Yucca Mountain
Nuclear Fuel Locations and Associated Rail Facilities

Humboldt Bay Nuclear Power Plant, California
VI. HUMBOLDT BAY NUCLEAR POWER PLANT, CALIFORNIA

Facility Description
The Humboldt Bay power plant consists of two fossil fueled units, two mobile gas turbines and one decommissioned nuclear unit. Situated on a 143 acre site, the plant is located about three miles southwest of Eureka, California. Pacific Gas & Electric Company (PGE) owns the facility. The nuclear unit was completed in 1963 and is the oldest commercial nuclear power plant in California. In 1976 the plant was shut down for regular maintenance and because of the discovery of several previously unidentified ground faults. The potential risk of earthquake damage coupled with the relative small scale of the plant ultimately resulted in the plant being kept inoperative until it was decommissioned in 1985. At this time the plant was classified as a long term (30 years) storage facility. This classification included the federal government taking responsibility for the long term storage of the spent fuel with Yucca Mountain being the future destination. Approximately 390 spent fuel assemblies are kept at the site. As an interim storage option, PG&E considered preparing applications to build a concrete vaulted, independent spent fuel storage installation for more secure storage. In 2009, PG&E finished moving the high level radioactive waste spent nuclear fuel into dry cask storage on site. In 2010 the plant is planned for full decommissioning including the decommissioning and dismantling of the two fossil fuel powered generators on site.

The first of the following maps entitled “Humboldt Bay Nuclear Power Plant” shows the plant's location and adjacent surface transportation network. Population centers, interstate highways, public roads and at-grade road/railroad crossings in the vicinity are noted. The second map illustrates (at a larger scale) the plant itself and proximity to the adjacent track. The track is currently owned by the North Coast Railroad Authority (NCRA) which was formed in 1989 by the California Legislature under the North Coast Railroad Authority Act. The Act was intended to ensure continuation of railroad service in Northwestern California and envisioned the railroad playing a significant role in the transportation infrastructure serving a vital part of the State that suffers from restricted access and limited transport options. In 1992, the State purchased the railroad line from Willits and to the north. In 1995, a separate transaction added the railroad line from Healdsburg north to the NCRA's holdings and provided for a joint powers authority, the Northwestern Pacific Railroad Authority (NWPRA), to own the right of way from Healdsburg south to Schellville in Sonoma County. The railroad then feeds a 12 mile short line through Napa County and connects to the Union Pacific mainline at Fairfield-Suisun in Solano County.

This Humboldt Bay Nuclear Power Plant site is adjacent to a currently out-of-service North Coast Rail Authority rail line. Due to a poor state of track repair and damaged sections of the rail network, the North Coast Rail Authority has suspended operations on the track. Funding to repair this freight line and restore service is in the application process.

Rail Routes
Humboldt Bay Nuclear Power Plant to Hazen Map - This facility is located along an out of service rail line that was formerly the Northwestern Pacific Railroad and has since been under the ownership of two or three short line initiatives. This line is very expensive to maintain with numerous tunnels that have experienced cave-ins as well as numerous high bridges and other expensive maintenance items. The line never had the traffic revenue to justify all of this expense. While efforts are again underway to re-open this rail line, it is doubtful that it would ever be deemed safe enough for the transport of hazardous cargo. Therefore, it is assumed that the waste material would be trucked approximately 140 miles east to Redding where a truck to rail transfer facility could be constructed. The Union Pacific would then haul this traffic southward to Roseville and eastward over Donner Pass through Reno to Hazen.
Humboldt Bay Nuclear Power Plant to Caliente Map – The route would be southward to Roseville as described above, eastward over Donner Pass to Ogden, southward to Salt Lake City, then southwest through Las Vegas to Caliente.
Legend

Probable Routes*

Railroads
- Burlington Northern Railway Company
- Union Pacific Railroad
- All Other Railroad Companies

Nuclear Fuel Locations' Status
- Canceled
- Closed
- Open

* Represents the most "probable" direct route. Actual route to be determined through multiple agencies and stakeholders, N.I.C.