XI. HANFORD SITE, WASHINGTON

Facility Description
The Hanford site, previously known as Hanford Nuclear Reservation, Hanford Works, and Hanford Engineer Works, was established in 1943, and is now mostly decommissioned. The site is located on the Columbia River in Benton County, Washington, near the town of Hanford in the south central part of the state. This expansive 586 square mile government facility was the first full scale plutonium production reactor in the world. During the Cold War, the site included nine nuclear reactors and five massive plutonium processing complexes which produced plutonium for most of the 60,000 weapons in the U.S. nuclear arsenal. Being one of the first facilities of this type, many early safety practices were found to be inadequate. Today approximately 53 million gallons of high level radioactive waste remain on the site. This represents about two-thirds of the total volume of the nation’s high level radioactive waste. The site is the focus of the nation’s most significant environmental cleanup. Much of the current activity at the site is associated with cleanup activities however; the site still accommodates a commercial nuclear power plant, the Columbia Generating Station, and various other research functions.

The first of the following maps entitled “Hanford Site” shows the site vicinity and nearby railroad and road network. The site is bordered by the metropolitan areas of Richland, Kennewick, Pasco, and several smaller communities with a total population of about 230,000. The second of the maps illustrates (at a larger scale) the more than 40 miles of spur tracks on the site.

Over 40 miles of track on site are operated by the U. S. Government. The nearest “outside connection” is at Richland Junction on the far southeast side of the facility. Both Union Pacific and BNSF Railroads connect with the site railroad here. The largest nearby city is Pasco which is located about five miles west of the southeast boundary of the facility. BNSF has a major classification freight yard at Pasco and well over 40 trains per day including two Amtrak trains serve Pasco. Speeds of the lines vary from 79 miles per hour for Amtrak up to 60 miles per hour for freight traffic. All types of commodities are carried by BNSF and UP in and out of Pasco. It appears that the majority of the processing tasks of nuclear material at Hanford are located approximately 25 miles within the interior of the site.

Rail Routes
Hanford Site to Hazen Map - This very large facility is served by a U. S. Government Railroad comprised of 40 to 50 miles of trackage within the facility. This facility railroad interchanges with the BNSF and UP at Richland Junction. For a single line haul to Hazen, it is assumed that waste material would be interchanged to the UP at Richland Junction for further movement. The UP would haul the material southward and westward along the Columbia River into the south side of Portland, Oregon. From there, the traffic would move south to Roseville, California, then eastward over Donner Pass through Reno to Hazen.

Hanford Site to Caliente Map – From Richland Junction, the UP would carry these loads southwestward to their classification yard at Hinkle. At that point, this traffic would be placed in a train to Ogden. The traffic would move south to Salt Lake City then southwestward 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.

HANFORD SITE TO HAZEN

1 in = 100 miles
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.

HANFORD SITE TO CALIENTE
Yucca Mountain
Nuclear Fuel Locations and Associated Rail Facilities

Satsop Nuclear Power Plant, Washington
XII. SATSOP NUCLEAR POWER PLANT WASHINGTON

Facility Description
The Satsop Nuclear Power Plant is made up of WNP-3 and WNP-5, two of the five nuclear power plants for which construction was started by the Washington Public Power Supply System in 1977. In 1982, construction of WNP-3 and WNP-5 was stopped and only WNP-2 was completed and placed into operation. WNP-3 and WNP-5 are located on a 1600 acre site near Elma in Grays Harbor County, Washington in what is now referred to the Satsop Development Park. These, along with WNP-2, are currently known as the Columbia Generating Station.

The first of the following maps entitled “Satsop Nuclear Power Plant” shows the plant’s location south of Highway 12 and south of the east/west main line. Population centers and at-grade road/ railroad crossings in the vicinity are noted. The second of the maps illustrates (at a larger scale) the plant itself and surrounding road network.

The facility is located approximately three miles south of the town of Satsop. The Rail America owned short line Puget Sound & Pacific passes through the town on an east-west alignment. There is one freight train each direction per day carrying logs, paper, chemicals, and a few other commodities. Speed on this line is 25 miles per hour. There is no spur track connecting the Satsop Nuclear Power Plant to the Puget Sound & Pacific main track.

Rail Routes
Satsop Nuclear Power Plant to Hazen Map - Assuming that the track conditions of short line railroad Puget Sound & Pacific are deemed acceptable for the handling of nuclear waste, a truck-to-rail transfer point would have to be constructed along this rail line. Assuming a location about five miles east of Satsop, the material would be trucked approximately eight miles for transfer to rail. The Puget Sound & Pacific would haul the material approximately 35 miles eastward to Centralia, Washington. At Centralia, the material would be interchanged to the Union Pacific. The UP would take over the movement turning southward through Portland, Eugene, and Klamath Falls, Oregon and into Roseville, California. The loads would be placed into an eastward train for transport over Donner Pass through Reno and into Hazen.

If the short line’s trackage between Satsop and Centralia is not considered safe to handle this traffic, the material would have to be trucked to the Centralia area; a trans-load site would have to be built; and the UP would be the line haul carrier as described above to Hazen.

Satsop Nuclear Power Plant to Caliente – The route to Caliente would replicate the above UP routing but continue through Hazen to Ogden and then south to Salt Lake City. From Salt Lake City the traffic would move southwesterly to Caliente.
Approximate Location of Satsop Nuclear Power Plant (Part of WPPSS)

### Railroads
- **NAME, CLASS**
  - BNSF Railway Company, 1

### Roads
- **Primary US & State Highways**
- **Secondary State & County Highways**

**Vicinity Map**
SATSOPO NUCLEAR POWER PLANT TO HAZEN

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.

1 in = 100 miles