

EXHIBIT H

**Table E-5 of DOE's 2015 EIS entitled
"Risk Factors per Shipment of
Radioactive Material and Waste"**

EXHIBIT H

Appendix E – Evaluation of Human Health Effects from Transportation

Table E-5 Risk Factors per Shipment of Radioactive Material and Waste

Material or Wastes	Origin	Transport Destination	Incident-Free				Accident	
			Crew Dose (person-rem)	Crew Risk (LCF)	Population Dose (person-rem)	Population Risk (LCF)	Radiological Risk (LCF)	Non-radiological Risk (traffic fatalities)
Pits ^{a, b}	Pantex, TX	SRS	0.051	3.1×10^{-5}	0.061	3.6×10^{-5}	1.4×10^{-9}	0.000059
Pits ^{a, b}	Pantex, TX	LANL	0.013	7.9×10^{-6}	0.018	1.1×10^{-5}	1.4×10^{-10}	0.000017
HEU ^{a, b}	SRS	Y-12	0.0037	2.2×10^{-6}	0.0057	3.4×10^{-6}	8.6×10^{-11}	0.000011
HEU ^{a, b}	LANL	Y-12	0.014	8.1×10^{-6}	0.024	1.5×10^{-5}	1.2×10^{-10}	0.000083
Pieces-parts ^{a, b}	SRS	LANL	0.0028	1.7×10^{-6}	0.0058	3.5×10^{-6}	9.1×10^{-10}	0.000078
Plutonium oxide powder ^{a, b}	LANL	SRS	0.028	1.7×10^{-5}	0.061	3.7×10^{-5}	7.3×10^{-8}	0.000078
TRU waste in POCs containing surplus plutonium material ^c	SRS	WIPP	0.094	5.7×10^{-5}	0.046	2.7×10^{-5}	8.4×10^{-10}	0.00015
TRU Waste with 10 grams non-pit FGE per drum ^d	SRS	WIPP	0.094	5.7×10^{-5}	0.046	2.7×10^{-5}	8.4×10^{-10}	0.00015
TRU Waste with 20 grams weapons-grade FGE per drum ^d	SRS	WIPP	0.094	5.7×10^{-5}	0.046	2.7×10^{-5}	8.4×10^{-10}	0.00015
TRU Waste with 20 grams weapons-grade FGE per drum ^d	LANL	WIPP	0.023	1.4×10^{-5}	0.012	7.5×10^{-6}	3.0×10^{-11}	0.000021
TRU waste in CCOs containing surplus plutonium material ^e	SRS	WIPP	0.094	5.7×10^{-5}	0.046	2.7×10^{-5}	8.4×10^{-10}	0.00015
Non-pit plutonium direct disposition to WIPP ^{a, b}	SRS	WIPP	0.073	4.4×10^{-5}	0.16	9.5×10^{-5}	6.5×10^{-8}	0.00015
HUFP ^f	SRS	WIPP	0.013	7.7×10^{-6}	0.026	1.6×10^{-5}	4.3×10^{-8}	0.00015
LLW ^g	SRS	NNSS	0.078	4.7×10^{-5}	0.031	1.9×10^{-5}	2.6×10^{-10}	0.00018
LLW ^g	LANL	NNSS	0.025	1.5×10^{-5}	0.011	6.3×10^{-6}	2.2×10^{-11}	0.000024
MLLW ^h	SRS	NNSS	0.093	5.6×10^{-5}	0.062	3.7×10^{-5}	5.1×10^{-10}	0.00018
MLLW ^h	LANL	NNSS	0.030	1.8×10^{-5}	0.021	1.3×10^{-5}	4.3×10^{-11}	0.000024
DUF ₆ (48G container)	Piketon, OH ⁱ	Richland, WA ^h	0.0089	5.3×10^{-6}	0.019	1.2×10^{-5}	1.0×10^{-7}	0.00020
DUF ₆ (30B container)	Piketon, OH ⁱ	Richland, WA ^h	0.041	2.5×10^{-5}	0.061	3.7×10^{-5}	8.8×10^{-8}	0.00020
depleted uranium oxide	Richland, WA ^j	SRS	0.10	6.2×10^{-5}	0.061	3.6×10^{-5}	6.3×10^{-7}	0.00023
DUNH	Richland, WA ^j	SRS	0.10	6.2×10^{-5}	0.061	3.6×10^{-5}	3.4×10^{-6}	0.00023
BWR MOX fuel assemblies ^k	SRS	BFN	0.0073	4.4×10^{-6}	0.012	7.2×10^{-6}	1.6×10^{-10}	0.000014
PWR MOX fuel assemblies ^k	SRS	SQN	0.0058	3.5×10^{-6}	0.0080	4.8×10^{-6}	2.1×10^{-10}	0.0000080
BWR MOX fuel assemblies ^k	SRS	Generic Reactor	0.043	2.6×10^{-5}	0.082	4.9×10^{-5}	5.3×10^{-10}	0.000091

BFN = Browns Ferry Nuclear Plant; BWR = boiling water reactor; CCO = criticality control overpack; DUF₆ = depleted uranium hexafluoride; DUNH = depleted uranyl nitrate, hexahydrate; FGE = fissile gram equivalent; HEU = highly enriched uranium; HUFP = Hanford Unirradiated Fuel Package; LANL = Los Alamos National Laboratory; LCF = latent cancer fatality; LLW = low-level radioactive waste; MLLW = mixed low-level radioactive waste; MOX = mixed oxide; NNSS = Nevada National Security Site; OH = Ohio; Pantex = Pantex Plant; POC = pipe overpack container; PWR = pressurized water reactor; SQN = Sequoyah Nuclear Plant; SRS = Savannah River Site; TRU = transuranic; TX = Texas; WA = Washington; WIPP = Waste Isolation Pilot Plant; Y-12 = Y-12 National Security complex.

^a Transported in Type B packages.

^b Transported by Secure Transportation Assets (STA).

^c Transported in 208-liter (55-gallon) drums in 2 TRUPACT-IIIs and 1 HalfPACT per shipment.

^d Transported in 208-liter (55-gallon) drums in 3 TRUPACT-IIIs per shipment.

^e Transported in 3 TRUPACT-IIIs per shipment.

^f The HUFP is a Type B package.

^g Transported in Type A B-25 boxes.

^h Transported in 208-liter (55-gallon) drums.

ⁱ Location of the Portsmouth Gaseous Diffusion Plant.

^j Location of the AREVA fuel fabrication facility.

^k Assumed to be transported in an as-yet designed transport package that can hold two assemblies.