DoE 2007a

Draft

Supplemental Environmental Impact Statement

for a

Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada

Summary

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

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Table 8-14. Cumulative transportation-related health effects.

Category	Worker dose (person-rem)	General population dose (person-rem)	Traffic fatalities
Historical DOE shipments (DIRS 101811-DOE 1996, all)	330	230	NL
Reasonably foreseeable actions			
Private Fuel Storage Facility (DIRS 157761-NRC 2001, all)	24	184	0.78
Sodium-Bonded Spent Nuclear Fuel (DIRS 157167-DOE 2000, all)	0.0044	0.032	0.0001
Idaho High-Level Waste and Facilities (DIRS 179508-DOE 2002 , all)	520	2,900	0.98
Surplus Plutonium Disposition (DIRS 118979-DOE 1999, all)	60	67	0.053
Sandia National Laboratories Site-Wide EIS (DIRS 157155-DOE 1999, all)	94	590	1.3
Depleted Uranium Hexafluoride (DIRS 152493-DOE 1999, all)	--	750	4
Tritium Production in a Commercial Light Water Reactor (DIRS 157166-DOE 1999, all)	16	80	0.06
Parallex Project (DIRS 157153-DOE 1999, all)	0.00001	0.00007	0.00005
Los Alamos National Laboratory Site-Wide EIS (DIRS 157154-DOE 1999, all)	~~580~~	~~310~~	~~8~~
Plutonium Residues at Rocky Flats (DIRS 155932-DOE 1998, all)	2.1	1.3	0.0078
Import of Russian Plutonium-238 (DIRS 157156-DOE 1993, all)	1.8	4.4	0.0036
Nevada Test Site Expanded Use (DIRS 101811-DOE 1996, all)	--	150	8
Spent nuclear fuel management (DIRS 101802-DOE 1995, all; DIRS 101812- DOE 1996, all)	360	810	0.77
Waste Management PEIS (DIRS 101816-DOE 1997, all)	16,000	20,000	36
Waste Isolation Pilot Plant (DIRS 148724-DOE 1997, Appendix E)	790	5,900	5
Molybdenum-99 production (DIRS 101813-DOE 1996, all)	240	520	0.1
Tritium supply and recycling (DIRS 103208-DOE 1995, all)	--	--	0.029
Surplus HEU disposition (DIRS 103216-DOE 1996, all)	400	520	1.1
Storage and Disposition of Fissile Materials (DIRS 103215-DOE 1996, all)	--	2,400	5.5
Stockpile Stewardship (DIRS 103217-DOE 1996, all)	--	38	0.064
Pantex (DIRS 103218-DOE 1996, all)	250	490	0.006
West Valley (DIRS 179454-DOE 2003, all)	520	410	0.15
S3G and D1G prototype reactor plant disposal (DIRS 103221-DOE 1997, all)	2.9	2.2	0.010
S1C prototype reactor plant disposal (DIRS 103219-DOE 1996, all)	6.7	1.9	0.0037
Container system for Naval spent nuclear fuel (DIRS 101941-USN 1996, all)	11	15	0.045
Cruiser and submarine reactor plant disposal (DIRS 103479-USN 1996, all)	5.8	5.8	0.00095
Submarine reactor compartment disposal (DIRS 103477-USN 1984, all)	--	0.053	NL
Uranium billets (DIRS 103189-DOE 1992, all)	0.5	0.014	0.00056
Nitric acid (DIRS 103212-DOE 1995, all)	0.43	3.1	NL
Los Alamos Relocation of Area 18 FEIS (DIRS 162639-DOE 2002, all)	< 1	< 1	0.00020
Construction, Operation of Depleted DUF6 Conversion Facility, Portsmouth, Ohio FEIS (DIRS 182373-DOE 2004, all)	520	29	0.45
Enrichment Facility in Lea County, New Mexico (DIRS 182375-NRC 2005, all)	~~10~~ 300	~~170~~ 5000	~~0.6~~ 18 for 30 years; per year
Decontamination, Demolition, and Removal of Facilities at West Valley (DIRS 182374-DOE 2006, all)	14	11	0.013
Hanford Site Solid Waste Program FEIS (DIRS 182376-DOE 2004, all)	~~1,200~~	~~11,000~~	~~2.4~~ withdrawn
Moab Uranium Mill Tailings FEIS (DIRS 182377-DOE 2005, all)	0.09	3.4	0.33
MOX Fuel Fabrication at Savannah River Site (DIRS 178816-NRC 2005, all)	530	560	0.056
GNEP	In preparation	In preparation	In preparation
Complex Transformation PEIS (From Table 6.3.2.1 of DOE 2007b) 4,667	In preparation	~~800~~ In preparation	In preparation 28; 0.48/0.0006; 2.2
General radioactive material transportation (From Table 6.3.2.1 of DOE 2007b)			
1943 to 2073	350,000	300,000	28
Subtotal of non-repository-related transportation impacts	370,000	350,000	100
1943 to 2073			
Proposed Action →	5,600–~~5,900~~	1,100–~~1,200~~	2.7–2.8 ← USED
Module 1	13,000	2,300–2,500	5.9–6.1
Module 2	14,000–15,000	2,400–2,700	6.4–6.6
Total collective dose (total latent cancer fatalities) ~~and total traffic fatalities~~			
Proposed Action → (383,000 ← 382,940)	~~380,000~~ (230)	~~350,000~~ (210)	100
Module 1	380,000 (230)	350,000 (210)	110
Module 2 **	390,000 (230)	350,000 (210)	110

NL = Not listed; information was not listed in the reference.

~~343~~,917 → 344,000

→ Reasonably Foreseeable Future (25,~~300~~ ← 25,339) (42,~~200~~ ← 42,246) 85

** includes all potential HLW; GTCC; and SNF.