

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
Samuel J. Collins, Director

In the matter of)	
)	
CONNECTICUT YANKEE ATOMIC)	Docket No. 50-213
POWER COMPANY)	(10 CFR 2.206)
)	
Haddam Neck Plant)	

DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

On September 11, 1998, Ms. Rosemary Bassilakis submitted a petition pursuant to Title 10 of the Code of Federal Regulations, Section 2.206 (10 CFR 2.206), on behalf of the Citizens Awareness Network requesting (1) that the U.S. Nuclear Regulatory Commission (NRC) immediately revoke or suspend the Connecticut Yankee Atomic Power Company's (CYAPCO's) operating license for the Haddam Neck Plant (HNP), (2) an informal public hearing on the petition be held in the vicinity of the site, and (3) that the NRC consider requiring CYAPCO to conduct decommissioning activities under 10 CFR Part 72.

In support of their requests, the petitioners state that (1) CYAPCO demonstrates incompetence in creating and maintaining a safe work environment and an effective, well-trained staff; (2) CYAPCO is not conducting its decommissioning activities in accordance with its post-shutdown decommissioning activities report (PSDAR) and, therefore, poses an undue

risk to public health; (3) the problems encountered at the plant during the summer of 1998 might not have occurred if the requirements under 10 CFR Part 72 had been applied; and (4) the spent fuel stored onsite in the spent fuel pool (SFP) is the primary risk to public health and safety.

II. BACKGROUND

CYAPCO submitted written certifications of permanent cessation of operations of HNP and permanent removal of fuel from the HNP reactor vessel on December 5, 1996. Upon the docketing of these documents, in accordance with 10 CFR 50.82(a)(2), CYAPCO was no longer authorized to operate the reactor or to place fuel into the reactor vessel. CYAPCO submitted its PSDAR on August 22, 1997, which, among other items, described its schedule and commitments for decommissioning HNP. The licensee chose the DECON option for the plant.

The licensee plans to keep its spent fuel stored in the SFP until such time as the Department of Energy takes possession of it. Systems supporting the SFP are being modified to operate independently of the rest of the site so that decommissioning activities will have no impact on the SFP.

On March 4, 1997, the NRC issued a confirmatory action letter to document the licensee's commitments to improve its radiological controls program. Subsequently, on May 5, 1998, the NRC determined that CYAPCO had met its commitments to make those improvements.

The petitioners state that since May 5, 1998, a series of incidents that occurred at HNP raises questions regarding the ability of CYAPCO to protect worker and public health and safety and the environment. The incidents noted by the petitioners and a brief statement of NRC's enforcement actions taken to date are listed below:

1. On June 20, 1998, 800 gallons of radioactive liquid, containing approximately

2,200 microcuries total activity (excluding tritium and noble gases), were inadvertently released into the Connecticut River from the HNP waste test tank (WTT). The licensee did not report the release for 2 days.

This event is discussed in Inspection Report 50-213/98-03, which was issued on August 21, 1998. The release was within regulatory limits. However, the event resulted in a Severity Level IV violation because of the licensee's failure to declare an Unusual Event for an unplanned liquid discharge in which the total activity exceeds 1,000 microcuries (excluding tritium and noble gases). The event also contributed to a Severity Level IV violation for inadequate configuration control in that a valve required to be closed was open.

2. On July 7, 1998, 350 gallons of demineralized water were inadvertently spilled, spraying workers in the spent fuel building.

This event is discussed in Inspection Report 50-213/98-03, which was issued on August 21, 1998. The workers involved were neither contaminated nor injured. However, the event contributed to a Severity Level IV violation for inadequate configuration control in that valves red-tagged shut and verified as closed were found open.

3. On July 27, 1998, approximately 1,000 gallons of reactor coolant system (RCS) decontamination solution were spilled inside the plant.

This event is mentioned in Inspection Report 50-213/98-03, which was issued on August 21, 1998, as an example of inadequate configuration control in that a valve required to be full open was found less than full open, which contributed to pressure transients and vibrations that resulted in the spill. The partially closed valve contributed to a Severity Level IV violation for inadequate configuration control.

The event is discussed in detail in Inspection Report 50-213/98-04, which was issued on October 29, 1998. There was no release of radioactive water to the environment. However, the report found that the licensee did not perform walkdown inspections or visual leak

checks in the plant's pipe trenches during leak testing of the systems in preparation for the RCS decontamination. In addition, the report found that the licensee failed to adequately address potential transient conditions in the letdown system equipment. The NRC identified these deficiencies as apparent violations in that corrective actions to address weaknesses in configuration control were inadequate. The need for enforcement action related to this event is being evaluated by the NRC.

4. On August 11, 1998, the SFP demineralizer retention element and filter failed, allowing contaminated resin beads to enter plant piping.

This event is discussed in Inspection Report 50-213/98-04, which was issued on October 29, 1998. The failures were caused by a combination of increased flow and corrosion due to operating conditions created by the RCS decontamination procedure. The contaminated resin beads increased radiation levels in the pipe trench and containment, areas not readily accessible to workers. The NRC identified this event as an apparent violation in that the licensee's technical evaluations and procedural controls failed to ensure that contaminated resin remained inside the demineralizer tank.

The final disposition of the apparent violations identified in items 3 and 4 above will be taken in accordance with the NRC's enforcement policy. The NRC is currently evaluating the events and the need for enforcement action. The results of the evaluation will be made available to the public.

The series of events during the summer of 1998 prompted the NRC to conduct a number of conference calls and management meetings with the licensee. Conference calls were made to licensee management on July 8 and 15, 1998. During the calls, the licensee described the results of its preliminary root cause analyses of the events of June 20 and July 7, 1998, and presented the corrective actions it took to ensure that no similar events would occur during the RCS decontamination procedure. The licensee documented the commitments

it made during those calls in a letter dated July 16, 1998. As a result of the July 27 event, a management meeting was held at the plant site on August 3, 1998, to discuss additional corrective actions taken by the licensee. These commitments were documented by the licensee in a letter dated August 12, 1998. The Regional Administrator for NRC Region I met with licensee management on August 20, 1998, to discuss concerns raised by the licensee's performance. On September 3-4, 1998, Region I and Headquarters personnel conducted interviews at the site with 30 licensee managers, supervisors, and workers to obtain information on organizational and management issues associated with the events during the RCS decontamination.

The petitioners state that CYAPCO never finished its root cause analysis for the incident on June 20, 1998, before commencing similar work. By letter dated July 16, 1998, CYAPCO committed to completing a root cause analysis by July 27, 1998, but did not commit to limit or prohibit similar work until the analysis was completed. Inspection Report 50-213/98-03 stated that the licensee's preliminary analysis of the June 20 event found that the root cause was accidental bumping of a cross-connect valve, which allowed partial discharge of the "A" WTT while the "B" WTT was being discharged. Both tanks had been properly prepared for release; however, they were intended to be released one at a time. The licensee suspended WTT discharges until a number of corrective actions, such as installation of a locking device on the cross-connect valve, were taken to prevent recurrence of a similar event. After the preliminary corrective actions were taken, the licensee removed the prohibition on WTT discharges. The final root cause analysis was issued by CYAPCO as an internal document and was approved by the HNP Unit Director on July 29, 1998. However, there was no requirement to place the analysis on the docket.

The petitioners also state that, as of the time of their September 11, 1998 petition, they had not received a response to their letter dated July 7, 1998, to NRC Chairman Jackson, in which they requested that NRC delay the start of the RCS chemical decontamination. The

NRC staff issued a response to the petitioners in a letter dated August 31, 1998. The response was docketed on September 8, 1998, under accession number 9809080105.

III. DISCUSSION OF PETITIONERS' REQUESTS

The petitioners' first request is to revoke or suspend the HNP operating license. The petitioners' basis for the request is that CYAPCO continues to demonstrate incompetence in creating and maintaining a safe work environment and an effective, well-trained staff.

The petitioners present the series of events outlined in Section II, "Background" as evidence to support their basis.

The NRC considers the series of events that occurred during the summer of 1998 to have been challenges to the licensee's ability to maintain a safe work environment. As noted in Section II, NRC has taken enforcement action in response to the events. The enforcement actions are based on the Commission's regulations, which place certain requirements on a licensee. To place a licensee under the authority of the regulations, the Commission issues a license with appropriate conditions. As a result, the facility operating license becomes a mechanism through which the Commission holds a licensee to its regulatory responsibilities. Revoking or suspending the HNP license would not relieve the licensee of its responsibilities but could impede the NRC's ability to enforce regulatory requirements.

The events previously outlined did not result in a radiological release to the environment above regulatory limits, did not cause radiation exposure above regulatory limits, and did not cause injury to workers or the public. In addition, the permanently shutdown and defueled condition of the plant substantially reduces the risk to public health and safety. In light of these facts, the NRC believes that revoking or suspending the HNP license is not necessary or appropriate. The NRC's enforcement policy provides objective criteria for responding to licensee actions and is adequate to require CYAPCO to take appropriate corrective actions in

response to the events outlined. Therefore, the request to revoke or suspend the HNP operating license is denied.

The petitioners' second request is to hold an informal public hearing in the vicinity of the site. The petitioners' basis for the request is that CYAPCO is not conducting its decommissioning activities in accordance with its PSDAR and, therefore, poses an undue risk to the public.

With regard to the petitioners' request for an informal public hearing, the staff reviewed the PSDAR and found that CYAPCO has followed the sequence of activities included in the PSDAR as Figure 1, "CY Decommissioning Schedule." Additionally, in its PSDAR, CYAPCO committed to controlling radiation exposure to offsite individuals to levels less than both the Environmental Protection Agency's Protective Action Guidelines and NRC's regulations. Both radiation exposures to individuals and effluents to the environment due to decommissioning activities have been within regulatory limits. On the basis of these facts, the staff finds that there is no undue risk to public health and safety. The staff also determined that the petitioners neither provided new information that raised the potential for a significant safety issue (SSI) nor presented a new SSI or new information on a previously evaluated SSI. Therefore, the criteria for an informal public hearing on a petition submitted under the provisions of 10 CFR 2.206, contained in Part III (c) of Management Directive 8.11, are not satisfied and the petitioners' request for an informal public hearing has been denied.

The petitioners' third request is for the NRC staff to consider applying the requirements of 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste," to decommissioning activities at HNP. The petitioners present two bases for this request. First, the problems encountered during the decommissioning activities in the summer of 1998 might not have occurred if 10 CFR Part 72

had been applied at HNP. Second, the spent fuel stored in the SFP is the primary risk to public health and safety.

The problems encountered by the licensee during the summer of 1998 have been examined by the NRC. As illustrated in Section II, the problems were not due to a lack of regulatory requirements. Therefore, the staff believes that the requirements of 10 CFR Part 72, which address activities associated with an independent spent fuel storage installation (ISFSI), would not have been applicable to the decommissioning activities underway at HNP during the summer of 1998.

The second basis for the request concerns the safe storage of spent fuel at HNP. The staff's consideration of applying the requirements of 10 CFR Part 72 at HNP is presented in Section IV, below. Therefore, the third request is granted.

IV. APPLICATION OF 10 CFR PART 72 AT HNP

The staff reviewed the requirements of 10 CFR Part 72 and compared them with the requirements of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," which currently apply to HNP. The scope of Part 72, as stated in 10 CFR 72.2, is limited to the receipt, transfer, packaging, and possession of power reactor spent fuel and other radioactive materials associated with spent fuel storage. As a result, decommissioning activities under Part 72 would apply only to the portion of the 10 CFR Part 50 site licensed as an ISFSI. However, the licensee has not applied for a Part 72 license to establish the SFP as an ISFSI. Furthermore, the licensee does not intend to decommission the SFP until after the Department of Energy takes possession of the spent fuel. In light of these facts, Part 72 does not apply to HNP and, even if CYAPCO held a Part 72 license, the decommissioning provisions of that part would not apply to the decommissioning activities currently underway at the facility. Because the HNP facility consists of contaminated and activated structures, systems, and components

associated with a permanently defueled reactor as well as the SFP, the limited scope of Part 72 is not sufficient to cover the full range of decommissioning activities at a power reactor facility such as HNP.

In contrast, the scope of 10 CFR Part 50 applies to HNP and covers all the structures, systems, and components of a power reactor facility, including the SFP. Part 50 contains specific provisions for decommissioning power reactors in Section 50.82, as well as other applicable sections. It follows that the decommissioning of HNP must proceed under 10 CFR Part 50, at least until such time as the decommissioning activities at HNP fall completely within the scope of 10 CFR Part 72 and the licensee applies for and obtains a Part 72 license. As of now, the activities at HNP extend beyond the scope of Part 72, and Part 50 would continue to apply even if a licensed ISFSI were established at the site.

After considering the applicability of the regulations noted above, the staff concludes that 10 CFR Part 72 does not apply to HNP at this time because the licensee does not possess an ISFSI licensed under Part 72 and many of the decommissioning activities to be performed can not be accommodated within the scope of Part 72.

V. DECISION

For the reasons stated herein, the petition is denied in part and granted in part. The requests to revoke or suspend the HNP operating license and to hold an informal public hearing in the vicinity of the site are denied. The request to consider application of the requirements of 10 CFR Part 72 to HNP is granted. The staff's evaluation of the applicability of 10 CFR Part 72 at HNP is presented in Section IV; however, the staff finds that Part 72 does not apply to the decommissioning activities now underway at the plant.

The decision and the documents cited in the decision are available for public inspection in the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, D.C., and at the Local Public Document Room for HNP at the Russell Library, 123 Broad Street, Middletown, Connecticut.

In accordance with 10 CFR 2.206(c), a copy of this decision will be filed with the Secretary of the Commission for the Commission's review. As provided for by this regulation, the decision will constitute the final action of the Commission 25 days after issuance, unless the Commission, on its own motion, institutes a review of the decision within that time.

Dated at Rockville, Maryland, this 12th day of January 1999.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation