee; and US Ecology - Oak Ridge, Tennessee.

Removal of Mixed Wastes

Mixed wastes will be managed according to all applicable federal and state regulations including NRC handling, storage, and transportation regulations.

Mixed wastes from the HNP will be transported only by authorized and licensed transporters and shipped only to authorized and licensed facilities. If technology, resources, and approved processes are available, processes will be evaluated to render the mixed waste non-hazardous.

Storage/Removal of Spent Fuel and GTCC Waste

Spent fuel and GTCC waste are currently planned to be stored wet in the spent fuel pool for the duration of the decommissioning until the DOE is ready to take such waste. Since the availability of a licensed DOE high level waste repository is uncertain, a precise determination of when spent fuel and GTCC waste will be removed from the HNP site is not possible. Current projections are that the turnover of spent fuel and GTCC waste to the DOE will be completed by January 2022 (based on an initial shipment start date in January 2006

and DOE's current acceptance schedule). CYAPCO will appropriately notify the NRC of any changes to its plans in this area.

SITE RESTORATION

Following dismantlement and decontamination of structures, systems, and components in a given work area, the structures and area will be surveyed to demonstrate that they meet NRC site release criteria [10CFR20, subpart E]. Successful completion of this survey in conjunction with oversight and confirmatory surveys by the NRC will allow remaining structures, systems, and components to be released for unrestricted use.

Following transfer of spent fuel and GTCC waste to a DOE facility (or to dry storage), structures, systems, and components used to support wet spent fuel storage will be decontaminated and/or dismantled. The portion of the site that has not yet been surveyed will be surveyed to demonstrate that it meets NRC site release criteria [10CFR20, subpart E]. Successful completion of this survey will allow remaining components and structures to be demolished by conventional methods. Ultimately, CYAPCO's license for the site will be terminated, and the site will be released for unrestricted use.

SCHEDULE FOR DECOMMISSIONING ACTIVITIES

Figure 1 presents the schedule and milestones for major decommissioning activities. This schedule is based on the assumption that spent fuel and GTCC waste will be retained in wet storage until the DOE transfers such waste to an offsite facility (as stated above, for planning purposes, this is considered complete in 2022). Activities requiring significant NRC licensing effort and resources are also shown on Figure 1.

ESTIMATE OF EXPECTED DECOMMISSIONING COSTS

In December 1996, CYAPCO filed an updated decommissioning cost estimate [Reference 5] with the Federal Energy Regulatory Commission (FERC). The decommissioning cost estimate was updated to reflect a pricing structure change for low level radioactive waste disposal at Barnwell, South Carolina, new industry experience in asbestos abatement, contaminated soil remediation activities, new industry experience in the final site survey, and scope of primary systems decontamination to lower exposures to workers during decommissioning. The current estimated cost to complete decommissioning is $426.7 million in 1996 dollars. CYAPCO will submit a further update on decommissioning funding matters, in light of the FERC rate case developments, in accordance with 10CFR50.82(8)(iii) and 50.82(c).

The current 1996 updated estimate, which will be identified as CY/FERC-96, is the basis for current HNP decommissioning plans and considered all decommissioning options - DECON, SAFSTOR, and ENTOMB. The CY/FERC-96 submittal assumes prompt removal/dismantling, (DECON), and is based on an analysis of the HNP systems, components, and structures. The estimate is also based on the radioactive waste disposal options available to CYAPCO in late 1996 (e.g., alternative waste disposal sites, barge transport, and various radwaste reprocessors). This estimate also includes provisions for site restoration, and for storage of spent fuel and GTCC wastes on the HNP site until 2022.

The CY/FERC-96 decommissioning cost estimate, expressed in terms of 1996 dollars, is summarized as follows:

- Planning/Preparation $ 76,248,000*
- Large Component Removal 46,550,000
- Dismantlement Activities 149,655,000
- Low Level Waste Shipping/Burial 71,928,000
- Spent Fuel Storage 82,345,000
- Total Cost to Remove/Dismantle CY $426,726,000

* Includes asbestos abatement, RCS decon, & SFP island

An external sinking fund, in accordance with 10CFR50.75(e), was established in April 1984, and amended in 1987, to accumulate CYAPCO decommissioning funds. Certification was provided in July 1990 [Reference 6] to certify the obligation of each wholesale purchaser from

CYAPCO to be responsible for its share of the HNP decommissioning costs pursuant to the terms of the power contracts.

ENVIRONMENTAL IMPACTS

CYAPCO has performed an environmental review to evaluate all actual or potential environmental impacts associated with the proposed decommissioning activities. This evaluation used as its basis NUREG-0586, "Final Generic Environmental Impact Statement (FGEIS) on Decommissioning of Nuclear Facilities," [Reference 1] and two previous site-specific environmental assessments from the conversion of the provisional operating license to a full-term operating license [Reference 2], and most recently, from the re-capture of the construction period time duration [Reference 3].

This environmental review concludes that the impacts due to decommissioning of the HNP will be bounded by the previously issued environmental impact statements, specifically the FGEIS and previously issued environmental assessments. This is principally due to the following reasons:

- The postulated impacts associated with the method chosen, DECON, have already been considered in the FGEIS.
- There are no unique aspects of the plant or decommissioning techniques to be utilized that would invalidate the conclusions reached in the FGEIS.
- The methods to be employed to dismantle and decontaminate the site are standard construction based techniques fully considered in the FGEIS .
- The site-specific person-rem estimate for all decommissioning activities has been conservatively calculated using methods similar to and consistent with the FGEIS.

Specifically, this review concludes that the HNP decommissioning will result in generally positive environmental effects, in that:

- Radiological sources that create the potential for radiation exposure to site workers and the public will be eliminated.
- The site will be returned to a condition that will be acceptable for unrestricted use.
- The thermal impact on the Connecticut River from facility operations will be eliminated.
- Noise levels in the vicinity of the facility will be reduced.
- Hazardous materials and chemicals will be removed.
- Local traffic will be reduced (fewer employees, contractors and materials shipments than are required to support an operating nuclear power plant).

Furthermore, the HNP decommissioning will be accomplished with no significant adverse environmental impacts in that:

- No site specific factors pertaining to the HNP would alter the conclusions of the FGEIS.
- Radiation dose to the public will be minimal.
- Radiation dose to decommissioning workers will be a fraction of the operating experience.
- Decommissioning is not an imminent health or safety problem and will generally have a positive environmental impact.

The total occupational radiation exposure (excludes public and transportation dose) impact for the proposed decommissioning activities has been conservatively estimated at approximately 935 person-rem, which is less than the 1,115 person-rem exposure estimate of the FGEIS for a PWR. This estimate is conservative and is based primarily on January 1997 plant dose rate surveys with no credit for (1) decay in place of isotopes (such as Co-60), (2) sequenced removal of higher dose rate components first, (3) aggressive ALARA program initiatives, (4) increased worker efficiency with experience, or (5) smaller scale decontamination initiatives.

Radiation exposure due to transportation of radioactive waste (includes both occupational and offsite radiation exposures) has been conservatively estimated The occupational exposure is approximately 61 person-rem. The cumulative radiation exposure to on-lookers

and the general public is approximately 11 person-rem. These values are bounded by the FGEIS values of 100 person-rem for transportation occupational exposure and 21 person-rem for the general public exposure.

Radiation exposure to off-site individuals for expected conditions, or from postulated accidents, is bounded by the Environmental Protection Agency's Protective Action Guides and NRC regulations. Doses due to the release of radionuclides in effluents will be negligible in comparison to allowable limits.

No significant impacts are expected from the disposal of low level radioactive waste. The total volume of HNP low level radioactive waste for disposal has been estimated at 283,117 cubic feet which is well bounded by the FGEIS volume of 647,600 cubic feet The actual HNP volume may be further reduced by additional utilization of volume reduction techniques.

Finally, the non-radiological environmental impacts from decommissioning are temporary and are not significant. The largest occupational risk associated with decommissioning HNP is related to the risk of industrial accidents. The primary environmental effects are short term, small increases in noise levels and dust in the immediate vicinity of the site, and truck traffic to and from the site for hauling equipment and waste. No significant socioeconomic impacts, other than those associated with cessation of operation (loss of jobs and taxes), or impacts to local culture, terrestrial or aquatic resources have been identified.

Given the low level of contamination and the expected volume of waste, disposal of low level radioactive waste off-site in a timely manner should be possible. If for any reason some portion of these wastes needs to be stored temporarily on-site, adequate space exists. No significant environmental impacts are anticipated from temporary on-site storage because all applicable federal and state regulations will be complied with.

REFERENCES

1. NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," August, 1988.
2. USNRC, Final Environmental Statement, Haddam Neck (Connecticut Yankee) Nuclear Power Plant, Docket No. 50-213, October 1973.
3. Letter, USNRC to CYAPCO, "Environmental Assessment for Proposed License Extension," dated November 23, 1987.
4. 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.
5. "Decommissioning Cost Study for the Connecticut Yankee Nuclear Power Plant," dated December, 1996.
6. Letter, CYAPCO to USNRC, "Decommissioning Financial Assurance Certification Report," dated July 18, 1990.

For a copy of the schedule please call CY Licensing , Janice Costin at ext. 3102