



Humboldt Bay Power Plant, Unit 3

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Tags:

Humboldt Bay was one of the very first plants to have operators join PROS. Operators that worked at Humboldt Bay went on to license and carry on the early operating experiences of that station. We did not have INPO at that time that could capture all of the lessons learned and pass them on to the future generation of nuclear operators. Here is Humboldt Bay today. Surviving a 6.5 earthquake on dry cask storage, there are some lessons learned.

John Conway Senior VP & CNO received a letter dated February 9, 2010 about an inspection was conducted on January 11-14, 2010, at the Humboldt Bay Power Plant, Unit 3 facility.

NRC Inspection Report 050-00133/10-001; 072-00027/10-001

This inspection was a routine, announced inspection of the Independent Spent Fuel Storage Installation (ISFSI) and decommissioning activities being conducted at the Humboldt Bay Power Plant, Unit 3 facility. In summary, the licensee was conducting site activities in compliance with regulatory and license requirements.

Operation of an ISFSI

- All spent nuclear fuel was moved to the ISFSI between August 2008 and December 2008 and had been safely stored in underground casks. One additional cask was purchased by the licensee for storage of radioactive components that will be removed from the reactor vessel and the spent fuel pool during future decommissioning efforts of the Humboldt Bay Unit 3 nuclear power plant. The ISFSI facility was well maintained and dose rates around the perimeter were being monitored. Perimeter dose rates measured since the fuel was loaded into the ISFSI have remained at background levels due to the shielding provided by the ISFSI structure and the old age of the spent fuel.

Temperature monitoring of each of the vaults holding the spent fuel casks have demonstrated that temperature levels have remained well below limits established for the ISFSI (Section 1).

- On January 9, 2010, just prior to the onsite inspection by the NRC, an earthquake of magnitude 6.5 occurred approximately 26 miles off the coast from the Humboldt Bay site. The earthquake was felt onsite and caused minor damage to onsite structures. No damage was found at the ISFSI. The power for the ISFSI was lost for approximately 3.5 hours due to damage at an offsite location. The onsite back-up power sources functioned as designed to provide power for the ISFSI. Because the event did not cause any damage to the ISFSI, no emergency classification was declared (Section 1).

Review of 10 CFR 72.48 Evaluations

- All safety screenings and evaluations had been performed in accordance with plant procedures. No findings of significance were identified (Section 2).

Maintenance and Surveillance

- The licensee conducted maintenance and surveillance activities in accordance with approved site procedures (Section 3).

Decommissioning Performance and Status Review

- Radioactive postings and boundaries were being maintained in accordance with regulatory requirements. Plant parameters were being maintained in accordance with plant procedures. In response to a number of recent minor decommissioning incidents, the licensee issued a Non-Conformance Report to identify the root and contributory causes of the incidents. The inspectors considered the licensee's efforts to retrain site workers and to take corrective actions to minimize the potential for future incidents involving decommissioning work as proactive. Occupational exposures for 2009 were well below regulatory limits. Radiation protection worker training was found to be in accordance site procedures and regulatory requirements. The licensee continued to implement programs in accordance with site procedures in an effort to control worker exposures to alpha contamination (Section 4).

Solid Radioactive Waste Management and Transportation of Radioactive Materials

- The licensee conducted radwaste handling and transportation related activities in accordance with procedure and regulatory requirements. (Section 5).

Report Details

Summary of Plant Status-Unit 3

Humboldt Bay Power Plant (HBPP), Unit 3, was being decommissioned by the licensee in accordance with commitments made in its Post-Shutdown Decommissioning Activities Report dated June 30, 2009. The licensee commenced with decommissioning during May 2009. At the time of this inspection, the licensee was in the process of preparing the reactor pressure vessel for flooding. The work included cutting and

removing a number of nozzle connections and installing a drain, level indicator, and fill systems. The licensee was also conducting asbestos abatement work in the drywell.

Other work in progress included removal of electrical equipment and low to no contamination piping from the seal oil room, main condenser area, and reactor feed pump room. The licensee continued to prepare for future cutting of alpha contaminated piping by testing the equipment to be used and training the personnel who will conduct the work. In other areas, the licensee continued to construct the future count room building, a 50 by 80 foot structure that will be used to conduct radiological analyses and to provide long-term storage of samples collected in the field. The licensee was also constructing the respirator facility, the location where previously used respirators will be decontaminated, cleaned, and prepared for reuse.

In the near future, the licensee plans to remove, package, and ship the two spent fuel storage racks that are currently stored in the spent fuel pool. The work will include the removal of the racks from the pool and placement of the racks in specially fabricated shipping containers. The racks will subsequently be shipped to an out of state disposal site.

The licensee continued to construct a new power generating plant on site property. Following the construction of the new power generating plant, the licensee plans to commence with the decommissioning of Units 1 and 2 by removing all of the hazardous materials from the structures. The licensee also plans to submit an exemption request to the NRC for alternate disposal of building rubble and soil collected during the demolition of Units 1, 2, and a small portion of Unit 3. If approved by the NRC, the licensee would be allowed to dispose of the waste material at a facility authorized to accept hazardous material with low levels of radioactive contamination.

Summary of Facility Status-ISFSI

The Humboldt Bay Independent Spent Fuel Storage Installation (ISFSI) was loaded with five Hi-Star HB casks between August 2008 and December 2008 containing all the spent nuclear fuel stored onsite at the HBPP. This removes all spent fuel assemblies from the spent fuel pool. A sixth Hi-Star cask was available at the site for eventual use in storing the Greater Than Class C (GTCC) waste associated with future dismantlement activities of the reactor vessel. The GTCC waste will be placed in the ISFSI for temporary storage and eventually transferred to a national permanent repository along with the spent fuel.

1 Operation of an ISFSI (60855)

1.1 Inspection Scope

The Humboldt Bay operational ISFSI inspectors reviewed selected records and conducted interviews with site personnel to verify ISFSI operations were in compliance with the Humboldt Bay License # 72-27, Amendment 2 and the Final Safety Analysis Report, Revision 2. A tour of the ISFSI was conducted to confirm the facility was being maintained in good physical condition for the safe storage of the spent fuel.