APPENDIX L
TRANSPORTATION RISK ANALYSIS

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TRANSPORTATION RISK

Tables L-1 through L-29 provide the detailed analysis results for Factor 5. Factor 5 evaluates human health impacts associated with the transportation of contact-handled (CH) and remote-handled (RH) transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP). Impacts are presented for the baseline and engineered alternative/configuration combinations on a per-shipment and cumulative WIPP lifetime basis. The analysis methodology, results overview, and conclusions are presented in Section 3.5.

TABLE L-1

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE BASELINE

Waste Origin Site	To Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	1.06×10^{-01}	6.36×10^{-01}	5.45×10^{-07}	1.78×10^{-03}
INEL	WIPP	8.81×10^{-03}	5.27×10^{-02}	5.86×10^{-08}	5.97×10^{-04}
LANL	WIPP	1.01×10^{-03}	6.14×10^{-03}	2.81×10^{-08}	6.54×10^{-04}
RFETS	WIPP	6.03×10^{-05}	3.53×10^{-04}	7.61×10^{-10}	4.09×10^{-03}
SRS	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.13×10^{-02}
Small CH-TRU Waste Sites					
AMES	ANL-E	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	9.75×10^{-03}	5.64×10^{-02}	5.86×10^{-08}	8.44×10^{-04}
ANL-E	WIPP	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	4.75×10^{-04}
BETTIS	MOUND	2.69×10^{-03}	1.33×10^{-02}	5.86×10^{-08}	6.14×10^{-04}
	WIPP	1.06×10^{-02}	6.10×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
ETEC	NTS	1.78×10^{-02}	9.27×10^{-02}	3.28×10^{-07}	4.02×10^{-04}
	WIPP	4.17×10^{-02}	2.55×10^{-01}	3.28×10^{-07}	2.08×10^{-04}
KAPL	MOUND	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1.06×10^{-02}	6.10×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
LBL	LLNL	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	6.05×10^{-05}
LLNL	WIPP	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	5.22×10^{-04}
MOUND	WIPP	1.06×10^{-04}	6.10×10^{-04}	5.86×10^{-10}	2.44×10^{-02}
MU	ANL-E	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	1.90×10^{-04}
NTS	WIPP	7.45×10^{-03}	4.54×10^{-02}	5.86×10^{-08}	7.24×10^{-04}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	1.26×10^{-05}	1.60×10^{-03}
PADUCAH	ORNL	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1.01×10^{-04}	5.88×10^{-04}	5.86×10^{-10}	6.99×10^{-03}

TABLE L-1 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE BASELINE

Waste Origin Site	To Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	3.45×10^{-06}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	4.27×10^{-07}

TABLE L-2

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY BASELINE

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$6.05 \times 10^{+02}$	$3.63 \times 10^{+03}$	3.11×10^{-03}	$1.02 \times 10^{+01}$
INEL	WIPP	4974	$4.38 \times 10^{+01}$	$2.62 \times 10^{+02}$	2.91×10^{-04}	$2.97 \times 10^{+00}$
LANL	WIPP	2835	$2.86 \times 10^{+00}$	$1.74 \times 10^{+01}$	7.97×10^{-05}	$1.85 \times 10^{+00}$
RFETS	WIPP	931	5.61×10^{-02}	3.29×10^{-01}	7.08×10^{-07}	$3.81 \times 10^{+00}$
SRS	WIPP	2827	3.05×10^{-01}	$1.71 \times 10^{+00}$	1.66×10^{-06}	$6.02 \times 10^{+01}$
	Subtotal		**$6.52 \times 10^{+02}$**	**$3.91 \times 10^{+03}$**	**3.48×10^{-03}**	**$7.90 \times 10^{+01}$**
Small CH-TRU Waste Sites						
AMES	ANL-E	1	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1	9.75×10^{-03}	5.64×10^{-02}	5.86×10^{-08}	8.44×10^{-04}
ANL-E	WIPP	5	4.88×10^{-04}	2.82×10^{-03}	2.93×10^{-09}	2.38×10^{-03}
BETTIS	MOUND	17	4.57×10^{-02}	2.26×10^{-01}	9.96×10^{-07}	1.04×10^{-02}
	WIPP	17	1.80×10^{-01}	$1.04 \times 10^{+00}$	9.96×10^{-07}	1.80×10^{-02}
ETEC	NTS	2	3.56×10^{-02}	1.85×10^{-01}	6.56×10^{-07}	8.04×10^{-04}
	WIPP	2	8.34×10^{-02}	5.10×10^{-01}	6.56×10^{-07}	4.16×10^{-04}
KAPL	MOUND	1	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1	1.06×10^{-02}	6.10×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
LBL	LLNL	1	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	6.05×10^{-05}
LLNL	WIPP	136	1.30×10^{-02}	7.63×10^{-02}	7.97×10^{-08}	7.10×10^{-02}
MOUND	WIPP	29	3.07×10^{-03}	1.77×10^{-02}	1.70×10^{-08}	7.08×10^{-01}
MU	ANL-E	1	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	1.90×10^{-04}
NTS	WIPP	66	4.92×10^{-01}	$3.00 \times 10^{+00}$	3.87×10^{-06}	4.78×10^{-02}
ORNL	WIPP	119	$1.57 \times 10^{+01}$	$8.78 \times 10^{+01}$	1.50×10^{-03}	1.90×10^{-01}
PADUCAH	ORNL	1	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1	1.01×10^{-04}	5.88×10^{-04}	5.86×10^{-10}	6.99×10^{-03}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	3.45×10^{-06}

TABLE L-2 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY BASELINE

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	6.30×10^{-05}	3.84×10^{-04}	1.76×10^{-09}	1.28×10^{-06}
	Subtotal		$\mathbf{1.66 \times 10^{+01}}$	$\mathbf{9.30 \times 10^{+01}}$	$\mathbf{1.51 \times 10^{-03}}$	$\mathbf{1.06 \times 10^{+00}}$
	TOTAL		$\mathbf{6.69 \times 10^{+02}}$	$\mathbf{4.00 \times 10^{+03}}$	$\mathbf{4.99 \times 10^{-03}}$	$\mathbf{8.01 \times 10^{+01}}$

TABLE L-3

RADIOLOGICAL DOSES PER SHIPMENT FOR RH-TRU WASTE BASELINE

Waste Origin Site	To Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major RH-TRU Waste Sites					
HANFORD	WIPP	1.12×10^{-01}	4.75×10^{-01}	2.08×10^{-06}	8.27×10^{-05}
ORNL	WIPP	2.80×10^{-02}	4.08×10^{-01}	5.87×10^{-07}	9.86×10^{-05}
Small RH-TRU Waste Sites					
BATTELLE	ORNL	1.90×10^{-04}	3.50×10^{-03}	1.14×10^{-08}	4.73×10^{-05}
	WIPP	5.43×10^{-04}	1.14×10^{-02}	1.14×10^{-08}	5.91×10^{-05}
BETTIS	ORNL	2.18×10^{-04}	4.17×10^{-03}	9.59×10^{-09}	7.11×10^{-06}
	WIPP	4.57×10^{-04}	9.63×10^{-03}	9.59×10^{-09}	8.89×10^{-06}
INEL	WIPP	3.00×10^{-03}	6.48×10^{-02}	7.19×10^{-08}	2.19×10^{-05}
KNOLL	ORNL	7.07×10^{-04}	1.35×10^{-02}	2.13×10^{-08}	9.55×10^{-06}
	WIPP	1.01×10^{-03}	2.13×10^{-02}	2.13×10^{-08}	8.89×10^{-06}
LANL	WIPP	3.86×10^{-04}	8.49×10^{-03}	3.90×10^{-08}	8.02×10^{-06}
SRS	WIPP	2.38×10^{-02}	4.19×10^{-01}	4.64×10^{-07}	1.47×10^{-04}

TABLE L-4

CUMULATIVE RADIOLOGICAL DOSES FOR RH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY BASELINE

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major RH-TRU Waste Sites						
HANFORD	WIPP	5176	$5.80 \times 10^{+02}$	$2.46 \times 10^{+03}$	1.08×10^{-02}	4.28×10^{-01}
ORNL	WIPP	2002	$5.61 \times 10^{+01}$	$8.17 \times 10^{+02}$	1.18×10^{-03}	1.97×10^{-01}
		Subtotal	**$6.36 \times 10^{+02}$**	**$3.28 \times 10^{+03}$**	**1.20×10^{-02}**	**6.25×10^{-01}**
Small RH-TRU Waste Sites						
BATTELLE	ORNL	123	2.34×10^{-02}	4.31×10^{-01}	1.40×10^{-06}	5.82×10^{-03}
	WIPP	123	6.68×10^{-02}	$1.40 \times 10^{+00}$	1.40×10^{-06}	7.27×10^{-03}
BETTIS	ORNL	3	6.54×10^{-04}	1.25×10^{-02}	2.88×10^{-08}	2.13×10^{-05}
	WIPP	3	1.37×10^{-03}	2.89×10^{-02}	2.88×10^{-08}	2.67×10^{-05}
INEL	WIPP	109	3.27×10^{-01}	$7.06 \times 10^{+00}$	7.84×10^{-06}	2.39×10^{-03}
KNOLL	ORNL	57	4.03×10^{-02}	7.70×10^{-01}	1.21×10^{-06}	5.44×10^{-04}
	WIPP	57	5.76×10^{-02}	$1.21 \times 10^{+00}$	1.21×10^{-06}	5.07×10^{-04}
LANL	WIPP	249	9.61×10^{-02}	$2.11 \times 10^{+00}$	9.71×10^{-06}	2.00×10^{-03}
SRS	WIPP	56	$1.33 \times 10^{+00}$	$2.35 \times 10^{+01}$	2.60×10^{-05}	8.23×10^{-03}
		Subtotal	**$1.94 \times 10^{+00}$**	**$3.65 \times 10^{+01}$**	**4.88×10^{-05}**	**2.68×10^{-02}**
		TOTAL	**$6.38 \times 10^{+02}$**	**$3.32 \times 10^{+03}$**	**1.20×10^{-02}**	**6.52×10^{-01}**

TABLE L-5

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVES No. 1 & 77 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	9.11×10^{-02}	5.46×10^{-01}	4.68×10^{-07}	1.06×10^{-04}
INEL	WIPP	7.93×10^{-03}	4.75×10^{-02}	5.27×10^{-08}	2.38×10^{-05}
LANL	WIPP	1.42×10^{-03}	8.69×10^{-03}	3.98×10^{-08}	2.71×10^{-05}
RFETS	WIPP	4.18×10^{-05}	2.45×10^{-04}	5.27×10^{-10}	1.68×10^{-04}
SRS	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	1.71×10^{-03}
Small CH-TRU Waste Sites					
AMES	ANL-E	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	8.78×10^{-03}	5.08×10^{-02}	5.27×10^{-08}	5.13×10^{-05}
ANL-E	WIPP	1.07×10^{-04}	6.22×10^{-04}	6.44×10^{-10}	9.55×10^{-06}
BETTIS	MOUND	2.69×10^{-03}	1.33×10^{-02}	5.86×10^{-08}	6.14×10^{-04}
	WIPP	9.55×10^{-03}	5.49×10^{-02}	5.27×10^{-08}	6.42×10^{-05}
ETEC	NTS	1.78×10^{-02}	9.27×10^{-02}	3.28×10^{-07}	4.02×10^{-04}
	WIPP	9.68×10^{-02}	5.70×10^{-01}	7.61×10^{-07}	2.57×10^{-05}
KAPL	MOUND	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	9.55×10^{-03}	5.49×10^{-02}	5.27×10^{-08}	6.42×10^{-05}
LBL	LLNL	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1.05×10^{-04}	6.18×10^{-04}	6.44×10^{-10}	9.27×10^{-06}
LLNL	WIPP	1.05×10^{-04}	6.18×10^{-04}	6.44×10^{-10}	4.89×10^{-05}
MOUND	WIPP	1.17×10^{-04}	6.71×10^{-04}	6.44×10^{-10}	2.82×10^{-03}
MU	ANL-E	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1.07×10^{-04}	6.22×10^{-04}	6.44×10^{-10}	1.63×10^{-05}
NTS	WIPP	6.70×10^{-03}	4.08×10^{-02}	5.27×10^{-08}	8.92×10^{-05}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	6.21×10^{-06}	1.68×10^{-04}

TABLE L-5 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVES No. 1 & 77 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1.11×10^{-04}	6.47×10^{-04}	6.44×10^{-10}	3.00×10^{-04}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	4.16×10^{-07}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	5.19×10^{-08}

TABLE L-6

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVES No. 1 & 77 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$5.20\times10^{+02}$	$3.12\times10^{+03}$	2.67×10^{-03}	6.05×10^{-01}
INEL	WIPP	4974	$3.94\times10^{+01}$	$2.36\times10^{+02}$	2.62×10^{-04}	1.18×10^{-01}
LANL	WIPP	2835	$4.03\times10^{+00}$	$2.46\times10^{+01}$	1.13×10^{-04}	7.68×10^{-02}
RFETS	WIPP	931	3.89×10^{-02}	2.28×10^{-01}	4.91×10^{-07}	1.56×10^{-01}
SRS	WIPP	2827	3.36×10^{-01}	$1.88\times10^{+00}$	1.82×10^{-05}	$4.83\times10^{+00}$
	Subtotal		**$5.64\times10^{+02}$**	**$3.38\times10^{+03}$**	**3.05×10^{-03}**	**$5.79\times10^{+00}$**
Small CH-TRU Waste Sites						
AMES	ANL-E	1	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1	8.78×10^{-03}	5.08×10^{-02}	5.27×10^{-08}	5.13×10^{-05}
ANL-E	WIPP	5	5.35×10^{-04}	3.11×10^{-03}	3.22×10^{-09}	4.78×10^{-05}
BETTIS	MOUND	17	4.57×10^{-02}	2.26×10^{-01}	9.96×10^{-07}	1.04×10^{-02}
	WIPP	17	1.62×10^{-01}	9.33×10^{-01}	8.96×10^{-07}	1.09×10^{-03}
ETEC	NTS	2	3.56×10^{-02}	1.85×10^{-01}	6.56×10^{-07}	8.04×10^{-04}
	WIPP	2	1.94×10^{-01}	$1.14\times10^{+00}$	1.52×10^{-06}	5.14×10^{-05}
KAPL	MOUND	1	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1	9.55×10^{-03}	5.49×10^{-02}	5.27×10^{-08}	6.42×10^{-05}
LBL	LLNL	1	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1	1.05×10^{-04}	6.18×10^{-04}	6.44×10^{-10}	9.27×10^{-06}
LLNL	WIPP	136	1.43×10^{-02}	8.40×10^{-02}	8.76×10^{-08}	6.65×10^{-03}
MOUND	WIPP	29	3.39×10^{-03}	1.95×10^{-02}	1.87×10^{-08}	8.18×10^{-02}
MU	ANL-E	1	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1	1.07×10^{-04}	6.22×10^{-04}	6.44×10^{-10}	1.63×10^{-05}
NTS	WIPP	66	4.42×10^{-01}	$2.69\times10^{+00}$	3.48×10^{-06}	5.89×10^{-03}
ORNL	WIPP	119	$1.57\times10^{+01}$	$8.78\times10^{+01}$	7.39×10^{-04}	2.00×10^{-02}
PA	ORNL	1	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1	1.11×10^{-04}	6.47×10^{-04}	6.44×10^{-10}	3.00×10^{-04}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	4.16×10^{-07}

TABLE L-6 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVES No. 1 & 77 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	6.90×10^{-05}	4.23×10^{-04}	1.93×10^{-09}	1.56×10^{-07}
	Subtotal		$1.66 \times 10^{+01}$	$9.32 \times 10^{+01}$	**7.47×10^{-04}**	**1.30×10^{-01}**
	TOTAL		$5.81 \times 10^{+02}$	$3.47 \times 10^{+03}$	**3.80×10^{-03}**	**$5.92 \times 10^{+00}$**

TABLE L-7

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVES No. 1 & 77 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	9.11×10^{-02}	5.46×10^{-01}	4.68×10^{-07}	1.06×10^{-04}
INEL	WIPP	7.93×10^{-03}	4.75×10^{-02}	5.27×10^{-08}	2.38×10^{-05}
LANL	WIPP	1.42×10^{-03}	8.69×10^{-03}	3.98×10^{-08}	2.71×10^{-05}
RFETS	WIPP	4.18×10^{-05}	2.45×10^{-04}	5.27×10^{-10}	1.68×10^{-04}
SRS	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	1.71×10^{-03}
Small CH-TRU Waste Sites					
AMES	SRS	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	9.73×10^{-03}	5.43×10^{-02}	5.27×10^{-08}	7.78×10^{-05}
ANL-E	SRS	7.06×10^{-05}	3.71×10^{-04}	5.86×10^{-10}	6.35×10^{-04}
	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	1.45×10^{-05}
BETTIS	SRS	5.30×10^{-03}	2.85×10^{-02}	5.86×10^{-08}	7.15×10^{-04}
	WIPP	9.73×10^{-03}	5.43×10^{-02}	5.27×10^{-08}	7.78×10^{-05}
ETEC	INEL	4.06×10^{-02}	2.23×10^{-01}	3.28×10^{-07}	6.88×10^{-04}
	WIPP	1.15×10^{-01}	6.62×10^{-01}	7.61×10^{-07}	3.78×10^{-05}
KAPL	SRS	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	9.73×10^{-03}	5.43×10^{-02}	5.27×10^{-08}	7.78×10^{-05}
LBL	HANFORD	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1.25×10^{-04}	7.52×10^{-04}	6.44×10^{-10}	7.28×10^{-06}
LLNL	HANFORD	6.70×10^{-05}	3.66×10^{-04}	5.86×10^{-10}	5.42×10^{-04}
	WIPP	1.25×10^{-04}	7.52×10^{-04}	6.44×10^{-10}	3.84×10^{-05}
MOUND	SRS	5.14×10^{-05}	2.70×10^{-04}	5.86×10^{-10}	1.77×10^{-02}
	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	3.43×10^{-03}
MU	SRS	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	2.48×10^{-05}
NTS	INEL	4.92×10^{-03}	2.82×10^{-02}	5.86×10^{-08}	1.17×10^{-03}
	WIPP	7.93×10^{-03}	4.75×10^{-02}	5.27×10^{-08}	1.31×10^{-04}
ORNL	SRS	3.65×10^{-02}	1.87×10^{-01}	1.26×10^{-05}	7.15×10^{-04}
	WIPP	1.41×10^{-01}	7.59×10^{-01}	6.21×10^{-06}	2.50×10^{-04}

TABLE L-7 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVES No. 1 & 77 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	SRS	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	4.48×10^{-04}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	4.16×10^{-07}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	5.19×10^{-08}

TABLE L-8

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVES No. 1 & 77 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$5.20\times10^{+02}$	$3.12\times10^{+03}$	2.67×10^{-03}	6.05×10^{-01}
INEL	WIPP	4974	$3.94\times10^{+01}$	$2.36\times10^{+02}$	2.62×10^{-04}	1.18×10^{-01}
LANL	WIPP	2835	$4.03\times10^{+00}$	$2.46\times10^{+01}$	1.13×10^{-04}	7.68×10^{-02}
RFETS	WIPP	931	3.89×10^{-02}	2.28×10^{-01}	4.91×10^{-07}	1.56×10^{-01}
SRS	WIPP	2827	3.36×10^{-01}	$1.88\times10^{+00}$	1.82×10^{-06}	$4.83\times10^{+00}$
		Subtotal	**$5.64\times10^{+02}$**	**$3.38\times10^{+03}$**	**3.05×10^{-03}**	**$5.79\times10^{+00}$**
Small CH-TRU Waste Sites						
AMES	SRS	1	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	1	9.73×10^{-03}	5.43×10^{-02}	5.27×10^{-08}	7.78×10^{-05}
ANL-E	SRS	5	3.53×10^{-04}	1.86×10^{-03}	2.93×10^{-09}	3.18×10^{-03}
	WIPP	5	5.95×10^{-04}	3.33×10^{-03}	3.22×10^{-09}	7.25×10^{-05}
BETTIS	SRS	17	9.01×10^{-02}	4.85×10^{-01}	9.96×10^{-07}	1.22×10^{-02}
	WIPP	17	1.65×10^{-01}	9.23×10^{-01}	8.96×10^{-07}	1.32×10^{-03}
ETEC	INEL	2	8.12×10^{-02}	4.46×10^{-01}	6.56×10^{-07}	1.38×10^{-03}
	WIPP	2	2.30×10^{-01}	$1.32\times10^{+00}$	1.52×10^{-06}	7.56×10^{-05}
KAPL	SRS	1	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	1	9.73×10^{-03}	5.43×10^{-02}	5.27×10^{-08}	7.78×10^{-05}
LBL	HANFORD	1	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1	1.25×10^{-04}	7.52×10^{-04}	6.44×10^{-10}	7.28×10^{-06}
LLNL	HANFORD	136	9.11×10^{-03}	4.98×10^{-02}	7.97×10^{-08}	7.37×10^{-02}
	WIPP	136	1.70×10^{-02}	1.02×10^{-01}	8.76×10^{-08}	5.22×10^{-03}
MOUND	SRS	29	1.49×10^{-03}	7.83×10^{-03}	1.70×10^{-08}	5.13×10^{-01}
	WIPP	29	3.45×10^{-03}	1.93×10^{-02}	1.87×10^{-08}	9.95×10^{-02}
MU	SRS	1	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	2.48×10^{-05}

TABLE L-8 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVES No. 1 & 77 - REGIONALIZED CONFIGURATION

			Incident-Free Doses			Accident Risk Dose
Waste Origin Site	To Route Segment Destination	No. Of Shipments	Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	66	3.25×10^{-01}	$1.86\times10^{+00}$	3.87×10^{-06}	7.72×10^{-02}
	WIPP	66	5.23×10^{-01}	$3.14\times10^{+00}$	3.48×10^{-06}	8.65×10^{-03}
ORNL	SRS	119	$4.34\times10^{+00}$	$2.23\times10^{+01}$	1.50×10^{-03}	8.51×10^{-02}
	WIPP	119	$1.68\times10^{+01}$	$9.03\times10^{+01}$	7.39×10^{-04}	2.98×10^{-02}
PADUCAH	SRS	1	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1	1.19×10^{-04}	6.65×10^{-04}	6.44×10^{-10}	4.48×10^{-04}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.30×10^{-05}	1.41×10^{-04}	6.44×10^{-10}	4.16×10^{-07}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	6.90×10^{-05}	4.23×10^{-04}	1.93×10^{-09}	1.56×10^{-07}
		Subtotal	$2.26\times10^{+01}$	$1.21\times10^{+02}$	2.25×10^{-03}	9.20×10^{-01}
		TOTAL	$\mathbf{5.87\times10^{+02}}$	$\mathbf{3.50\times10^{+03}}$	$\mathbf{5.30\times10^{-03}}$	$\mathbf{6.71\times10^{+00}}$

TABLE L-9

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE CENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	1.06×10^{-01}	6.36×10^{-01}	5.45×10^{-07}	1.78×10^{-03}
INEL	WIPP	8.81×10^{-03}	5.27×10^{-02}	5.86×10^{-08}	5.97×10^{-04}
LANL	WIPP	1.01×10^{-03}	6.14×10^{-03}	2.81×10^{-08}	6.54×10^{-04}
RFETS	WIPP	6.03×10^{-05}	3.53×10^{-04}	7.61×10^{-10}	4.09×10^{-03}
SRS	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.13×10^{-02}
Small CH-TRU Waste Sites					
AMES	WIPP	8.06×10^{-03}	4.79×10^{-02}	5.86×10^{-08}	6.23×10^{-04}
ANL-E	WIPP	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	4.75×10^{-04}
BETTIS	WIPP	1.27×10^{-02}	7.17×10^{-02}	5.86×10^{-08}	1.42×10^{-03}
ETEC	WIPP	4.44×10^{-02}	2.55×10^{-01}	3.28×10^{-07}	5.26×10^{-04}
KAPL	WIPP	1.62×10^{-02}	8.93×10^{-02}	5.86×10^{-08}	1.86×10^{-03}
LBL	WIPP	1.05×10^{-04}	6.02×10^{-04}	5.86×10^{-10}	8.60×10^{-05}
LLNL	WIPP	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	5.22×10^{-04}
MOUND	WIPP	1.06×10^{-04}	6.10×10^{-04}	5.86×10^{-10}	2.44×10^{-02}
MU	WIPP	7.44×10^{-05}	4.39×10^{-04}	5.86×10^{-10}	1.48×10^{-04}
NTS	WIPP	7.45×10^{-03}	4.54×10^{-02}	5.86×10^{-08}	7.24×10^{-04}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	1.26×10^{-05}	1.60×10^{-03}
PADUCAH	WIPP	8.99×10^{-05}	5.25×10^{-04}	5.86×10^{-10}	6.01×10^{-03}
PANTEX	WIPP	2.72×10^{-05}	1.65×10^{-04}	5.86×10^{-10}	5.01×10^{-06}
SNL	WIPP	1.93×10^{-05}	1.16×10^{-04}	5.86×10^{-10}	4.36×10^{-07}

TABLE L-10

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY CENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$6.05\times10^{+02}$	$3.63\times10^{+03}$	3.11×10^{-03}	$1.02\times10^{+01}$
INEL	WIPP	4974	$4.38\times10^{+01}$	$2.62\times10^{+02}$	2.91×10^{-04}	$2.97\times10^{+00}$
LANL	WIPP	2835	$2.86\times10^{+00}$	$1.74\times10^{+01}$	7.97×10^{-05}	$1.85\times10^{+00}$
RFETS	WIPP	931	5.61×10^{-02}	3.29×10^{-01}	7.08×10^{-07}	$3.81\times10^{+00}$
SRS	WIPP	2827	3.05×10^{-01}	$1.71\times10^{+00}$	1.66×10^{-05}	$6.02\times10^{+01}$
		Subtotal	$6.52\times10^{+02}$	$3.91\times10^{+03}$	3.48×10^{-03}	$7.90\times10^{+01}$
Small CH-TRU Waste Sites						
AMES	WIPP	1	8.06×10^{-03}	4.79×10^{-02}	5.86×10^{-08}	6.23×10^{-04}
ANL-E	WIPP	5	4.88×10^{-04}	2.82×10^{-03}	2.93×10^{-09}	2.38×10^{-03}
BETTIS	WIPP	17	2.16×10^{-01}	$1.22\times10^{+00}$	9.96×10^{-07}	2.41×10^{-02}
ETEC	WIPP	2	8.88×10^{-02}	5.10×10^{-01}	6.56×10^{-07}	1.05×10^{-03}
KAPL	WIPP	1	1.62×10^{-02}	8.93×10^{-02}	5.86×10^{-08}	1.86×10^{-03}
LBL	WIPP	1	1.05×10^{-04}	6.02×10^{-04}	5.86×10^{-10}	8.60×10^{-05}
LLNL	WIPP	136	1.30×10^{-02}	7.63×10^{-02}	7.97×10^{-08}	7.10×10^{-02}
MOUND	WIPP	29	3.07×10^{-03}	1.77×10^{-02}	1.70×10^{-08}	7.08×10^{-01}
MU	WIPP	1	7.44×10^{-05}	4.39×10^{-04}	5.86×10^{-10}	1.48×10^{-04}
NTS	WIPP	66	4.92×10^{-01}	$3.00\times10^{+00}$	3.87×10^{-06}	4.78×10^{-02}
ORNL	WIPP	119	$1.57\times10^{+01}$	$8.78\times10^{+01}$	1.50×10^{-03}	1.90×10^{-01}
PADUCAH	WIPP	1	8.99×10^{-05}	5.25×10^{-04}	5.86×10^{-10}	6.01×10^{-03}
PANTEX	WIPP	1	2.72×10^{-05}	1.65×10^{-04}	5.86×10^{-10}	5.01×10^{-06}
SNL	WIPP	3	5.79×10^{-05}	3.48×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
		Subtotal	$1.65\times10^{+01}$	$9.28\times10^{+01}$	1.51×10^{-03}	$1.05\times10^{+00}$
		TOTAL	**$6.69\times10^{+02}$**	**$4.00\times10^{+03}$**	**4.99×10^{-03}**	**$8.01\times10^{+01}$**

TABLE L-11

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 6 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	8.54×10^{-02}	5.13×10^{-01}	4.39×10^{-07}	1.61×10^{-03}
INEL	WIPP	7.66×10^{-03}	4.59×10^{-02}	5.09×10^{-08}	4.89×10^{-04}
LANL	WIPP	1.38×10^{-03}	8.43×10^{-03}	3.87×10^{-08}	5.46×10^{-04}
RFETS	WIPP	4.18×10^{-05}	2.45×10^{-04}	5.27×10^{-10}	3.39×10^{-03}
SRS	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.06×10^{-02}
Small CH-TRU Waste Sites					
AMES	ANLE-E	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	8.49×10^{-03}	4.91×10^{-02}	5.09×10^{-08}	6.92×10^{-04}
ANL-E	WIPP	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	1.48×10^{-04}
BETTIS	MOUND	2.69×10^{-03}	1.33×10^{-02}	5.86×10^{-08}	6.14×10^{-04}
	WIPP	9.23×10^{-03}	5.30×10^{-02}	5.09×10^{-08}	8.65×10^{-04}
ETEC	NTS	1.78×10^{-02}	9.27×10^{-02}	3.28×10^{-07}	4.02×10^{-04}
	WIPP	5.51×10^{-02}	3.36×10^{-01}	4.33×10^{-07}	2.02×10^{-04}
KAPL	MOUND	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	9.23×10^{-03}	5.30×10^{-02}	5.09×10^{-08}	8.65×10^{-04}
LBL	LLNL	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	6.19×10^{-05}
LLNL	WIPP	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	4.76×10^{-04}
MOUND	WIPP	1.06×10^{-04}	6.10×10^{-04}	5.86×10^{-10}	2.32×10^{-02}
MU	ANL-E	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	1.39×10^{-04}
NTS	WIPP	6.48×10^{-03}	3.95×10^{-02}	5.09×10^{-08}	6.94×10^{-04}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	7.79×10^{-06}	1.51×10^{-03}
PADUCAH	ORNL	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1.01×10^{-04}	5.88×10^{-04}	5.86×10^{-10}	5.12×10^{-03}

TABLE L-11 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 6 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	3.33×10^{-06}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	4.11×10^{-07}

TABLE L-12

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 6 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$4.88\times10^{+02}$	$2.93\times10^{+03}$	2.51×10^{-03}	$9.20\times10^{+00}$
INEL	WIPP	4974	$3.81\times10^{+01}$	$2.28\times10^{+02}$	2.53×10^{-04}	$2.43\times10^{+00}$
LANL	WIPP	2835	$3.91\times10^{+00}$	$2.39\times10^{+01}$	1.10×10^{-04}	$1.55\times10^{+00}$
RFETS	WIPP	931	3.89×10^{-02}	2.28×10^{-01}	4.91×10^{-07}	$3.16\times10^{+00}$
SRS	WIPP	2827	3.05×10^{-01}	$1.71\times10^{+00}$	1.66×10^{-05}	$5.82\times10^{+01}$
		Subtotal	**$5.30\times10^{+02}$**	**$3.18\times10^{+03}$**	**2.88×10^{-03}**	**$7.45\times10^{+01}$**
Small CH-TRU Waste Sites						
AMES	ANL-E	1	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1	8.49×10^{-03}	4.91×10^{-02}	5.09×10^{-08}	6.92×10^{-04}
ANL-E	WIPP	5	4.88×10^{-04}	2.82×10^{-03}	2.93×10^{-09}	7.40×10^{-04}
BETTIS	MOUND	17	4.57×10^{-02}	2.26×10^{-01}	9.96×10^{-07}	1.04×10^{-02}
	WIPP	17	1.57×10^{-01}	9.01×10^{-01}	8.65×10^{-07}	1.47×10^{-02}
ETEC	NTS	2	3.56×10^{-02}	1.85×10^{-01}	6.56×10^{-07}	8.04×10^{-04}
	WIPP	2	1.10×10^{-01}	6.72×10^{-01}	8.66×10^{-07}	4.04×10^{-04}
KAPL	MOUND	1	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1	9.23×10^{-03}	5.30×10^{-02}	5.09×10^{-08}	8.65×10^{-04}
LBL	LLNL	1	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1	9.54×10^{-05}	5.61×10^{-04}	5.86×10^{-10}	6.19×10^{-05}
LLNL	WIPP	136	1.30×10^{-02}	7.63×10^{-02}	7.97×10^{-08}	6.47×10^{-02}
MOUND	WIPP	47	4.98×10^{-03}	2.87×10^{-02}	2.75×10^{-08}	$1.09\times10^{+00}$
MU	ANL-E	1	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1	9.75×10^{-05}	5.64×10^{-04}	5.86×10^{-10}	1.39×10^{-04}
NTS	WIPP	66	4.28×10^{-01}	$2.61\times10^{+00}$	3.36×10^{-06}	4.58×10^{-02}
ORNL	WIPP	119	$1.57\times10^{+01}$	$8.78\times10^{+01}$	9.27×10^{-04}	1.80×10^{-01}

TABLE L-12 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 6 - DECENTRALIZED CONFIGURATION

			Incident-Free Doses			Accident Risk Dose
Waste Origin Site	Route Segment Destination	No. Of Shipments	Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	1	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1	1.01×10^{-04}	5.88×10^{-04}	5.86×10^{-10}	5.12×10^{-03}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	3.33×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	6.30×10^{-05}	3.84×10^{-04}	1.76×10^{-09}	1.23×10^{-06}
		Subtotal	**$1.65 \times 10^{+01}$**	**$9.27 \times 10^{+01}$**	**9.34×10^{-04}**	**$1.42 \times 10^{+00}$**
		TOTAL	**$5.47 \times 10^{+02}$**	**$3.27 \times 10^{+03}$**	**3.81×10^{-03}**	**$7.59 \times 10^{+01}$**

TABLE L-13

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 6 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	8.54×10^{-02}	5.13×10^{-01}	4.39×10^{-07}	1.61×10^{-03}
INEL	WIPP	7.66×10^{-03}	4.59×10^{-02}	5.09×10^{-08}	4.89×10^{-04}
LANL	WIPP	1.38×10^{-03}	8.43×10^{-03}	3.87×10^{-08}	5.46×10^{-04}
RFETS	WIPP	4.18×10^{-05}	2.45×10^{-04}	5.27×10^{-10}	3.39×10^{-03}
SRS	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.06×10^{-02}
Small CH-TRU Waste Sites					
AMES	SRS	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	9.41×10^{-03}	5.26×10^{-02}	5.09×10^{-08}	1.05×10^{-03}
ANL-E	SRS	7.06×10^{-05}	3.71×10^{-04}	5.86×10^{-10}	6.35×10^{-04}
	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.25×10^{-04}
BETTIS	SRS	5.30×10^{-03}	2.85×10^{-02}	5.86×10^{-08}	7.15×10^{-04}
	WIPP	9.41×10^{-03}	5.26×10^{-02}	5.09×10^{-08}	1.05×10^{-03}
ETEC	INEL	4.06×10^{-02}	2.23×10^{-01}	3.28×10^{-07}	6.88×10^{-04}
	WIPP	6.52×10^{-02}	3.90×10^{-01}	4.33×10^{-07}	2.98×10^{-04}
KAPL	SRS	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	9.41×10^{-03}	5.26×10^{-02}	5.09×10^{-08}	1.05×10^{-03}
LBL	HANFORD	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1.14×10^{-04}	6.84×10^{-04}	5.86×10^{-10}	4.96×10^{-05}
LLNL	HANFORD	6.70×10^{-05}	3.66×10^{-04}	5.86×10^{-10}	5.42×10^{-04}
	WIPP	1.14×10^{-04}	6.84×10^{-04}	5.86×10^{-10}	3.81×10^{-04}
MOUND	SRS	5.14×10^{-05}	2.70×10^{-04}	5.86×10^{-10}	1.77×10^{-02}
	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.82×10^{-02}
MU	SRS	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.11×10^{-04}

TABLE L-13 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 6 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	$4.92X10^{-03}$	$2.82X10^{-02}$	$5.86x10^{-08}$	$1.17X10^{-03}$
	WIPP	$7.66X10^{-03}$	$4.59X10^{-02}$	$5.09X10^{-08}$	$1.03X10^{-03}$
ORNL	SRS	$3.65X10^{-02}$	$1.87X10^{-01}$	$1.26X10^{-05}$	$7.15X10^{-04}$
	WIPP	$1.41X10^{-01}$	$7.58X10^{-01}$	$7.79X10^{-06}$	$2.14X10^{-03}$
PADUCAH	SRS	$4.61X10^{-05}$	$2.42X10^{-04}$	$5.86X10^{-10}$	$6.34X10^{-03}$
	WIPP	$1.08X10^{-04}$	$6.05X10^{-04}$	$5.86X10^{-10}$	$7.68X10^{-03}$
PANTEX	LANL	$2.05X10^{-05}$	$1.26X10^{-04}$	$5.86X10^{-10}$	$3.83X10^{-06}$
	WIPP	$2.10X10^{-05}$	$1.28X10^{-04}$	$5.86X10^{-10}$	$3.33X10^{-06}$
SNL	LANL	$7.74X10^{-06}$	$4.27X10^{-05}$	$5.86X10^{-10}$	$4.36X10^{-07}$
	WIPP	$2.10X10^{-05}$	$1.28X10^{-04}$	$5.86X10^{-10}$	$4.11X10^{-07}$

TABLE L-14

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 6 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$4.88\times10^{+02}$	$2.93\times10^{+03}$	2.51×10^{-03}	$9.20\times10^{+00}$
INEL	WIPP	4974	$3.81\times10^{+01}$	$2.28\times10^{+02}$	2.53×10^{-04}	$2.43\times10^{+00}$
LANL	WIPP	2835	$3.91\times10^{+00}$	$2.39\times10^{+01}$	1.10×10^{-04}	$1.55\times10^{+00}$
RFETS	WIPP	931	3.89×10^{-02}	2.28×10^{-01}	4.91×10^{-07}	$3.16\times10^{+00}$
SRS	WIPP	2827	3.05×10^{-01}	$1.71\times10^{+00}$	1.66×10^{-06}	$5.82\times10^{+01}$
		Subtotal	**$5.30\times10^{+02}$**	**$3.18\times10^{+03}$**	**2.88×10^{-03}**	**$7.45\times10^{+01}$**
Small CH-TRU Waste Sites						
AMES	SRS	1	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	1	9.41×10^{-03}	5.26×10^{-02}	5.09×10^{-08}	1.05×10^{-03}
ANL-E	SRS	5	3.53×10^{-04}	1.86×10^{-03}	2.93×10^{-09}	3.18×10^{-03}
	WIPP	5	5.40×10^{-04}	3.03×0^{-03}	2.93×10^{-09}	1.13×10^{-03}
BETTIS	SRS	17	9.01×10^{-02}	4.85×10^{-01}	9.96×10^{-07}	1.22×10^{-02}
	WIPP	17	1.60×10^{-01}	8.94×10^{-01}	8.65×10^{-07}	1.79×10^{-02}
ETEC	INEL	2	8.12×10^{-02}	4.46×10^{-01}	6.56×10^{-07}	1.38×10^{-03}
	WIPP	2	1.30×10^{-01}	7.80×10^{-01}	8.66×10^{-07}	5.96×10^{-04}
KAPL	SRS	1	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	1	9.41×10^{-03}	5.26×10^{-02}	5.09×10^{-08}	1.05×10^{-03}
LBL	HANFORD	1	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1	1.14×10^{-04}	6.84×10^{-04}	5.86×10^{-10}	4.96×10^{-05}
LLNL	HANFORD	136	9.11×10^{-03}	4.98×10^{-02}	7.97×10^{-08}	7.37×10^{-02}
	WIPP	136	1.55×10^{-02}	9.30×10^{-02}	7.97×10^{-08}	5.18×10^{-02}
MOUND	SRS	29	1.49×10^{-03}	7.83×10^{-03}	1.70×10^{-08}	5.13×10^{-01}
	WIPP	29	3.13×10^{-03}	1.75×10^{-02}	1.70×10^{-08}	8.18×10^{-01}
MU	SRS	1	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	2.11×10^{-04}

TABLE L-14 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 6 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	66	3.25×10^{-01}	$1.86\times10^{+00}$	3.87×10^{-06}	7.72×10^{-02}
	WIPP	66	5.06×10^{-01}	$3.03\times10^{+00}$	3.36×10^{-06}	6.80×10^{-02}
ORNL	SRS	119	$4.34\times10^{+00}$	$2.23\times10^{+01}$	1.50×10^{-03}	8.51×10^{-02}
	WIPP	119	$1.68\times10^{+01}$	$9.02\times10^{+01}$	9.27×10^{-04}	2.55×10^{-01}
PADUCAH	SRS	1	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1	1.08×10^{-04}	6.05×10^{-04}	5.86×10^{-10}	7.68×10^{-03}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.10×10^{-05}	1.28×10^{-04}	5.86×10^{-10}	3.33×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	6.30×10^{-05}	3.84×10^{-04}	1.76×10^{-09}	1.23×10^{-06}
		Subtotal	**$2.25\times10^{+01}$**	**$1.20\times10^{+02}$**	**2.44×10^{-03}**	**$2.00\times10^{+00}$**
		TOTAL	**$5.53\times10^{+02}$**	**$3.28\times10^{+03}$**	**5.32×10^{-03}**	**$7.65\times10^{+01}$**

TABLE L-15

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 10 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	1.12×10^{-01}	6.70×10^{-01}	5.74×10^{-07}	2.86×10^{-05}
INEL	WIPP	1.06×10^{-02}	6.32×10^{-02}	7.03×10^{-08}	1.00×10^{-05}
LANL	WIPP	2.10×10^{-03}	1.28×10^{-02}	5.86×10^{-08}	1.19×10^{-05}
RFETS	WIPP	8.35×10^{-05}	4.90×10^{-04}	1.05×10^{-09}	8.49×10^{-05}
SRS	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	3.00×10^{-04}
Small CH-TRU Waste Sites					
AMES	ANLE-E	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1.17×10^{-02}	6.78×10^{-02}	7.03×10^{-08}	1.40×10^{-05}
ANL-E	WIPP	1.17×10^{-04}	6.78×10^{-04}	7.03×10^{-10}	3.01×10^{-06}
BETTIS	MOUND	2.69×10^{-03}	1.33×10^{-02}	5.86×10^{-08}	6.14×10^{-04}
	WIPP	1.27×10^{-02}	7.32×10^{-02}	7.03×10^{-08}	1.75×10^{-05}
ETEC	NTS	1.78×10^{-02}	9.27×10^{-02}	3.28×10^{-07}	4.02×10^{-04}
	WIPP	9.72×10^{-02}	5.70×10^{-01}	8.20×10^{-07}	3.03×10^{-06}
KAPL	MOUND	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1.27×10^{-02}	7.32×10^{-02}	7.03×10^{-08}	1.75×10^{-05}
LBL	LLNL	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1.14×10^{-04}	6.74×10^{-04}	7.03×10^{-10}	1.06×10^{-06}
LLNL	WIPP	1.14×10^{-04}	6.74×10^{-04}	7.03×10^{-10}	8.79×10^{-06}
MOUND	WIPP	1.27×10^{-04}	7.32×10^{-04}	7.03×10^{-10}	3.46×10^{-04}
MU	ANL-E	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1.17×10^{-04}	6.78×10^{-04}	7.03×10^{-10}	1.77×10^{-06}
NTS	WIPP	8.94×10^{-03}	5.45×10^{-02}	7.03×10^{-08}	1.05×10^{-05}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	6.73×10^{-06}	2.29×10^{-05}

TABLE L-15 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 10 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1.21×10^{-04}	7.06×10^{-04}	7.03×10^{-10}	6.59×10^{-05}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	4.74×10^{-08}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	5.65×10^{-09}

TABLE L-16

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 10 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$6.40\times10^{+02}$	$3.83\times10^{+03}$	3.28×10^{-03}	1.63×10^{-01}
INEL	WIPP	4974	$5.27\times10^{+01}$	$3.14\times10^{+02}$	3.50×10^{-04}	4.97×10^{-02}
LANL	WIPP	2835	$5.95\times10^{+00}$	$3.63\times10^{+01}$	1.66×10^{-04}	3.37×10^{-02}
RFETS	WIPP	931	7.77×10^{-02}	4.56×10^{-01}	9.78×10^{-07}	7.90×10^{-02}
SRS	WIPP	2827	3.68×10^{-01}	$2.05\times10^{+00}$	1.99×10^{-05}	8.48×10^{-01}
		Subtotal	**$6.99\times10^{+02}$**	**$4.18\times10^{+03}$**	**3.80×10^{-03}**	**$1.17\times10^{+00}$**
Small CH-TRU Waste Sites						
AMES	ANL-E	1	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1	1.17×10^{-02}	6.78×10^{-02}	7.03×10^{-08}	1.40×10^{-05}
ANL-E	WIPP	5	5.85×10^{-04}	3.39×10^{-03}	3.52×10^{-09}	1.51×10^{-05}
BETTIS	MOUND	17	4.57×10^{-02}	2.26×10^{-01}	9.96×10^{-07}	1.04×10^{-02}
	WIPP	17	2.16×10^{-01}	$1.24\times10^{+00}$	1.20×10^{-06}	2.98×10^{-04}
ETEC	NTS	2	3.56×10^{-02}	1.85×10^{-01}	6.56×10^{-07}	8.04×10^{-04}
	WIPP	2	1.94×10^{-01}	$1.14\times10^{+00}$	1.64×10^{-06}	6.06×10^{-06}
KAPL	MOUND	1	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1	1.27×10^{-02}	7.32×10^{-02}	7.03×10^{-08}	1.75×10^{-05}
LBL	LLNL	1	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1	1.14×10^{-04}	6.74×10^{-04}	7.03×10^{-10}	1.06×10^{-06}
LLNL	WIPP	136	1.55×10^{-02}	9.17×10^{-02}	9.56×10^{-08}	1.20×10^{-03}
MOUND	WIPP	47	5.97×10^{-03}	3.44×10^{-02}	3.30×10^{-08}	1.63×10^{-02}
MU	ANL-E	1	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1	1.17×10^{-04}	6.78×10^{-04}	7.03×10^{-10}	1.77×10^{-06}
NTS	WIPP	66	5.90×10^{-01}	$3.60\times10^{+00}$	4.64×10^{-06}	6.93×10^{-04}
ORNL	WIPP	119	$1.57\times10^{+01}$	$8.78\times10^{+01}$	8.01×10^{-04}	2.73×10^{-03}

TABLE L-16 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 10 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	1	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1	1.21×10^{-04}	7.06×10^{-04}	7.03×10^{-10}	6.59×10^{-05}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	4.74×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-05}
	WIPP	3	7.53×10^{-05}	4.59×10^{-04}	2.11×10^{-09}	1.70×10^{-06}
		Subtotal	**$1.68 \times 10^{+01}$**	**$9.45 \times 10^{+01}$**	**8.11×10^{-04}**	**3.58×10^{-02}**
		TOTAL	**$7.16 \times 10^{+02}$**	**$4.27 \times 10^{+03}$**	**4.61×10^{-03}**	**$1.21 \times 10^{+00}$**

TABLE L-17

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 10 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	1.12×10^{-01}	6.70×10^{-01}	5.74×10^{-07}	2.86×10^{-05}
INEL	WIPP	1.06×10^{-02}	6.32×10^{-02}	7.03×10^{-08}	1.00×10^{-05}
LANL	WIPP	2.10×10^{-03}	1.28×10^{-02}	5.86×10^{-08}	1.19×10^{-05}
RFETS	WIPP	8.35×10^{-05}	4.90×10^{-04}	1.05×10^{-09}	8.49×10^{-05}
SRS	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	3.00×10^{-04}
Small CH-TRU Waste Sites					
AMES	SRS	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	1.30×10^{-02}	7.25×10^{-02}	7.03×10^{-08}	2.12×10^{-05}
ANL-E	SRS	7.06×10^{-05}	3.71×10^{-04}	5.86×10^{-10}	6.35×10^{-04}
	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	4.56×10^{-06}
BETTIS	SRS	5.30×10^{-03}	2.85×10^{-02}	5.86×10^{-08}	7.15×10^{-04}
	WIPP	1.30×10^{-02}	7.25×10^{-02}	7.03×10^{-08}	2.12×10^{-05}
ETEC	INEL	4.06×10^{-02}	2.23×10^{-01}	3.28×10^{-07}	6.88×10^{-04}
	WIPP	1.15×10^{-01}	6.62×10^{-01}	8.20×10^{-07}	4.41×10^{-06}
KAPL	SRS	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	1.30×10^{-02}	7.25×10^{-02}	7.03×10^{-08}	2.12×10^{-05}
LBL	HANFORD	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1.37×10^{-04}	8.21×10^{-04}	7.03×10^{-10}	7.99×10^{-07}
LLNL	HANFORD	6.70×10^{-05}	3.66×10^{-04}	5.86×10^{-10}	5.42×10^{-04}
	WIPP	1.37×10^{-04}	8.21×10^{-04}	7.03×10^{-10}	6.61×10^{-06}
MOUND	SRS	5.14×10^{-05}	2.70×10^{-04}	5.86×10^{-10}	1.77×10^{-02}
	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	4.18×10^{-04}
MU	SRS	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	2.69×10^{-06}

TABLE L-17 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 10 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	4.92×10^{-03}	2.82×10^{-02}	5.86×10^{-08}	1.17×10^{-03}
	WIPP	1.06×10^{-02}	6.32×10^{-02}	7.03×10^{-08}	1.53×10^{-05}
ORNL	SRS	3.65×10^{-02}	1.87×10^{-01}	1.26×10^{-05}	7.15×10^{-04}
	WIPP	1.41×10^{-01}	7.59×10^{-01}	6.73×10^{-06}	3.38×10^{-05}
PADUCAH	SRS	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	9.73×10^{-05}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	4.74×10^{-08}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	5.65×10^{-09}

TABLE L-18

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 10 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$6.40\times10^{+02}$	$3.83\times10^{+03}$	3.28×10^{-03}	1.63×10^{-01}
INEL	WIPP	4974	$5.27\times10^{+01}$	$3.14\times10^{+02}$	3.50×10^{-04}	4.97×10^{-02}
LANL	WIPP	2835	$5.95\times10^{+00}$	$3.63\times10^{+01}$	1.66×10^{-04}	3.37×10^{-02}
RFETS	WIPP	931	7.77×10^{-02}	4.56×10^{-01}	9.78×10^{-07}	7.90×10^{-02}
SRS	WIPP	2827	3.68×10^{-01}	$2.05\times10^{+00}$	1.99×10^{-06}	8.48×10^{-01}
		Subtotal	**$6.99\times10^{+02}$**	**$4.18\times10^{+03}$**	**3.80×10^{-03}**	**$1.17\times10^{+00}$**
Small CH-TRU Waste Sites						
AMES	SRS	1	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	1	1.30×10^{-02}	7.25×10^{-02}	7.03×10^{-08}	2.12×10^{-05}
ANL-E	SRS	5	3.53×10^{-04}	1.86×10^{-03}	2.93×10^{-09}	3.18×10^{-03}
	WIPP	5	6.50×10^{-04}	3.63×10^{-03}	3.52×10^{-09}	2.28×10^{-05}
BETTIS	SRS	17	9.01×10^{-02}	4.85×10^{-01}	9.96×10^{-07}	1.22×10^{-02}
	WIPP	17	2.21×10^{-01}	$1.23\times10^{+00}$	1.20×10^{-06}	3.60×10^{-04}
ETEC	INEL	2	8.12×10^{-02}	4.46×10^{-01}	6.56×10^{-07}	1.38×10^{-03}
	WIPP	2	2.30×10^{-01}	$1.32\times10^{+00}$	1.64×10^{-05}	8.82×10^{-06}
KAPL	SRS	1	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	1	1.30×10^{-02}	7.25×10^{-02}	7.03×10^{-08}	2.12×10^{-05}
LBL	HANFORD	1	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1	1.37×10^{-04}	8.21×10^{-04}	7.03×10^{-10}	7.99×10^{-07}
LLNL	HANFORD	136	9.11×10^{-03}	4.98×10^{-02}	7.97×10^{-08}	7.37×10^{-02}
	WIPP	136	1.86×10^{-02}	1.12×10^{-01}	9.56×10^{-08}	8.99×10^{-04}
MOUND	SRS	29	1.49×10^{-03}	7.83×10^{-03}	1.70×10^{-08}	5.13×10^{-01}
	WIPP	29	3.77×10^{-03}	2.10×10^{-02}	2.04×10^{-08}	1.21×10^{-02}
MU	SRS	1	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	2.69×10^{-06}

TABLE L-18 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 10 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	66	3.25×10^{-01}	$1.86\times10^{+00}$	3.87×10^{-06}	7.72×10^{-02}
	WIPP	66	7.00×10^{-01}	$4.17\times10^{+00}$	4.64×10^{-06}	1.01×10^{-03}
ORNL	SRS	119	$4.34\times10^{+00}$	$2.23\times10^{+01}$	1.50×10^{-03}	8.51×10^{-02}
	WIPP	119	$1.68\times10^{+01}$	$9.03\times10^{+01}$	8.01×10^{-04}	4.02×10^{-03}
PADUCAH	SRS	1	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1	1.30×10^{-04}	7.25×10^{-04}	7.03×10^{-10}	9.73×10^{-05}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	2.51×10^{-05}	1.53×10^{-04}	7.03×10^{-10}	4.74×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	7.53×10^{-05}	4.59×10^{-04}	2.11×10^{-09}	1.70×10^{-06}
		Subtotal	**$2.29\times10^{+01}$**	**$1.23\times10^{+02}$**	**2.31×10^{-03}**	**7.93×10^{-01}**
		TOTAL	**$7.22\times10^{+02}$**	**$4.30\times10^{+03}$**	**6.11×10^{-03}**	**$1.96\times10^{+00}$**

TABLE L-19

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 94 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	6.72×10^{-02}	4.04×10^{-01}	3.46×10^{-07}	1.30×10^{-03}
INEL	WIPP	4.49×10^{-03}	2.69×10^{-02}	2.99×10^{-08}	3.03×10^{-04}
LANL	WIPP	9.01×10^{-04}	5.50×10^{-03}	2.52×10^{-08}	4.01×10^{-04}
RFETS	WIPP	3.71×10^{-05}	2.18×10^{-04}	4.68×10^{-10}	2.91×10^{-03}
SRS	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	1.56×10^{-02}
Small CH-TRU Waste Sites					
AMES	ANLE-E	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	4.97×10^{-03}	2.88×10^{-02}	2.99×10^{-08}	4.29×10^{-04}
ANL-E	WIPP	7.80×10^{-05}	4.52×10^{-04}	4.68×10^{-10}	9.08×10^{-05}
BETTIS	MOUND	2.69×10^{-03}	1.33×10^{-02}	5.86×10^{-08}	6.14×10^{-04}
	WIPP	5.41×10^{-03}	3.11×10^{-02}	2.99×10^{-08}	5.37×10^{-04}
ETEC	NTS	1.78×10^{-02}	9.27×10^{-02}	3.28×10^{-07}	4.02×10^{-04}
	WIPP	7.45×10^{-02}	4.54×10^{-01}	5.86×10^{-07}	1.53×10^{-04}
KAPL	MOUND	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	5.41×10^{-03}	3.11×10^{-02}	2.99×10^{-08}	5.37×10^{-04}
LBL	LLNL	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	7.63×10^{-05}	4.49×10^{-04}	4.68×10^{-10}	4.42×10^{-05}
LLNL	WIPP	7.63×10^{-05}	4.49×10^{-04}	4.68×10^{-10}	3.75×10^{-04}
MOUND	WIPP	8.49×10^{-05}	4.87×10^{-04}	4.68×10^{-10}	1.72×10^{-02}
MU	ANL-E	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	7.80×10^{-05}	4.52×10^{-04}	4.68×10^{-10}	1.39×10^{-04}
NTS	WIPP	3.80×10^{-03}	2.31×10^{-02}	2.99×10^{-08}	5.29×10^{-04}
ORNL	WIPP	1.32×10^{-01}	7.38×10^{-01}	4.02×10^{-06}	1.03×10^{-03}

TABLE L-19 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 94 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	8.07×10^{-05}	4.71×10^{-04}	4.68×10^{-10}	2.05×10^{-03}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	2.54×10^{-06}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	3.13×10^{-07}

TABLE L-20

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 94 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$3.84\times10^{+02}$	$2.31\times10^{+03}$	1.98×10^{-03}	$7.43\times10^{+00}$
INEL	WIPP	4974	$2.23\times10^{+01}$	$1.34\times10^{+02}$	1.49×10^{-04}	$1.51\times10^{+00}$
LANL	WIPP	2835	$2.55\times10^{+00}$	$1.56\times10^{+01}$	7.14×10^{-05}	$1.14\times10^{+00}$
RFETS	WIPP	931	3.45×10^{-02}	2.03×10^{-01}	4.36×10^{-07}	$2.71\times10^{+00}$
SRS	WIPP	2827	2.45×10^{-01}	$1.37\times10^{+00}$	1.32×10^{-06}	$4.41\times10^{+01}$
		Subtotal	**$4.09\times10^{+02}$**	**$2.46\times10^{+03}$**	**2.20×10^{-03}**	**$5.69\times10^{+01}$**
Small CH-TRU Waste Sites						
AMES	ANL-E	1	2.35×10^{-03}	1.37×10^{-02}	5.86×10^{-08}	1.66×10^{-04}
	WIPP	1	4.97×10^{-03}	2.88×10^{-02}	2.99×10^{-08}	4.29×10^{-04}
ANL-E	WIPP	5	3.90×10^{-04}	2.26×10^{-03}	2.34×10^{-09}	4.54×10^{-04}
BETTIS	MOUND	17	4.57×10^{-02}	2.26×10^{-01}	9.96×10^{-07}	1.04×10^{-02}
	WIPP	17	9.20×10^{-02}	5.29×10^{-01}	5.08×10^{-07}	9.13×10^{-03}
ETEC	NTS	2	3.56×10^{-02}	1.85×10^{-01}	6.56×10^{-07}	8.04×10^{-04}
	WIPP	2	1.49×10^{-01}	9.08×10^{-01}	1.17×10^{-06}	3.06×10^{-04}
KAPL	MOUND	1	6.17×10^{-03}	3.08×10^{-02}	5.86×10^{-08}	1.06×10^{-03}
	WIPP	1	5.41×10^{-03}	3.11×10^{-02}	2.99×10^{-08}	5.37×10^{-04}
LBL	LLNL	1	9.84×10^{-06}	4.30×10^{-05}	5.86×10^{-10}	2.57×10^{-05}
	WIPP	1	7.63×10^{-05}	4.49×10^{-04}	4.68×10^{-10}	4.42×10^{-05}
LLNL	WIPP	136	1.04×10^{-02}	6.11×10^{-02}	6.36×10^{-08}	5.10×10^{-02}
MOUND	WIPP	29	2.46×10^{-03}	1.41×10^{-02}	1.36×10^{-08}	4.99×10^{-01}
MU	ANL-E	1	2.94×10^{-05}	1.61×10^{-04}	5.86×10^{-10}	9.30×10^{-05}
	WIPP	1	7.80×10^{-05}	4.52×10^{-04}	4.68×10^{-10}	1.39×10^{-04}
NTS	WIPP	66	2.51×10^{-01}	$1.52\times10^{+00}$	1.97×10^{-06}	3.49×10^{-02}
ORNL	WIPP	119	$1.57\times10^{+01}$	$8.78\times10^{+01}$	4.78×10^{-04}	1.23×10^{-01}

TABLE L-20 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 94 - DECENTRALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
PADUCAH	ORNL	1	2.26×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	1.86×10^{-03}
	WIPP	1	8.07×10^{-05}	4.71×10^{-04}	4.68×10^{-10}	2.05×10^{-03}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	2.54×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	5.04×10^{-05}	3.06×10^{-04}	1.40×10^{-09}	9.39×10^{-07}
		Subtotal	**$1.63\times10^{+01}$**	**$9.14\times10^{+01}$**	**4.84×10^{-04}**	**7.35×10^{-01}**
		TOTAL	**$4.25\times10^{+02}$**	**$2.55\times10^{+03}$**	**2.68×10^{-03}**	**$5.76\times10^{+01}$**

TABLE L-21

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 94 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites					
HANFORD	WIPP	6.72×10^{-02}	4.04×10^{-01}	3.46×10^{-07}	1.30×10^{-03}
INEL	WIPP	4.49×10^{-03}	2.69×10^{-02}	2.99×10^{-08}	3.03×10^{-04}
LANL	WIPP	9.01×10^{-04}	5.50×10^{-03}	2.52×10^{-08}	4.01×10^{-04}
RFETS	WIPP	3.71×10^{-05}	2.18×10^{-04}	4.68×10^{-10}	2.91×10^{-03}
SRS	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	1.56×10^{-02}
Small CH-TRU Waste Sites					
AMES	SRS	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	5.51×10^{-03}	3.08×10^{-02}	2.99×10^{-08}	6.52×10^{-04}
ANL-E	SRS	7.06×10^{-05}	3.71×10^{-04}	5.86×10^{-10}	6.35×10^{-04}
	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	1.38×10^{-04}
BETTIS	SRS	5.30×10^{-03}	2.85×10^{-02}	5.86×10^{-08}	7.15×10^{-04}
	WIPP	5.51×10^{-03}	3.08×10^{-02}	2.99×10^{-08}	6.52×10^{-04}
ETEC	INEL	4.06×10^{-02}	2.23×10^{-01}	3.28×10^{-07}	6.88×10^{-04}
	WIPP	8.81×10^{-02}	5.27×10^{-01}	5.86×10^{-07}	2.25×10^{-04}
KAPL	SRS	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	5.51×10^{-03}	3.08×10^{-02}	2.99×10^{-08}	6.52×10^{-04}
LBL	HANFORD	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	9.11×10^{-05}	5.46×10^{-04}	4.68×10^{-10}	3.54×10^{-05}
LLNL	HANFORD	6.70×10^{-05}	3.66×10^{-04}	5.86×10^{-10}	5.42×10^{-04}
	WIPP	9.11×10^{-05}	5.46×10^{-04}	4.68×10^{-10}	3.00×10^{-04}
MOUND	SRS	5.14×10^{-05}	2.70×10^{-04}	5.86×10^{-10}	1.77×10^{-02}
	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	2.09×10^{-02}
MU	SRS	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	2.11×10^{-04}

TABLE L-21 (Continued)

RADIOLOGICAL DOSES PER SHIPMENT FOR CH-TRU WASTE ENGINEERED ALTERNATIVE No. 94 - REGIONALIZED CONFIGURATION

Waste Origin Site	Route Segment Destination	Incident-Free Doses			Accident Risk Dose
		Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	4.92×10^{-03}	2.82×10^{-02}	5.86×10^{-08}	1.17×10^{-03}
	WIPP	4.49×10^{-03}	2.69×10^{-02}	2.99×10^{-08}	7.82×10^{-04}
ORNL	SRS	3.65×10^{-02}	1.87×10^{-01}	1.26×10^{-05}	7.15×10^{-04}
	WIPP	1.41×10^{-01}	7.59×10^{-01}	4.02×10^{-06}	1.54×10^{-03}
PADUCAH	SRS	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	3.07×10^{-03}
PANTEX	LANL	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	2.54×10^{-06}
SNL	LANL	7.74×10^{-06}	4.27×10^{-05}	5.86×10^{-10}	4.36×10^{-07}
	WIPP	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	3.13×10^{-07}

TABLE L-22

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 94 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
Major CH-TRU Waste Sites						
HANFORD	WIPP	5712	$3.84\times10^{+02}$	$2.31\times10^{+03}$	1.98×10^{-03}	$7.43\times10^{+00}$
INEL	WIPP	4974	$2.23\times10^{+01}$	$1.34\times10^{+02}$	1.49×10^{-04}	$1.51\times10^{+00}$
LANL	WIPP	2835	$2.55\times10^{+00}$	$1.56\times10^{+01}$	7.14×10^{-05}	$1.14\times10^{+00}$
RFETS	WIPP	931	3.45×10^{-02}	2.03×10^{-01}	4.36×10^{-07}	$2.71\times10^{+00}$
SRS	WIPP	2827	2.45×10^{-01}	$1.37\times10^{+00}$	1.32×10^{-05}	$4.41\times10^{+01}$
		Subtotal	**$4.09\times10^{+02}$**	**$2.46\times10^{+03}$**	**2.20×10^{-03}**	**$5.69\times10^{+01}$**
Small CH-TRU Waste Sites						
AMES	SRS	1	8.88×10^{-03}	4.85×10^{-02}	5.86×10^{-08}	1.07×10^{-03}
	WIPP	1	5.51×10^{-03}	3.08×10^{-02}	2.99×10^{-08}	6.52×10^{-04}
ANL-E	SRS	5	3.53×10^{-04}	1.86×10^{-03}	2.93×10^{-09}	3.18×10^{-03}
	WIPP	5	4.33×10^{-04}	2.42×10^{-03}	2.34×10^{-09}	6.90×10^{-04}
BETTIS	SRS	17	9.01×10^{-02}	4.85×10^{-01}	9.96×10^{-07}	1.22×10^{-02}
	WIPP	17	9.37×10^{-02}	5.24×10^{-01}	5.08×10^{-07}	1.11×10^{-02}
ETEC	INEL	2	8.12×10^{-02}	4.46×10^{-01}	6.56×10^{-07}	1.38×10^{-03}
	WIPP	2	1.76×10^{-01}	$1.05\times10^{+00}$	1.17×10^{-06}	4.50×10^{-04}
KAPL	SRS	1	7.49×10^{-03}	3.97×10^{-02}	5.86×10^{-08}	9.92×10^{-04}
	WIPP	1	5.51×10^{-03}	3.08×10^{-02}	2.99×10^{-08}	6.52×10^{-04}
LBL	HANFORD	1	6.53×10^{-05}	3.57×10^{-04}	5.86×10^{-10}	6.10×10^{-05}
	WIPP	1	9.11×10^{-05}	5.46×10^{-04}	4.68×10^{-10}	3.54×10^{-05}
LLNL	HANFORD	136	9.11×10^{-03}	4.98×10^{-02}	7.97×10^{-08}	7.37×10^{-02}
	WIPP	136	1.24×10^{-02}	7.43×10^{-02}	6.36×10^{-08}	4.08×10^{-02}
MOUND	SRS	29	1.49×10^{-03}	7.83×10^{-03}	1.70×10^{-08}	5.13×10^{-01}
	WIPP	29	2.51×10^{-03}	1.40×10^{-02}	1.36×10^{-08}	6.06×10^{-01}
MU	SRS	1	6.81×10^{-05}	3.63×10^{-04}	5.86×10^{-10}	2.49×10^{-04}
	WIPP	1	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	2.11×10^{-04}

TABLE L-22 (Continued)

CUMULATIVE RADIOLOGICAL DOSES FOR CH-TRU WASTE SHIPMENTS OVER THE LIFETIME OF THE WIPP FACILITY ENGINEERED ALTERNATIVE No. 94 - REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Incident-Free Doses			Accident Risk Dose
			Crew (person-rem)	Public (person-rem)	Max Individual (rem)	Public (person-rem)
NTS	INEL	66	3.25×10^{-01}	$1.86 \times 10^{+00}$	3.87×10^{-06}	7.72×10^{-02}
	WIPP	66	2.96×10^{-01}	$1.78 \times 10^{+00}$	1.97×10^{-06}	5.16×10^{-02}
ORNL	SRS	119	$4.34 \times 10^{+00}$	$2.23 \times 10^{+01}$	1.50×10^{-03}	8.51×10^{-02}
	WIPP	119	$1.68 \times 10^{+01}$	$9.03 \times 10^{+01}$	4.78×10^{-04}	1.83×10^{-01}
PADUCAH	SRS	1	4.61×10^{-05}	2.42×10^{-04}	5.86×10^{-10}	6.34×10^{-03}
	WIPP	1	8.65×10^{-05}	4.83×10^{-04}	4.68×10^{-10}	3.07×10^{-03}
PANTEX	LANL	1	2.05×10^{-05}	1.26×10^{-04}	5.86×10^{-10}	3.83×10^{-06}
	WIPP	1	1.68×10^{-05}	1.02×10^{-04}	4.68×10^{-10}	2.54×10^{-06}
SNL	LANL	3	2.32×10^{-05}	1.28×10^{-04}	1.76×10^{-09}	1.31×10^{-06}
	WIPP	3	5.04×10^{-05}	3.06×10^{-04}	1.40×10^{-09}	9.39×10^{-07}
		Subtotal	**$2.23 \times 10^{+01}$**	**$1.19 \times 10^{+02}$**	**1.99×10^{-03}**	**$1.67 \times 10^{+00}$**
		TOTAL	**$4.31 \times 10^{+02}$**	**$2.58 \times 10^{+03}$**	**4.19×10^{-03}**	**$5.86 \times 10^{+01}$**

TABLE L-23

CHEMICAL AIRBORNE RELEASES FOR A POSTULATED VERY SEVERE ACCIDENT (CH-TRU TRUCK SHIPMENT) - BASELINE[1,3,4,5,6]

Chemical	Release Form	Release Fraction	Fraction of Waste Chemical is Present	Chemical Fraction in Waste Matrix	Quantity Released (mg)	Receptor Concentration (mg/m3)	Adjusted ERPG-2 Value (mg/m3)	Receptor Concentration/ Adj.'d ERPG-2 Value
Beryllium	particulate	2.0×10^{-04}	2.1×10^{-01}	1.0×10^{-02}	$2.6\times10^{+03}$	4.1×10^{-05}	2.5×10^{-03}	1.6×10^{-02}
Bromine	vapor	5.0×10^{-01}	6.6×10^{-02}	1.0×10^{-02}	$2.0\times10^{+06}$	3.2×10^{-02}	$3.3\times10^{+00}$	9.7×10^{-03}
Cadmium	particulate	2.0×10^{-04}	1.9×10^{-01}	3.0×10^{-01}	$7.0\times10^{+04}$	1.1×10^{-03}	1.5×10^{-01}	7.3×10^{-03}
Cadmium	vapor	1.6×10^{-02}	1.9×10^{-01}	3.0×10^{-01}	$5.6\times10^{+06}$	8.8×10^{-02}	1.5×10^{-01}	5.9×10^{-01}
Carbon Tetrachloride	vapor	5.0×10^{-01}	1.3×10^{-01}	3.0×10^{-01}	$1.2\times10^{+06}$	$1.9\times10^{+00}$	$7.9\times10^{+01}$	2.4×10^{-02}
Cellulose	particulate	2.0×10^{-02}	9.1×10^{-02}	3.0×10^{-01}	$3.4\times10^{+06}$	5.3×10^{-02}	$2.5\times10^{+01}$	2.1×10^{-03}
Chloroform	vapor	5.0×10^{-01}	6.0×10^{-03}	3.0×10^{-01}	$5.5\times10^{+06}$	8.7×10^{-02}	$2.4\times10^{+02}$	3.6×10^{-04}
Chlorosulporic acid	vapor	5.0×10^{-01}	1.8×10^{-01}	1.0×10^{-02}	$5.5\times10^{+06}$	8.7×10^{-02}	$5.0\times10^{+00}$	1.7×10^{-02}
Chromium VI compounds	particulate	2.0×10^{-04}	1.9×10^{-01}	1.0×10^{-02}	$2.3\times10^{+03}$	3.7×10^{-05}	1.3×10^{-01}	2.8×10^{-04}
Copper	particulate	2.0×10^{-04}	1.9×10^{-01}	1.0×10^{-01}	$2.3\times10^{+04}$	3.7×10^{-04}	5.0×10^{-01}	7.3×10^{-04}
Hydrazine	vapor	5.0×10^{-01}	1.3×10^{-01}	1.0×10^{-02}	$4.0\times10^{+06}$	6.3×10^{-02}	5.5×10^{-01}	1.1×10^{-01}
Lead	particulate	2.0×10^{-04}	1.9×10^{-01}	3.0×10^{-01}	$7.0\times10^{+04}$	1.1×10^{-03}	3.8×10^{-01}	2.9×10^{-03}
Mercury	vapor	5.0×10^{-01}	3.6×10^{-02}	1.0×10^{-02}	$1.1\times10^{+06}$	1.7×10^{-02}	5.0×10^{-02}	3.5×10^{-01}
Oxalic acid	vapor	5.0×10^{-01}	1.8×10^{-01}	1.0×10^{-02}	$5.5\times10^{+06}$	8.7×10^{-02}	$2.5\times10^{+00}$	3.5×10^{-02}
Platinum	particulate	2.0×10^{-04}	2.8×10^{-01}	1.0×10^{-01}	$3.4\times10^{+04}$	5.4×10^{-04}	$2.5\times10^{+00}$	2.2×10^{-04}

Refer to footnotes at end of table.

TABLE L-23 (Continued)

CHEMICAL AIRBORNE RELEASES FOR A POSTULATED VERY SEVERE ACCIDENT (CH-TRU TRUCK SHIPMENT) - BASELINE[1,3,4,5,6]

Chemical	Release Form	Release Fraction	Fraction of Waste Chemical is Present	Chemical Fraction in Waste Matrix	Quantity Released (mg)	Receptor Concentration (mg/m3)	Adjusted ERPG-2 Value (mg/m3)	Receptor Concentration/ Adj.'d ERPG-2 Value
Phosphoric acid	particulate	$2.0x10^{-04}$	$6.0x10^{-03}$	$1.0x10^{-02}$	$7.4x10^{+01}$	$1.2x10^{-06}$	$2.5x10^{+00}$	$4.6x10^{-07}$
Silver	particulate	$2.0x10^{-04}$	$1.5x10^{-01}$	$1.0x10^{-02}$	$1.8x10^{+03}$	$2.9x10^{-05}$	$2.5x10^{-01}$	$1.2x10^{-04}$
Sodium hydroxide	particulate	$2.0x10^{-04}$	$1.6x10^{-01}$	$1.0x10^{-02}$	$2.0x10^{+03}$	$3.1x10^{-05}$	$1.0x10^{+00}$	$3.1x10^{-05}$
Tributyl phosphate	vapor	$5.0x10^{-01}$	$2.4x10^{-02}$	$3.0x10^{-01}$	$2.2x10^{+07}$	$3.5x10^{-01}$	$5.5x10^{+00}$	$6.3x10^{-02}$
Tungsten	particulate	$2.0x10^{-04}$	$1.9x10^{-01}$	$1.0x10^{-01}$	$2.3x10^{+04}$	$3.7x10^{-04}$	$2.5x10^{+00}$	$1.5x10^{-04}$
Uranium	particulate	$2.0x10^{-04}$	$1.5x10^{-01}$	$1.0x10^{-02}$	$1.8x10^{+03}$	$2.9x10^{-05}$	$5.0x10^{-01}$	$5.8x10^{-05}$
TOTAL								$1.2X10^{+00}$

[1]Assumes a severity category VIII accident.
[2]See Section 3.5.2.1.3 text for basis of chemicals evaluated and release quantities.
[3]The receptor is the maximum exposed member of the public, with downwind dispersion characteristics based on a wind speed of 1 meter/sec and Pasquill Stability Class F (X/Q = $1.13x10^{-04}$).
[4]Quantity Released = Release Fraction x Fraction of Waste Chemical is Present x Chemical Fraction in Waste x Weight of Waste/Shipment.
[5]Weight of Waste/Shipment (mg) = 3.67 (m3/TRUPACT) x 3 (TRUPACT/Shipment) x 559 (kg/m3) x $1x10^{+06}$; TRUPACT cargo volume based on 2 SWBs.
[6]Receptor Concentration = X/Q (max individual) x Release rate (mg/sec); = 1.13x10-04 (sec/m^3) x Release Quantity (mg)/7200 (sec); assumes a two hour release.

TABLE L-24

CHEMICAL AIRBORNE RELEASES FOR A POSTULATED VERY SEVERE ACCIDENT (CH-TRU TRUCK SHIPMENT) - ENGINEERED ALTERNATIVES[1,2,3,4,5,6]

		Engineered Alternatives No. 1 & 77		Engineered Alternative No. 6		Engineered Alternative No. 10		Engineered Alternative No. 94	
Chemical	Release Form	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value
Beryllium	particulate	$2.0x10^{-05}$	$2.4x10^{-03}$	$2.0x10^{-04}$	$1.6x10^{-02}$	$7.0x10^{-08}$	$1.6x10^{-05}$	$2.0x10^{-04}$	$1.1x10^{-02}$
Bromine	vapor	$5.0x10^{-01}$	$1.4x10^{-02}$	$5.0x10^{-01}$	$9.4x10^{-03}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$6.4x10^{-03}$
Cadmium	particulate	$2.0x10^{-05}$	$1.1x10^{-03}$	$2.0x10^{-04}$	$7.2x10^{-03}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$2.0x10^{-04}$	$4.9x10^{-03}$
Cadmium	vapor	$1.6x10^{-02}$	$8.6x10^{-01}$	$1.6x10^{-02}$	$5.7x10^{-01}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$1.6x10^{-02}$	$3.9x10^{-01}$
Carbon Tetrachloride	vapor	$5.0x10^{-01}$	$3.5x10^{-02}$	$5.0x10^{-01}$	$2.3x10^{-02}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$1.6x10^{-02}$
Cellulose	particulate	$2.0x10^{-02}$	$3.1x10^{-03}$	$2.0x10^{-02}$	$2.1x10^{-03}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$2.0x10^{-02}$	$1.4x10^{-03}$
Chloroform	vapor	$5.0x10^{-01}$	$5.3x10^{-04}$	$5.0x10^{-01}$	$3.5x10^{-04}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$2.4x10^{-04}$
Chlorosulporic acid	vapor	$5.0x10^{-01}$	$2.5x10^{-02}$	$5.0x10^{-01}$	$1.7x10^{-02}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$1.2x10^{-02}$
Chromium VI compounds	particulate	$2.0x10^{-05}$	$4.1x10^{-05}$	$2.0x10^{-04}$	$2.8x10^{-04}$	$7.0x10^{-08}$	$2.8x10^{-07}$	$2.0x10^{-04}$	$1.9x10^{-04}$
Copper	particulate	$2.0x10^{-05}$	$1.1x10^{-04}$	$2.0x10^{-04}$	$7.2x10^{-04}$	$7.0x10^{-08}$	$7.3x10^{-07}$	$2.0x10^{-04}$	$4.9x10^{-04}$
Hydrazine	vapor	$5.0x10^{-01}$	$1.7x10^{-01}$	$5.0x10^{-01}$	$1.1x10^{-01}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$7.6x10^{-02}$
Lead	particulate	$2.0x10^{-05}$	$4.2x10^{-04}$	$2.0x10^{-04}$	$2.8x10^{-03}$	$7.0x10^{-08}$	$2.9x10^{-06}$	$2.0x10^{-04}$	$1.9x10^{-03}$

Refer to footnotes at end of table.

TABLE L-24 (Continued)

CHEMICAL AIRBORNE RELEASES FOR A POSTULATED VERY SEVERE ACCIDENT (CH-TRU TRUCK SHIPMENT) - ENGINEERED ALTERNATIVES[1,2,3,4,5,6]

		Engineered Alternatives No. 1 & 77		Engineered Alternative No. 6		Engineered Alternative No. 10		Engineered Alternative No. 94	
Chemical	Release Form	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value	Release Fraction	Receptor Concentration/ Adj'd ERPG-2 Value
Mercury	vapor	$5.0x10^{-01}$	$5.x10^{-01}$	$5.0x10^{-01}$	$3.4x10^{-01}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$2.3x10^{-01}$
Oxalic acid	vapor	$5.0x10^{-01}$	$5.1x10^{-02}$	$5.0x10^{-01}$	$3.4x10^{-02}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$2.3x10^{-02}$
Platinum	particulate	$2.0x10^{-05}$	$3.2x10^{-05}$	$2.0x10^{-04}$	$2.1x10^{-04}$	$7.0x10^{-08}$	$2.2x10^{-07}$	$2.0x10^{-04}$	$1.4x10^{-04}$
Phosphoric acid	particulate	$2.0x10^{-05}$	$6.8x10^{-08}$	$2.0x10^{-04}$	$4.5x10^{-07}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$2.0x10^{-04}$	$3.1x10^{-07}$
Silver	particulate	$2.0x10^{-05}$	$1.7x10^{-05}$	$2.0x10^{-04}$	$1.1x10^{-04}$	$7.0x10^{-08}$	$1.2x10^{-07}$	$2.0x10^{-04}$	$7.7x10^{-05}$
Sodium hydroxide	particulate	$2.0x10^{-05}$	$4.5x10^{-08}$	$2.0x10^{-04}$	$3.0x10^{-05}$	$7.0x10^{-08}$	$3.1x10^{-08}$	$2.0x10^{-04}$	$2.0x10^{-05}$
Tributyl phosphate	vapor	$5.0x10^{-01}$	$9.2x10^{-02}$	$5.0x10^{-01}$	$6.2x10^{-02}$	$0.0x10^{+00}$	$0.0x10^{+00}$	$5.0x10^{-01}$	$4.2x10^{-02}$
Tungsten	particulate	$2.0x10^{-05}$	$2.1x10^{-05}$	$2.0x10^{-04}$	$1.4x10^{-04}$	$7.0x10^{-08}$	$1.5x10^{-07}$	$2.0x10^{-04}$	$9.7x10^{-04}$
Uranium	particulate	$2.0x10^{-05}$	$8.5x10^{-08}$	$2.0x10^{-04}$	$5.7x10^{-05}$	$7.0x10^{-08}$	$5.8x10^{-08}$	$2.0x10^{-04}$	$3.8x10^{-05}$
TOTAL			**$1.8x10^{+00}$**		**$1.2x10^{+00}$**		**$2.1x10^{-06}$**		**$8.1x10^{-01}$**

[1]The receptor is the maximum exposed member of the public and the analysis assumes a severity category VIII accident.
[2]See Section 3.5.2.1.3 text for basis of chemicals evaluated and analysis methodology.
[3]Engineered Alternatives No. 1 & 77 calculation basis: system-wide average waste density of 1031 kg/m^3, waste shipped in drums, particulate releases assumed to be the same as radiological particulate releases for the same alternative, vapor releases assumed to be the same as the baseline.
[4]Engineered Alternative No. 6 basis: system-wide average waste density of 689 kg/m^3, waste shipped in drums, particulate releases assumed to be the same as radiological particulate releases for the same alternative, vapor releases assumed to be the same as the base case.
[5]Engineered Alternative No. 10 basis: system-wide average waste density of 1595 kg/m^3, waste may be shipped in SWBs, all organics and cadmium (low vaporization temperature) removed by processing and would have no accident releases, particulate releases assumed to be the same as radiological particulate releases for the same alternative.
[6]Engineered Alternative No. 94 basis: system-wide average waste density of 997 kg/m^3, waste shipped in drums, same release fractions as Alternative No. 6, addition of clay reduces average chemical constituent fraction in the waste matrix to a value equal to 0.468 of the baseline value.

TABLE L-25

NONRADIOLOGICAL/NONCHEMICAL PER-SHIPMENT RISK FOR CH-TRU AND RH-TRU WASTE

Waste Origin Site	To Route Segment Destination	Zone	Injuries	Fatalities
AMES	ANL-E	Rural	8.00×10^{-04}	6.56×10^{-05}
		Suburban	6.35×10^{-05}	2.70×10^{-06}
		Urban	2.59×10^{-06}	6.47×10^{-08}
AMES	SRS	Rural	2.35×10^{-03}	1.92×10^{-04}
		Suburban	3.69×10^{-04}	1.57×10^{-05}
		Urban	1.93×10^{-05}	4.84×10^{-07}
AMES	WIPP	Rural	2.98×10^{-03}	2.44×10^{-04}
		Suburban	1.49×10^{-04}	6.34×10^{-06}
		Urban	1.93×10^{-05}	4.84×10^{-07}
ANL-E	SRS	Rural	1.56×10^{-03}	1.28×10^{-04}
		Suburban	3.36×10^{-04}	1.43×10^{-05}
		Urban	2.92×10^{-05}	7.30×10^{-07}
ANL-E	WIPP	Rural	3.29×10^{-03}	2.70×10^{-04}
		Suburban	2.57×10^{-04}	1.09×10^{-05}
		Urban	1.70×10^{-05}	4.25×10^{-07}
BATTELLE	ORNL	Rural	6.45×10^{-04}	5.29×10^{-05}
		Suburban	1.91×10^{-04}	8.15×10^{-06}
		Urban	1.84×10^{-05}	4.59×10^{-07}
BETTIS	MOUND	Rural	4.12×10^{-04}	3.38×10^{-05}
		Suburban	1.44×10^{-04}	6.12×10^{-06}
		Urban	2.46×10^{-05}	6.16×10^{-07}
BETTIS	SRS	Rural	1.29×10^{-03}	1.06×10^{-04}
		Suburban	2.38×10^{-04}	1.01×10^{-05}
		Urban	1.53×10^{-05}	3.82×10^{-07}
BETTIS	WIPP	Rural	3.86×10^{-03}	3.17×10^{-04}
		Suburban	4.02×10^{-04}	1.71×10^{-05}
		Urban	3.87×10^{-05}	9.67×10^{-07}

TABLE L-25 (Continued)

NONRADIOLOGICAL/NONCHEMICAL PER-SHIPMENT RISK FOR CH-TRU AND RH-TRU WASTE

Waste Origin Site	To Route Segment Destination	Zone	Injuries	Fatalities
ETEC	INEL	Rural	2.01×10^{-03}	1.65×10^{-04}
		Suburban	1.79×10^{-04}	7.61×10^{-06}
		Urban	7.60×10^{-05}	1.90×10^{-05}
ETEC	NTS	Rural	7.16×10^{-04}	5.87×10^{-05}
		Suburban	7.75×10^{-05}	3.30×10^{-06}
		Urban	5.49×10^{-05}	1.37×10^{-05}
ETEC	WIPP	Rural	2.65×10^{-03}	2.17×10^{-04}
		Suburban	1.28×10^{-04}	5.43×10^{-06}
		Urban	6.50×10^{-05}	1.63×10^{-05}
HANFORD	WIPP	Rural	4.38×10^{-03}	3.59×10^{-04}
		Suburban	1.83×10^{-04}	7.77×10^{-06}
		Urban	2.23×10^{-05}	5.57×10^{-07}
INEL	WIPP	Rural	3.36×10^{-03}	2.75×10^{-04}
		Suburban	1.44×10^{-04}	6.14×10^{-06}
		Urban	1.90×10^{-05}	4.74×10^{-07}
KAPL	MOUND	Rural	1.02×10^{-03}	8.32×10^{-05}
		Suburban	3.68×10^{-04}	1.57×10^{-05}
		Urban	2.54×10^{-05}	6.34×10^{-07}
KAPL	ORNL	Rural	7.83×10^{-04}	6.42×10^{-05}
		Suburban	1.80×10^{-04}	7.68×10^{-06}
		Urban	6.04×10^{-06}	1.51×10^{-07}
KAPL	SRS	Rural	1.71×10^{-03}	1.40×10^{-04}
		Suburban	3.73×10^{-04}	1.59×10^{-05}
		Urban	1.44×10^{-05}	3.60×10^{-07}
KAPL	WIPP	Rural	4.47×10^{-03}	3.66×10^{-04}
		Suburban	6.27×10^{-04}	2.67×10^{-05}
		Urban	3.93×10^{-05}	9.83×10^{-07}

TABLE L-25 (Continued)

NONRADIOLOGICAL/NONCHEMICAL PER-SHIPMENT RISK FOR CH-TRU AND RH-TRU WASTE

Waste Origin Site	To Route Segment Destination	Zone	Injuries	Fatalities
LANL	WIPP	Rural	8.47×10^{-04}	6.94×10^{-05}
		Suburban	2.70×10^{-05}	1.15×10^{-06}
		Urban	2.59×10^{-06}	6.47×10^{-08}
LBL	HANFORD	Rural	1.78×10^{-03}	1.46×10^{-04}
		Suburban	2.11×10^{-04}	8.99×10^{-06}
		Urban	4.34×10^{-05}	1.08×10^{-06}
LBL	LLNL	Rural	5.29×10^{-05}	4.34×10^{-06}
		Suburban	4.02×10^{-05}	1.71×10^{-06}
		Urban	2.86×10^{-05}	7.15×10^{-07}
LBL	WIPP	Rural	3.51×10^{-03}	2.88×10^{-04}
		Suburban	1.65×10^{-04}	7.02×10^{-06}
		Urban	8.75×10^{-05}	2.19×10^{-06}
LLNL	HANFORD	Rural	1.80×10^{-03}	1.47×10^{-04}
		Suburban	2.32×10^{-04}	9.89×10^{-06}
		Urban	3.79×10^{-05}	9.49×10^{-07}
LLNL	WIPP	Rural	3.47×10^{-03}	2.84×10^{-04}
		Suburban	1.27×10^{-04}	5.40×10^{-06}
		Urban	5.90×10^{-05}	1.48×10^{-06}
MOUND	SRS	Rural	1.13×10^{-03}	9.25×10^{-05}
		Suburban	2.61×10^{-04}	1.11×10^{-05}
		Urban	1.28×10^{-05}	3.20×10^{-07}
MOUND	WIPP	Rural	3.46×10^{-03}	2.84×10^{-04}
		Suburban	2.96×10^{-04}	1.26×10^{-05}
		Urban	2.56×10^{-05}	6.41×10^{-07}
MU	ANL-E	Rural	7.84×10^{-04}	6.43×10^{-05}
		Suburban	1.12×10^{-04}	4.79×10^{-06}
		Urban	1.13×10^{-05}	2.83×10^{-07}

TABLE L-25 (Continued)

NONRADIOLOGICAL/NONCHEMICAL PER-SHIPMENT RISK FOR CH-TRU AND RH-TRU WASTE

Waste Origin Site	To Route Segment Destination	Zone	Injuries	Fatalities
MU	SRS	Rural	1.61×10^{-03}	1.32×10^{-04}
		Suburban	2.92×10^{-04}	1.24×10^{-05}
		Urban	3.35×10^{-05}	8.38×10^{-07}
MU	WIPP	Rural	2.71×10^{-03}	2.22×10^{-04}
		Suburban	1.38×10^{-04}	5.89×10^{-06}
		Urban	2.21×10^{-05}	5.51×10^{-07}
NTS	INEL	Rural	1.60×10^{-03}	1.31×10^{-04}
		Suburban	1.17×10^{-04}	4.97×10^{-06}
		Urban	2.50×10^{-05}	6.25×10^{-07}
NTS	WIPP	Rural	3.02×10^{-03}	2.48×10^{-04}
		Suburban	8.06×10^{-05}	3.43×10^{-06}
		Urban	1.65×10^{-05}	4.13×10^{-07}
ORNL	SRS	Rural	6.51×10^{-04}	5.33×10^{-05}
		Suburban	1.40×10^{-04}	5.94×10^{-06}
		Urban	3.70×10^{-06}	9.24×10^{-08}
ORNL	WIPP	Rural	3.50×10^{-03}	2.87×10^{-04}
		Suburban	2.30×10^{-04}	9.80×10^{-06}
		Urban	2.60×10^{-05}	6.50×10^{-07}
PADUCAH	ORNL	Rural	6.68×10^{-04}	5.47×10^{-05}
		Suburban	7.80×10^{-05}	3.32×10^{-06}
		Urban	5.42×10^{-06}	1.36×10^{-07}
PADUCAH	SRS	Rural	1.01×10^{-03}	8.29×10^{-05}
		Suburban	2.16×10^{-04}	9.21×10^{-06}
		Urban	2.17×10^{-05}	5.42×10^{-07}
PADUCAH	WIPP	Rural	3.12×10^{-03}	2.56×10^{-04}
		Suburban	2.17×10^{-04}	9.22×10^{-06}
		Urban	1.71×10^{-05}	4.28×10^{-07}

TABLE L-25 (Continued)

NONRADIOLOGICAL/NONCHEMICAL PER-SHIPMENT RISK FOR CH-TRU AND RH-TRU WASTE

Waste Origin Site	To Route Segment Destination	Zone	Injuries	Fatalities
PANTEX	LANL	Rural	8.36×10^{-04}	6.85×10^{-05}
		Suburban	2.14×10^{-05}	9.09×10^{-07}
		Urban	4.68×10^{-06}	1.17×10^{-07}
PANTEX	WIPP	Rural	1.10×10^{-03}	8.99×10^{-05}
		Suburban	3.37×10^{-05}	1.44×10^{-06}
		Urban	4.44×10^{-06}	1.11×10^{-07}
RFETS	WIPP	Rural	1.65×10^{-03}	1.35×10^{-04}
		Suburban	8.99×10^{-05}	3.83×10^{-06}
		Urban	1.74×10^{-05}	4.34×10^{-07}
SNL	LANL	Rural	2.18×10^{-04}	1.79×10^{-05}
		Suburban	2.11×10^{-05}	8.98×10^{-07}
		Urban	6.41×10^{-06}	1.60×10^{-07}
SNL	WIPP	Rural	7.67×10^{-04}	6.28×10^{-05}
		Suburban	2.36×10^{-05}	1.01×10^{-06}
		Urban	4.80×10^{-06}	1.20×10^{-07}
SRS	WIPP	Rural	3.15×10^{-03}	2.58×10^{-04}
		Suburban	3.85×10^{-04}	1.64×10^{-05}
		Urban	2.44×10^{-05}	6.10×10^{-07}

TABLE L-26

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
Major CH-TRU Waste Sites					
HANFORD	WIPP	5712	Rural	$2.50 \times 10^{+01}$	$2.05 \times 10^{+00}$
			Suburban	$1.05 \times 10^{+00}$	4.44×10^{-02}
			Urban	1.27×10^{-01}	3.18×10^{-03}
INEL	WIPP	4974	Rural	$1.67 \times 10^{+01}$	$1.37 \times 10^{+00}$
			Suburban	7.16×10^{-01}	3.05×10^{-02}
			Urban	9.45×10^{-02}	2.36×10^{-03}
LANL	WIPP	2835	Rural	$2.40 \times 10^{+00}$	1.97×10^{-01}
			Suburban	7.65×10^{-02}	3.26×10^{-03}
			Urban	7.34×10^{-03}	1.83×10^{-04}
RFETS	WIPP	931	Rural	$1.54 \times 10^{+00}$	1.26×10^{-01}
			Suburban	8.37×10^{-02}	3.57×10^{-02}
			Urban	1.62×10^{-03}	4.04×10^{-04}
SRS	WIPP	2827	Rural	$8.91 \times 10^{+00}$	7.29×10^{-01}
			Suburban	$1.09 \times 10^{+00}$	4.64×10^{-02}
			Urban	$6.90 \times 10^{+00}$	1.72×10^{-03}
			Subtotal	**$6.47 \times 10^{+01}$**	**$4.64 \times 10^{+00}$**
Small CH-TRU Waste Sites					
AMES	ANL-E	1	Rural	8.00×10^{-04}	6.56×10^{-05}
			Suburban	6.35×10^{-05}	2.70×10^{-06}
			Urban	2.59×10^{-06}	6.47×10^{-08}
	WIPP	1	Rural	3.29×10^{-03}	2.70×10^{-04}
			Suburban	2.57×10^{-04}	1.09×10^{-05}
			Urban	1.70×10^{-05}	4.25×10^{-07}
ANL-E	WIPP	5	Rural	1.65×10^{-02}	1.35×10^{-03}
			Suburban	1.29×10^{-03}	5.45×10^{-05}
			Urban	8.50×10^{-05}	2.13×10^{-06}

TABLE L-26(Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
BETTIS	MOUND	17	Rural	7.00×10^{-03}	5.75×10^{-04}
			Suburban	2.45×10^{-03}	1.04×10^{-04}
			Urban	4.18×10^{-05}	1.05×10^{-05}
	WIPP	17	Rural	5.88×10^{-02}	4.83×10^{-03}
			Suburban	5.03×10^{-03}	2.14×10^{-04}
			Urban	4.35×10^{-04}	1.09×10^{-05}
ETEC	NTS	2	Rural	1.43×10^{-03}	1.17×10^{-04}
			Suburban	1.55×10^{-04}	6.60×10^{-06}
			Urban	1.10×10^{-04}	2.74×10^{-05}
	WIPP	2	Rural	6.04×10^{-03}	4.96×10^{-04}
			Suburban	1.61×10^{-04}	6.86×10^{-06}
			Urban	3.30×10^{-05}	8.36×10^{-07}
KAPL	MOUND	1	Rural	1.02×10^{-03}	8.32×10^{-05}
			Suburban	3.68×10^{-04}	1.57×10^{-05}
			Urban	2.54×10^{-05}	6.34×10^{-07}
	WIPP	1	Rural	3.46×10^{-03}	2.84×10^{-04}
			Suburban	2.96×10^{-04}	1.28×10^{-05}
			Urban	2.56×10^{-05}	6.41×10^{-07}
LBL	LLNL	1	Rural	5.29×10^{-05}	4.34×10^{-06}
			Suburban	4.02×10^{-05}	1.71×10^{-06}
			Urban	2.86×10^{-05}	7.15×10^{-07}
	WIPP	1	Rural	3.47×10^{-03}	2.84×10^{-04}
			Suburban	1.27×10^{-04}	5.40×10^{-06}
			Urban	5.90×10^{-05}	1.48×10^{-06}
LLNL	WIPP	136	Rural	4.72×10^{-01}	3.86×10^{-02}
			Suburban	1.73×10^{-02}	7.34×10^{-03}
			Urban	8.02×10^{-03}	2.01×10^{-04}

TABLE L-26 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
MOUND	WIPP	29	Rural	1.00×10^{-01}	8.24×10^{-03}
			Suburban	8.58×10^{-03}	3.65×10^{-05}
			Urban	7.42×10^{-04}	1.86×10^{-05}
MU	ANL-E	1	Rural	7.84×10^{-04}	6.43×10^{-05}
			Suburban	1.12×10^{-04}	4.79×10^{-06}
			Urban	1.13×10^{-05}	2.83×10^{-07}
	WIPP	1	Rural	3.29×10^{-03}	2.70×10^{-04}
			Suburban	2.57×10^{-04}	1.09×10^{-05}
			Urban	1.70×10^{-05}	4.25×10^{-07}
NTS	WIPP	66	Rural	1.99×10^{-01}	1.64×10^{-02}
			Suburban	5.32×10^{-03}	2.26×10^{-04}
			Urban	1.09×10^{-03}	2.73×10^{-05}
ORNL	WIPP	119	Rural	4.17×10^{-01}	3.42×10^{-02}
			Suburban	2.74×10^{-02}	1.17×10^{-01}
			Urban	3.09×10^{-03}	7.74×10^{-05}
PADUCAH	ORNL	1	Rural	6.68×10^{-04}	5.47×10^{-05}
			Suburban	7.80×10^{-05}	3.32×10^{-06}
			Urban	5.42×10^{-06}	1.36×10^{-07}
	WIPP	1	Rural	3.50×10^{-03}	2.87×10^{-04}
			Suburban	2.30×10^{-04}	9.80×10^{-06}
			Urban	2.60×10^{-05}	6.50×10^{-07}
PANTEX	LANL	1	Rural	8.36×10^{-04}	6.85×10^{-05}
			Suburban	2.14×10^{-05}	9.09×10^{-07}
			Urban	4.68×10^{-06}	1.17×10^{-07}
	WIPP	1	Rural	8.47×10^{-04}	6.94×10^{-05}
			Suburban	2.70×10^{-05}	1.15×10^{-06}
			Urban	2.59×10^{-06}	6.47×10^{-08}

TABLE L-26 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
SNL	LANL	3	Rural	6.54×10^{-04}	5.37×10^{-05}
			Suburban	6.33×10^{-05}	2.99×10^{-06}
			Urban	1.92×10^{-05}	4.80×10^{-07}
	WIPP	3	Rural	2.54×10^{-03}	2.08×10^{-04}
			Suburban	8.10×10^{-05}	3.45×10^{-06}
			Urban	7.77×10^{-06}	1.94×10^{-07}
			Subtotal	$\mathbf{1.39 \times 10^{+00}}$	$\mathbf{2.32 \times 10^{-01}}$
			TOTAL	$\mathbf{6.61 \times 10^{+01}}$	$\mathbf{4.87 \times 10^{+00}}$

TABLE L-27

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
Major CH-TRU Waste Sites					
HANFORD	WIPP	5712	Rural	$2.50\times10^{+01}$	$2.05\times10^{+00}$
			Suburban	$1.05\times10^{+00}$	4.44×10^{-02}
			Urban	1.27×10^{-01}	3.18×10^{-03}
INEL	WIPP	4974	Rural	$1.67\times10^{+01}$	$1.37\times10^{+00}$
			Suburban	7.16×10^{-01}	3.05×10^{-02}
			Urban	9.45×10^{-02}	2.36×10^{-03}
LANL	WIPP	2835	Rural	$2.40\times10^{+00}$	1.97×10^{-01}
			Suburban	7.65×10^{-02}	3.26×10^{-03}
			Urban	7.34×10^{-03}	1.83×10^{-04}
RFETS	WIPP	931	Rural	$1.54\times10^{+00}$	1.26×10^{-01}
			Suburban	8.37×10^{-02}	3.57×10^{-03}
			Urban	1.62×10^{-02}	4.04×10^{-04}
SRS	WIPP	2836	Rural	$8.93\times10^{+00}$	7.32×10^{-01}
			Suburban	$1.09\times10^{+00}$	4.65×10^{-02}
			Urban	6.92×10^{-02}	1.73×10^{-03}
			Subtotal	**$5.79\times10^{+01}$**	**$4.61\times10^{+00}$**
Small CH-TRU Waste Sites					
AMES	SRS	1	Rural	1.56×10^{-03}	1.28×10^{-04}
			Suburban	3.36×10^{-04}	1.43×10^{-05}
			Urban	2.92×10^{-05}	7.30×10^{-07}
	WIPP	1	Rural	3.15×10^{-03}	2.58×10^{-04}
			Suburban	3.85×10^{-04}	1.64×10^{-05}
			Urban	2.44×10^{-05}	6.10×10^{-07}
ANL-E	SRS	5	Rural	7.80×10^{-03}	6.40×10^{-04}
			Suburban	1.68×10^{-03}	7.15×10^{-05}
			Urban	1.46×10^{-04}	3.65×10^{-06}

TABLE L-27 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
BETTIS	SRS	17	Rural	2.19×10^{-02}	1.80×10^{-03}
			Suburban	4.05×10^{-03}	1.72×10^{-04}
			Urban	2.60×10^{-04}	6.49×10^{-06}
	WIPP	17	Rural	5.36×10^{-02}	4.39×10^{-03}
			Suburban	6.55×10^{-03}	2.79×10^{-04}
			Urban	4.15×10^{-04}	1.04×10^{-05}
ETEC	INEL	2	Rural	4.02×10^{-03}	3.30×10^{-04}
			Suburban	3.58×10^{-04}	1.52×10^{-05}
			Urban	1.52×10^{-04}	3.80×10^{-06}
	WIPP	2	Rural	5.30×10^{-03}	4.34×10^{-04}
			Suburban	2.56×10^{-04}	1.09×10^{-05}
			Urban	1.30×10^{-04}	3.26×10^{-06}
KAPL	SRS	1	Rural	1.71×10^{-03}	1.40×10^{-04}
			Suburban	3.73×10^{-04}	1.59×10^{-05}
			Urban	1.44×10^{-05}	3.60×10^{-07}
	WIPP	1	Rural	3.15×10^{-03}	2.58×10^{-04}
			Suburban	3.85×10^{-04}	1.64×10^{-05}
			Urban	2.44×10^{-05}	6.10×10^{-07}
LBL	HANFORD	1	Rural	1.78×10^{-03}	1.46×10^{-04}
			Suburban	2.11×10^{-04}	8.99×10^{-06}
			Urban	4.34×10^{-05}	1.08×10^{-05}
	WIPP	1	Rural	4.38×10^{-03}	3.59×10^{-04}
			Suburban	1.83×10^{-04}	7.77×10^{-06}
			Urban	2.23×10^{-05}	5.57×10^{-07}

TABLE L-27 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
LLNL	HANFORD	136	Rural	2.45×10^{-01}	2.00×10^{-02}
			Suburban	3.16×10^{-02}	1.35×10^{-03}
			Urban	5.15×10^{-03}	1.29×10^{-04}
	WIPP	136	Rural	4.72×10^{-01}	3.86×10^{-02}
			Suburban	1.73×10^{-02}	7.34×10^{-04}
			Urban	8.02×10^{-03}	2.01×10^{-04}
MOUND	SRS	29	Rural	3.28×10^{-02}	2.68×10^{-03}
			Suburban	7.57×10^{-03}	3.22×10^{-04}
			Urban	3.71×10^{-04}	9.28×10^{-06}
	WIPP	29	Rural	1.00×10^{-01}	8.24×10^{-03}
			Suburban	8.58×10^{-03}	3.65×10^{-04}
			Urban	7.42×10^{-04}	1.86×10^{-05}
MU	SRS	1	Rural	1.61×10^{-03}	1.32×10^{-04}
			Suburban	2.92×10^{-04}	1.24×10^{-05}
			Urban	3.35×10^{-05}	8.38×10^{-07}
	WIPP	1	Rural	3.15×10^{-03}	2.58×10^{-04}
			Suburban	3.85×10^{-04}	1.64×10^{-05}
			Urban	2.44×10^{-05}	6.10×10^{-07}
NTS	INEL	66	Rural	1.06×10^{-01}	8.65×10^{-03}
			Suburban	7.72×10^{-03}	3.28×10^{-04}
			Urban	1.65×10^{-03}	4.13×10^{-06}
	WIPP	66	Rural	1.99×10^{-01}	1.64×10^{-02}
			Suburban	5.32×10^{-03}	2.26×10^{-04}
			Urban	1.09×10^{-03}	2.73×10^{-06}
ORNL	SRS	119	Rural	7.75×10^{-02}	6.34×10^{-03}
			Suburban	1.67×10^{-02}	7.07×10^{-04}
			Urban	4.40×10^{-04}	1.10×10^{-05}
	WIPP	119	Rural	3.75×10^{-01}	3.07×10^{-02}
			Suburban	4.58×10^{-02}	1.95×10^{-03}
			Urban	2.90×10^{-03}	7.26×10^{-05}

TABLE L-27 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE
REGIONALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
PADUCAH	ORNL	1	Rural	6.68×10^{-04}	5.47×10^{-05}
			Suburban	7.80×10^{-05}	3.32×10^{-06}
			Urban	5.42×10^{-06}	1.36×10^{-07}
	WIPP	1	Rural	3.50×10^{-03}	2.87×10^{-04}
			Suburban	2.30×10^{-04}	9.80×10^{-06}
			Urban	2.60×10^{-05}	6.50×10^{-07}
PANTEX	LANL	1	Rural	8.36×10^{-04}	6.85×10^{-05}
			Suburban	2.14×10^{-05}	9.09×10^{-07}
			Urban	4.68×10^{-06}	1.17×10^{-07}
	WIPP	1	Rural	8.47×10^{-04}	6.94×10^{-05}
			Suburban	2.70×10^{-05}	1.15×10^{-06}
			Urban	2.59×10^{-06}	6.47×10^{-08}
SNL	LANL	3	Rural	6.54×10^{-04}	5.37×10^{-05}
			Suburban	6.33×10^{-05}	2.69×10^{-06}
			Urban	1.92×10^{-05}	4.80×10^{-07}
	WIPP	3	Rural	2.30×10^{-03}	1.88×10^{-04}
			Suburban	7.08×10^{-05}	3.03×10^{-06}
			Urban	1.44×10^{-05}	3.60×10^{-07}
			Subtotal	$\mathbf{1.91 \times 10^{+00}}$	$\mathbf{1.49 \times 10^{-01}}$
			TOTAL	$\mathbf{5.98 \times 10^{-01}}$	$\mathbf{4.76 \times 10^{-00}}$

TABLE L-28

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE CENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
Major CH-TRU Waste Sites					
HANFORD	WIPP	5712	Rural	$2.50 \times 10^{+01}$	$2.05 \times 10^{+00}$
			Suburban	$1.05 \times 10^{+01}$	4.44×10^{-02}
			Urban	1.27×10^{-01}	3.18×10^{-03}
INEL	WIPP	4974	Rural	$1.67 \times 10^{+01}$	$1.37 \times 10^{+00}$
			Suburban	7.16×10^{-01}	3.05×10^{-02}
			Urban	9.45×10^{-02}	2.36×10^{-03}
LANL	WIPP	2835	Rural	$2.40 \times 10^{+00}$	1.97×10^{-01}
			Suburban	7.65×10^{-02}	3.26×10^{-03}
			Urban	7.34×10^{-03}	1.83×10^{-04}
RFETS	WIPP	931	Rural	$1.54 \times 10^{+00}$	1.26×10^{-01}
			Suburban	8.37×10^{-02}	3.57×10^{-03}
			Urban	1.62×10^{-02}	4.04×10^{-04}
SRS	WIPP	2827	Rural	$8.91 \times 10^{+00}$	7.29×10^{-01}
			Suburban	$1.09 \times 10^{+00}$	4.64×10^{-02}
			Urban	6.90×10^{-02}	1.72×10^{-03}
			Subtotal	**$6.73 \times 10^{+01}$**	**$4.61 \times 10^{+00}$**
Small CH-TRU Waste Sites					
AMES	WIPP	1	Rural	2.98×10^{-03}	2.44×10^{-04}
			Suburban	1.49×10^{-04}	6.34×10^{-06}
			Urban	1.93×10^{-05}	4.84×10^{-07}
ANL-E	WIPP	5	Rural	1.65×10^{-02}	1.35×10^{-03}
			Suburban	1.29×10^{-03}	5.45×10^{-05}
			Urban	8.50×10^{-05}	2.13×10^{-06}
BETTIS	WIPP	17	Rural	6.56×10^{-02}	5.39×10^{-03}
			Suburban	6.83×10^{-03}	2.91×10^{-04}
			Urban	6.58×10^{-04}	1.64×10^{-05}

TABLE L-28 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE CENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
ETEC	WIPP	2	Rural	5.30×10^{-03}	4.34×10^{-04}
			Suburban	2.56×10^{-04}	1.09×10^{-05}
			Urban	$2.00 \times 10^{+00}$	3.26×10^{-06}
KAPL	WIPP	1	Rural	4.47×10^{-03}	3.66×10^{-04}
			Suburban	6.27×10^{-04}	2.67×10^{-05}
			Urban	3.93×10^{-05}	9.83×10^{-07}
LBL	WIPP	1	Rural	3.51×10^{-03}	2.88×10^{-04}
			Suburban	1.65×10^{-04}	7.02×10^{-06}
			Urban	8.75×10^{-05}	2.19×10^{-06}
LLNL	WIPP	136	Rural	4.72×10^{-01}	3.86×10^{-02}
			Suburban	1.73×10^{-02}	7.34×10^{-04}
			Urban	8.02×10^{-03}	2.01×10^{-04}
MOUND	WIPP	29	Rural	3.28×10^{-02}	2.68×10^{-03}
			Suburban	7.57×10^{-03}	3.22×10^{-04}
			Urban	3.71×10^{-04}	9.28×10^{-06}
MU	WIPP	1	Rural	2.71×10^{-03}	2.22×10^{-04}
			Suburban	1.38×10^{-04}	5.89×10^{-06}
			Urban	2.21×10^{-05}	5.51×10^{-07}
NTS	WIPP	66	Rural	1.99×10^{-01}	1.64×10^{-02}
			Suburban	5.32×10^{-03}	2.26×10^{-04}
			Urban	1.09×10^{-03}	2.73×10^{-05}
ORNL	WIPP	119	Rural	4.17×10^{-01}	3.42×10^{-02}
			Suburban	2.74×10^{-02}	1.17×10^{-03}
			Urban	3.09×10^{-03}	7.74×10^{-05}
PADUCAH	WIPP	1	Rural	3.12×10^{-03}	2.56×10^{-04}
			Suburban	2.17×10^{-04}	9.22×10^{-06}
			Urban	1.71×10^{-05}	4.28×10^{-07}

TABLE L-28 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
CH-TRU WASTE CENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
PADUCAH	WIPP	1	Rural	3.12×10^{-03}	2.56×10^{-04}
			Suburban	2.17×10^{-04}	9.22×10^{-06}
			Urban	1.71×10^{-05}	4.28×10^{-07}
PANTEX	WIPP	1	Rural	1.10×10^{-03}	8.99×10^{-05}
			Suburban	3.37×10^{-05}	1.44×10^{-06}
			Urban	4.44×10^{-06}	1.11×10^{-07}
SNL	WIPP	3	Rural	2.30×10^{-03}	1.88×10^{-04}
			Suburban	7.08×10^{-05}	3.03×10^{-06}
			Urban	1.44×10^{-05}	3.60×10^{-07}
			Subtotal	$\mathbf{3.31 \times 10^{+00}}$	$\mathbf{1.04 \times 10^{-01}}$
			TOTAL	$\mathbf{7.06 \times 10^{+01}}$	$\mathbf{4.71 \times 10^{+00}}$

TABLE L-29

NONCHEMICAL/NONRADIOLOGICAL RISK
RH-TRU WASTE DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
Major RH-TRU Waste Sites					
HANFORD	WIPP	5176	Rural	$2.27\times10^{+01}$	$1.86\times10^{+00}$
			Suburban	9.47×10^{-01}	4.02×10^{-02}
			Urban	1.15×10^{-01}	2.88×10^{-03}
ORNL	WIPP	2002	Rural	$7.01\times10^{+00}$	5.75×10^{-01}
			Suburban	4.60×10^{-01}	1.96×10^{-02}
			Urban	5.21×10^{-02}	1.30×10^{-03}
			Subtotal	**$3.13\times10^{+01}$**	**$2.50\times10^{+00}$**
Small RH-TRU Waste Sites					
BATTELLE	ORNL	123	Rural	7.93×10^{-02}	6.51×10^{-03}
			Suburban	2.35×10^{-02}	1.00×10^{-03}
			Urban	2.26×10^{-03}	5.65×10^{-05}
	WIPP		Rural	4.31×10^{-01}	3.53×10^{-02}
			Suburban	2.83×10^{-02}	1.21×10^{-03}
			Urban	3.20×10^{-03}	8.00×10^{-05}
BETTIS	ORNL	3	Rural	1.94×10^{-03}	1.59×10^{-04}
			Suburban	5.73×10^{-04}	2.45×10^{-05}
			Urban	5.52×10^{-05}	1.38×10^{-06}
	WIPP		Rural	1.05×10^{-02}	8.61×10^{-04}
			Suburban	6.90×10^{-04}	2.94×10^{-05}
			Urban	7.80×10^{-05}	1.95×10^{-06}
INEL	WIPP	109	Rural	9.66×10^{-01}	3.00×10^{-02}
			Suburban	1.57×10^{-02}	6.69×10^{-04}
			Urban	2.07×10^{-03}	5.17×10^{-05}

TABLE L-29 (Continued)

NONCHEMICAL/NONRADIOLOGICAL RISK
RH-TRU WASTE DECENTRALIZED CONFIGURATION

Waste Origin Site	To Route Segment Destination	No. Of Shipments	Zone	Injuries	Fatalities
KAPL	ORNL		Rural	4.46×10^{-02}	3.66×10^{-03}
			Suburban	1.03×10^{-02}	4.38×10^{-04}
			Urban	3.44×10^{-04}	8.61×10^{-05}
	WIPP		Rural	2.00×10^{-01}	1.64×10^{-02}
			Suburban	1.31×10^{-02}	5.59×10^{-04}
			Urban	1.48×10^{-04}	3.71×10^{-05}
LANL	WIPP	249	Rural	2.11×10^{-01}	1.73×10^{-02}
			Suburban	6.73×10^{-03}	2.86×10^{-04}
			Urban	6.45×10^{-04}	1.61×10^{-05}
SRS	WIPP	56	Rural	1.76×10^{-01}	1.44×10^{-02}
			Suburban	2.16×10^{-02}	9.18×10^{-04}
			Urban	1.37×10^{-03}	3.42×10^{-05}
			Subtotal	**$2.55 \times 10^{+00}$**	**1.30×10^{-01}**
			TOTAL	**$3.35 \times 10^{+01}$**	**$2.63 \times 10^{+00}$**

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