

**Transportation Status Report
Yucca Mountain Project**

August 2002

Potential Waste Transportation Through Mineral County To Yucca Mountain

There are a number of generator sites in the western United States that will be shipping spent nuclear fuel and high-level waste to Yucca Mountain. These sites are comprised of commercial reactor sites, and DOE facilities in four western states. Figure 1-1 shows the location of generator sites and the likely routes connecting to U.S. 95 and Yucca Mountain. Table 1-1 lists the generator site and the number of truck shipments likely to occur from western reactor sites. Those located to the east will probably use highway alternatives such as Interstate 80 to U.S. 93 and 6 in Nevada. The Hanford site and WPPSS in eastern Washington will potentially generate the largest number of shipments to Yucca Mountain.

Using interstate routes would cause Hanford shipments to pass through major metropolitan areas such as Salt Lake City and Las Vegas, or alternatively Portland Oregon and cities in California. U.S. 95 provides easy access to Yucca Mountain and avoids larger metropolitan areas encountered using the Interstate Highway system. Also, U.S. 95 offers overall better highway conditions with few high mountain passes and a lower incidence of winter driving conditions as compared to other highway options.

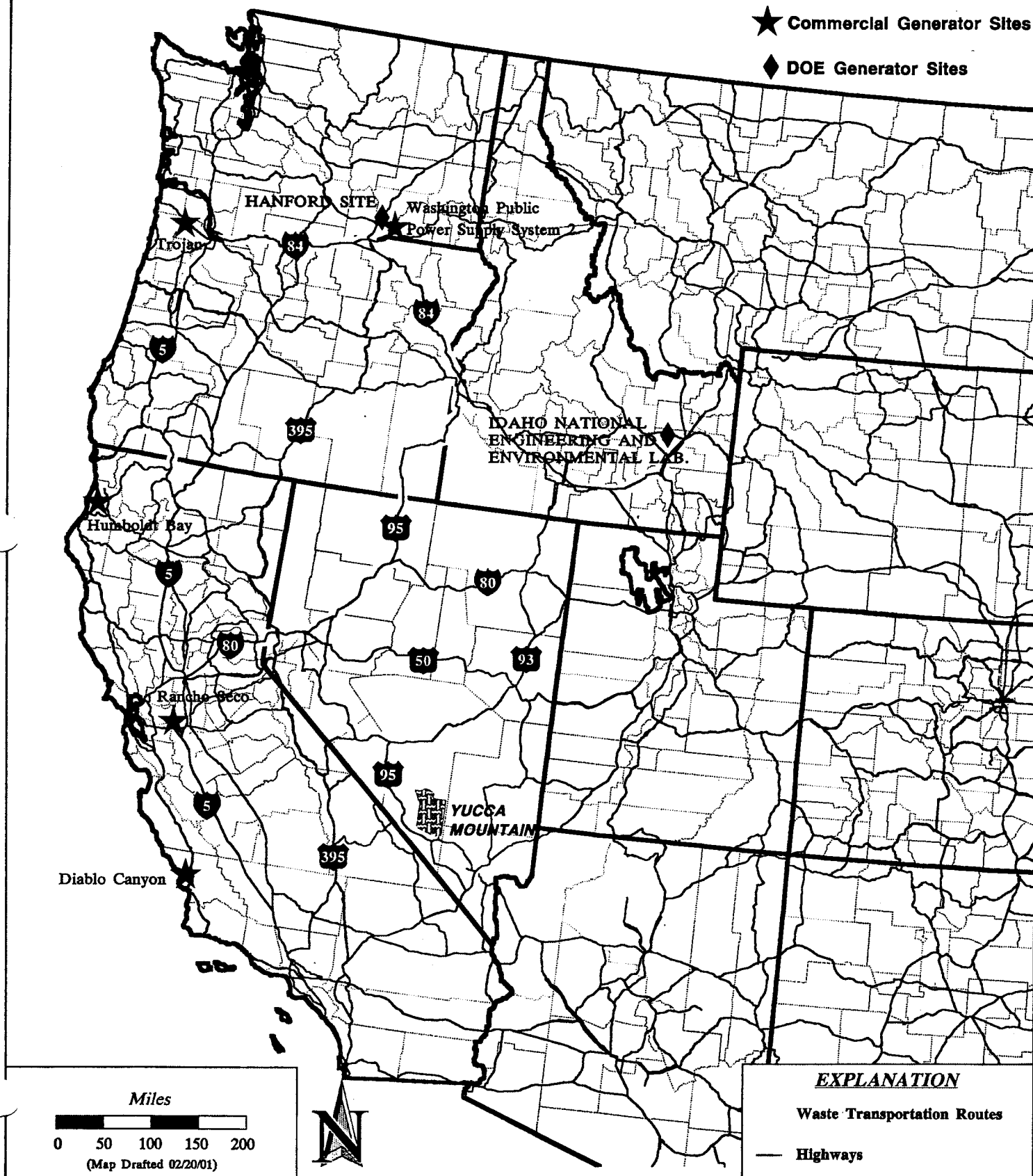
Table 1-1
Potential Generator Sites and Shipment Volumes
To Utilize U.S. 95 through Mineral County

Reactor Site	Yucca Mountain Shipments	
	(2010 – 2033) Proposed Action	(2010 – 2048) Modules 1 & 2
Humboldt Bay (Eureka, CA.)-SNF	44	44
Rancho Seco (Sacramento, CA)-SNF	124	124
Diablo Canyon I (San Luis Obispo, CA)-SNF	327	617
Diablo Canyon II (San Luis Obispo, CA)-SNF	305	691
INEEL (Twin Falls, ID)-SNF	1,388	1,467
INEEL (Twin Falls, ID)-HLW	0	1,300
Trojan (Astoria, OR.)-SNF	195	195
Hanford (Hanford, WA.)-SNF	754	809
Hanford (Hanford, WA.)-HLW	1,960	14,500
WPSS 2 (Keniwick WA.)-SNF	353	736
Total	5,450	20,483

Source: DOE 1999, EIS Yucca Mountain Project. SNF-Spent Nuclear Fuel, HLW-High-Level Waste.

The greater amounts shown in modules 1 & 2 (Table 1-1) generally reflect continued operations at nuclear power plants across the country and other projected waste generation volumes at DOE facilities. Shipments from Hanford, Trojan Site, WPPSS, Humboldt Bay, and Rancho Seco are most likely to pass through the Hawthorne area. It is possible that Diablo Canyon and Idaho National Engineering and Environmental Laboratory will also ship through the Hawthorne area.

Transportation Routes to Yucca Mountain From Western Generator Sites Using US 95



Under federal regulation, states are allowed to designate alternate highway routes. The State of Nevada has yet to undertake this process. In 1989, the State has undertaken an initial process to identify routes to Yucca Mountain. The initial study did not thoroughly consider western generator sites although Interstate 80 was considered.

However, recent shipping campaigns to the WIPP site in New Mexico and low-level waste shipment to the Nevada Test Site strongly suggest that alternate route designation largely serve to avoid major metropolitan areas.

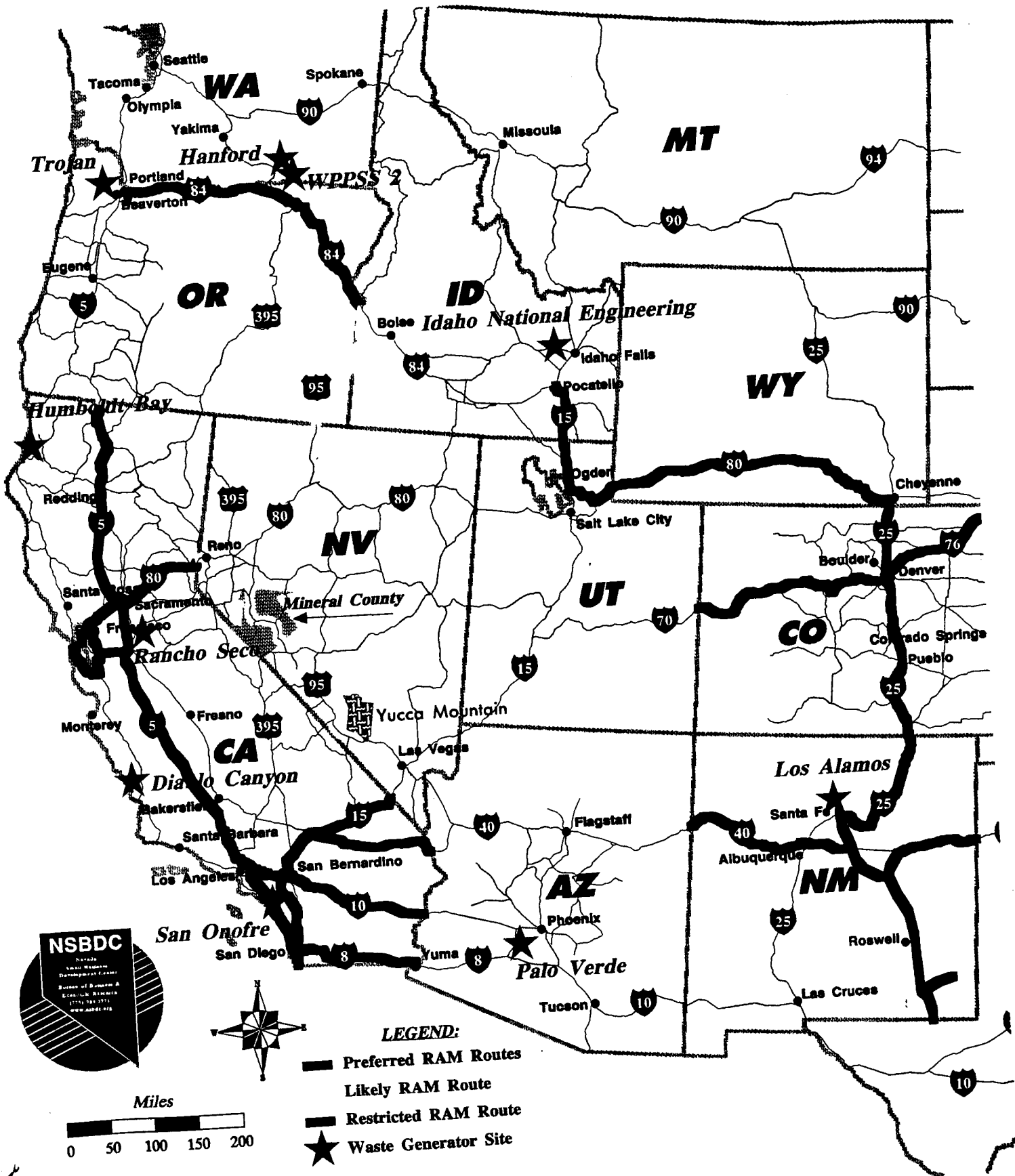
Figure 1-2 shows the current highway route designations for western states. These designations are likely to influence the selection of routes needed to access Yucca Mountain. Some of the routes were designated in response to WIPP shipments. California, Oregon, Utah and Colorado all have preferred route segments. In one instance, the State of Colorado has restricted use of Interstate 70 east of Denver. This route passes through the Central Rocky Mountain region and connects into I-15 going south to Las Vegas. Without the use of I-70, waste shipments from the east will continue on Interstate 80 and avoid the Las Vegas Valley.

Although the State of Nevada has not designated preferred routes, shipments of transuranic waste from the Nevada Test Site to the WIPP site in New Mexico utilize U.S. 95 to Highway 127 in Nevada. Again the purpose of using this route is to avoid going through major metropolitan areas. Other route designations by Oregon and California may force routes that ultimately pass through northern Nevada and Mineral County. It is not known to what extent surrounding states may choose to adjust preferred and restricted routes.

Final route designations and mode of transportation may not be decided until at least 2005. According to DOE, decisions on whether to use highways or railroads will not be made until 2005, or at least five years before the Yucca Mountain repository can begin receiving the waste. No rail or highway routes have been selected and no decisions will be made until the Department has had an opportunity to talk to states about routes that have been chosen.

Routes to Yucca Mountain haven't been picked. But, if the site in the southern Nevada desert 90 miles northwest of Las Vegas, becomes the country's nuclear repository, U.S. 95 might be judged a good way to reach the dump, according to the state's nuclear transportation expert. "It's absolutely credible and possible," said Robert Halstead, who's worked on the route issue for 24 years and advised Nevada since 1988. Halstead, who lives in Wisconsin, also claims a U.S. 95 designation would bring radioactive waste through Reno and Sparks on Interstate 80 before trucks turn south at Fernley.

Halstead claims the federal government might be left with U.S. 95 as one of the few highway alternatives, especially for waste shipments from the Pacific Northwest, if its preferred routes are blocked by legal, political, financial or safety considerations.



He also stated "along with truckloads of nuclear waste on I-80, rail shipments from California and the Pacific Northwest would come through Reno and Sparks, the worst case is a total of 10 to 20 percent. (Reno Gazette-Journal 7/10/02).

Rail shipments to an interim site could bring waste shipments from western generators. Shipments through Reno/Sparks would also mean that rail shipments would pass through the Fallon area enroute to an interim facility or to access Yucca Mountain either through a rail spur at Beowawe (Crescent Valley Option) or Elgin Nevada (Lincoln County Route). It is unclear whether the branch line passing through Reno/Sparks would be used. Foreign reactor shipments that occurred several years ago utilized the Feather River branch line of the Union Pacific. This rail route passes north of western Nevada communities.

Other Waste Shipments

DOE continues to ship low-level waste to the Nevada Test Site (NTS) from locations throughout the United State. Attached to this report are the two most recent quarterly reports for low-level radioactive waste shipments to the NTS. Waste shipments on U.S. 95 occurred during the first quarter (October to December 2001). A total of six shipments came from Lawrence Livermore National Laboratories in Livermore, California. There were no shipments from January to March of 2002. There were no low-level waste shipments through the Las Vegas Valley for the six months ending March 2002.

The Goshute Private Storage fuel proposal continues to move through the regulatory process. Final shipping logistics are unknown at this point. Rail and or truck could be used to transport spent nuclear fuel to the site in northwestern Utah.

LOW-LEVEL RADIOACTIVE WASTE SHIPMENTS TO THE NE TEST SITE
FIRST QUARTER REPORT, FY2002 (OCTOBER TO DECEMBER, 2001)

GENERATOR	VOLUME (FT3)	LEGEND	SHIPMENTS	ROUTES
ABERDEEN PROVING GROUNDS (MD)	846		2	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
FERMCO (OH)	align="right">103,239		44	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			38	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			82	TOTAL
LAWRENCE LIVERMORE NATIONAL LAB (CA)	align="right">18,152		19	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			6	I-80, ALT-50, US-95 <i>Churchill County Route</i>
			25	TOTAL
MOUND (OH)	align="right">20,155		4	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			5	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			1	I-40, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95
			10	TOTAL
OAK RIDGE (TN) Includes Oak Ridge National Lab, ORNL-Y12, DOE-OR, British Nuclear Fuels	133,112		89	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95)
PADUCAH (KY)	align="right">12,109		3	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			19	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			3	I-40, AZ-68, NV-163, US-95, NV-164, I-15, NV-160, US-95
			25	TOTAL
PRINCETON PLASMA PHYSICS (NJ)	align="right">2,620		1	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			1	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			2	TOTAL
RMI-EARTHLINE (OH)	5,686		3	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
ROCKY FLATS (CO)	align="right">159,038		74	I-70, US-50, I-15, US-50, US-6-50, US-6, US-95
			1	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			75	TOTAL
SANDIA NATIONAL LAB (NM)	2,500		3	I-40, AZ-68, NV-163, US-95, I-515, NV-146, I-15, NV-160, US-95
SANDIA NATIONAL LAB (CA)	1,764		3	I-15, CA-127, CA-178, NV-372, NV-160, US-95
SAVANNAH RIVER SITE (SC)	1,614		2	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
WEST VALLEY (NY)	722		1	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
TOTALS	461,557		322	

NOTE: The routes described above are the core routes used by motor carriers hauling low-level waste to the Nevada Test Site.

**LOW-LEVEL RADIOACTIVE WASTE SHIPMENTS TO THE NE . TEST SITE
SECOND QUARTER REPORT, FY2002 (JANUARY TO MARCH, 2002)**

GENERATOR	VOLUME (FT3)	LEGEND	SHIPMENTS	ROUTES
FERMCO (OH)	50,700		1	I-40, AZ-68, NV-163, US-95 (LAS VEGAS SPAGHETTI BOWL)
			46	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, US-95, NV-164, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
			47	TOTAL
LAWRENCE LIVERMORE NATIONAL LAB (CA)	4,090		5	CA-58, I-15, CA-127, CA-178, NV-372, NV-160, US-95
MOUND (OH)	22,500		10	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95)
OAK RIDGE (TN) Includes Oak Ridge National Lab, ORNL-Y12, DOE-OR, British Nuclear Fuels	85,500		70	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95) OR (I-40, US-95, NV-164, I-15, CA-127, CA-178, NV-372, NV-160, US-95)
PADUCAH (KY)	11,500		10	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, NV-160, US-95)
PRINCETON PLASMA PHYSICS (NJ)	10,800		4	NORTHERN ROUTE (I-80, US-93, US-6, US-95)
			19	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95)
			1	I-70, US-50, I-15, US-50, US-6-50, US-6, US-95
			1	I-40, US-89, UT-20, I-15, UT-56, NV-319, US-93, NV-375, US-6, US-95
			25	TOTAL
BOEING ROCKETDYNE (CA)	1,130		1	I-15, CA-127, CA-178, NV-372, NV-160, US-95)
ROCKY FLATS (CO)	235,000		117	I-70, US-50, I-15, US-50, US-6-50, US-6, US-95
SANDIA NATIONAL LAB (NM)	7,740		4	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, NV-160, US-95)
SAVANNAH RIVER SITE (SC)	13,400		15	SOUTHERN ROUTE (I-40, US-95, NV-164, I-15, CA-127, NV-373, US-95) OR (I-40, US-95, NV-164, I-15, NV-160, US-95)
TOTALS	442,360		304	

NOTE: The routes described above are the core routes used by motor carriers hauling low-level waste to the Nevada Test Site.